

Natural England

12th September 2013

Deadline 10: Comments to the Examining Authority's initial written questions – schedule of responses

The Examining Authority presented a series of questions which were outlined in its Rule 8 letter of 25th July 2013 to the Applicant and other Interested Parties, in order to receive further information about matters it considered relevant to the application. Natural England responded to these questions which can be found in Annex E appended to the Written Representation report. Natural England has several additional comments to present in light of the Applicant's response to the Examining Authority's questions (deadline 10 as outlined in the Examining Authority's Rule 8 letter). Natural England has provided the following schedule which provides an easy reference guide for the Examining Authority to see the comment to each of the Applicant's response provided in the text of the table below. Please note that the table below incorporates the initial response Natural England made (where applicable) to Annex E of its Written Representations for clarity. In addition, please see Explanation Note 2 of this document which confirms Natural England no longer has concerns with the issues surrounding sandwaves (see para. 6.5.2.2 of our 15th August Written Representations) based on the information that has now been provided by the Applicant, provided that the cable route remains the proposed location. Furthermore, Explanation Note 3 provides Natural England's response to Action 24 arising from the DCO / DML Issue Specific hearing held on the 28th 29th August 2013.

Examining Authority Question Number	Examining Authority's Question and Applicant's response	Natural England's comments
10	<p><i>Examining Authority's Question:</i> In relation to SPA/Ramsar sites, NE's relevant representation disagreed with the applicant's conclusion that there were no SPA/Ramsar sites identified in this HRA for which it was considered that there could be a Likely Significant Effect under the Habitats Regulations and therefore that for the marine ornithological aspects of the proposal an Appropriate Assessment under the Habitats Regulations would not be necessary. On the contrary NE held that an Appropriate Assessment was required, but provided relatively little detail regarding what further information was needed. Can NE provide detailed advice regarding what additional or different information or assessment/interpretation is required and provide justification for its</p>	<p><i>Natural England's Annex E response</i> See Written Representations Annex C, Sections 1, 2, 3, 4, 5 & 6.</p> <p><i>Natural England's response to Applicant</i> The updated No Significant Effects Report (The Applicant's Written Representations Appendix 25) has not been revised to consider more distant SPAs which, in Natural England's view, have linkage to the development site. In its WR, Natural England provided evidence of linkage for three species (gannet, kittiwake and lesser black-backed (lbb) gull) between SPAs/Ramsar sites classified for breeding, and non-breeding season (passage or over-wintering) presence in the area</p>

	<p>contention that an Appropriate Assessment is necessary? (NE)</p> <p>Applicant's response 10.1 pg 16 WR This was discussed in detail with Natural England at the meeting of 23 October 2012 (see Consultation Report submitted with the Application (Document 5.1)) where it was agreed that in order to show linkage to individual sites, clear ecological links would be required, and if this was not possible then there would be no requirement for HRA screening. Natural England has subsequently changed its position on this matter in its Relevant Representations but it remains the position of the Applicant.</p>	<p>around the wind farm. We maintain that further consideration of the impact of collision mortality, in-combination with other relevant OWF's, is required before a conclusion of NLSE can safely be reached. (These comments are also relevant to the Applicant's response 19.1, 20.1 & 24.1).</p> <p>Please refer to the Explanation Note 1 below this table which outlines a summary of all the additional areas where Natural England consider require further assessment.</p>
13	<p>Examining Authority's Question: The applicant, relevant consultees and relevant nature conservation parties are requested to comment regarding whether and how the extent and nature of the project and/or the terms of the DCO should have regard to maximum limits for monitored collision mortality, either on a phased or overall basis? (applicant, MMO, NE, other interested IPs)</p> <p>Applicant's response 13.1 pg 17 WR This would not be a practical process to implement not least because of the inherent difficulty in measuring actual collisions offshore (as evidenced from the recent review of this topic by the SoSS-03A project, which did not identify any proven technology currently available that can do this reliably). The collision risk assessment has also demonstrated that the predicted collisions, even in a worst case would not be significant so there would not in any case be any need to implement such measures.</p>	<p>Natural England's Annex E response Natural England has seen full worked CRM for kittiwake and nightjar. NE is satisfied that modelling, including choice of option (Option 1) is appropriate. ES presents collision risk at a range of avoidance rates following best practice. NE has based advice on an AR of %98.</p> <p>Natural England's response to Applicant The DCO does not currently contain any reference to ornithological post-construction monitoring, which could form part of any mitigation and monitoring program that maybe proposed should they discover LSE on the relevant SPA's / Ramsars, not be excluded.</p> <p>Examples of post-construction monitoring employed at other sites, during and after construction, include:</p> <ul style="list-style-type: none"> • Tracking of individual birds from breeding colonies; • Direct observation of collisions (by a range of different techniques described in Desholm <i>et.al.</i> 2006); and • Boat surveys of same methodology as those used for ES data collection <p>It is unlikely that the first would be useful as there is no pre-construction data to compare. The last is most likely to be most applicable in this case, as this would be directly comparable to pre-construction data already collected.</p>

<p>19</p>	<p>The Examining Authority's Question: The ES indicates that other wind farms selected for consideration in the CIA have been identified through consideration of foraging areas or migratory routes. However, no evidence appears to have been identified to substantiate this point. Can the applicant provide appropriate information and explanation/justification? (applicant)</p> <p>Applicant's response 19.1 pg 16 WR It was agreed with Natural England that a similar approach to the cumulative assessment as that used for the Galloper Offshore Wind Farm would be used, at the meeting of 23 October 2012, and this has been followed in the cumulative assessment.</p>	<p>Natural England's Annex E response n/a</p> <p>Natural England's response to Applicant The updated No Significant Effects Report (The Applicant's Written Representations Appendix 25) has not been revised to consider more distant SPAs which, in Natural England's view, have linkage to the development site. In its WR, Natural England provided evidence of linkage for three species (gannet, kittiwake and Ibb gull) between SPAs/Ramsar sites classified for breeding, and non-breeding season (passage or over-wintering) presence in the area around the wind farm. We maintain that further consideration of the impact of collision mortality, in-combination with other relevant OWF's, is required before a conclusion of no likely significant effect (LSE) can safely be reached. (These comments are also relevant to the Applicant's response 10.1, 20.1 & 24.1).</p>
<p>20</p>	<p>The Examining Authority's Question: With regard to consideration of cumulative impacts when the Rampion OWF proposal is considered together with the proposed Navitus Bay OWF, the ES states that no ornithological data was available. It is not clear what efforts were made to obtain data. Much of the consideration of operational cumulative impacts appears to have been based on the approach taken on the Galloper OWF. The ExA is not clear whether such an approach is applicable or sufficiently robust in relation to the particular circumstances of the Rampion assessment. Does NE consider that the approach adopted to the in combination/cumulative assessment is appropriate in this case? Can NE also provide an indication of evidence that would relate to the assessment and that would support any response to this question? Other parties may also wish to comment) (NE, applicant)</p> <p>Applicant's response 20.1 pg 21 WR The adoption of a similar approach to the cumulative assessment as that used for Galloper Offshore Wind Farm was specifically agreed with Natural England at the meeting of 23 October 2012. The Applicant approached the Navitus Bay developer but was not able to obtain the baseline data or any</p>	<p>Natural England's Annex E response NE is satisfied with regard to potential in combination effects on nightjar. See Written Representations Annex C, for details per species.</p> <p>Natural England's response to Applicant Natural England is satisfied with regard to potential in combination effects on nightjar. See Written Representations Annex C, for details per species.</p> <p>The updated No Significant Effects Report (The Applicant's Written Representations Appendix 25) has not been revised to consider more distant SPAs which, in Natural England's view, have linkage to the development site. In its WR, Natural England provided evidence of linkage for three species (gannet, kittiwake and Ibb gull) between SPAs/Ramsar sites classified for breeding, and non-breeding season (passage or over-wintering) presence in the area around the wind farm. We maintain that further consideration of the impact of collision mortality, in-combination with other relevant OWF's, is required before a conclusion of NLSE can safely be reached. (These comments</p>

	assessment of the Navitus Bay project prior to submission of the Application.	are also relevant to the Applicant's response 10.1, 19.1 & 24.1).
24	<p>The Examining Authority's Question:</p> <p>It is noted that from the NE RR that concerns remain that potential impacts on SPA species during the non-breeding season have not been considered comprehensively. The ExA seeks clarification from NE and from the applicant regarding the extent to which impacts on non-breeding populations need to and have been considered in the assessment. (NE, applicant)</p> <p>Applicant's response 24.1 pg 22 WR</p> <p>This was discussed in detail with Natural England at the meeting of 23 October 2012 where it was agreed that in order to show linkage to individual sites, clear ecological links would be required, and if this was not possible then there would be no requirement for HRA screening. Natural England has subsequently changed its position on this matter in its Relevant Representations but it remains the position of the Applicant.</p>	<p>Natural England's Annex E response</p> <p>See Written Representations Annex C, Sections 1, 2, 3, 4 & 6 for details.</p> <p>Natural England's response to Applicant</p> <p>The updated No Significant Effects Report (the Applicant's Written Representations Appendix 25) has not been revised to consider more distant SPAs which, in Natural England's view, have linkage to the development site. In its WR, Natural England provided evidence of linkage for three species (gannet, kittiwake and lbb gull) between SPAs/Ramsar sites classified for breeding, and non-breeding season (passage or over-wintering) presence in the area around the wind farm. We maintain that further consideration of the impact of collision mortality, in-combination with other relevant OWF's, is required before a conclusion of no likely significant effect (LSE) can safely be reached. (These comments are also relevant to the Applicant's response 10.1, 19.1 & 20.1).</p>
26	<p>Examining Authority's Question:</p> <p>In the case of far-ranging species, the likelihood of the sites being regularly used by populations has been judged as unlikely partly on the basis that '<i>the wind farm site lies on the edge of the foraging range, well outside the <u>global mean distances recorded</u></i>' (11.5.7). However NE has indicated in its RR that the primary consideration should be the <u>mean maximum range</u> (11.5.6), within which there are several SPA colonies located, and not the global mean range. Can the applicant and NE comment regarding any potential implications of the different approaches for any overall conclusions reached in the assessment? (applicant, NE)</p> <p>Applicant's response 26.1 Pg 23 WR</p> <p>As stated at paragraph 1.6.1 of the NSER (Document 5.3) and following Natural England advice the main focus of the assessment was using the mean maximum Thaxter et al foraging range. With regard to far-ranging (>100km) species, this identified two internationally important colonies, (1) the Alderney West Coast and the Burhou Islands Ramsar site for gannet (180km</p>	<p>Natural England's Annex E response</p> <p>Global mean foraging range is the mean of the distances each species was observed to forage over all colonies studied in Thaxter <i>et al.</i> 2012. Mean maximum foraging range is the mean of all the maximum foraging distances observed from the same colonies / species and provides a better description of the likely total extent of foraging range / areas in the absence of site-specific information.</p> <p>Natural England's response to Applicant</p> <p>Natural England is satisfied that the Applicant has followed our advice with regard to using mean maximum foraging distance to determine potential impacts on SPAs/Ramsar sites during the breeding season. However, Natural England advised in its WR that further assessment of the significance of the additional mortality as a result of collisions with wind generators at Rampion of gannet and lbb gull in relation to <i>Alderney West Coast and Burhou Islands Ramsar site and Baie de Seine Occidentale SPA</i> respectively.</p>

	<p>from the Project; gannet has a mean max foraging range of 229km, and (2) the Baie de Seine Occidentale SPA (Iles de Saint Marcouf) lesser black-backed gull colony (130km from the Project; lesser black-backed gull has a mean max foraging range of 141km). Further consideration was then given to the likelihood of any significant effects on these colonies given their distance from the Project and the numbers/densities recorded in the survey area, after which, as explained in the NSER (paragraphs 1.8.11-12 for gannet and paragraphs 1.8.15-16 for lesser black-backed gull), no LSE was concluded.</p>	<p>In the Applicant's NLSE Report Version B August 2013, paragraph 1.8.11 considers displacement of gannet breeding at Alderney West Coast and Burhou Islands Ramsar site from the windfarm area but not collision risk to this population. Paragraph 1.8.12 considers collision risk to the national gannet population, but not specifically to the in-combination impacts on the population breeding at this site as requested. In relation to lbb gull, the updated NLSE Report concludes that the worse-case scenario of collision mortality predicted in the ES is unlikely by reference to studies indicating gull species are not particularly at risk of collision with turbines. Natural England refers to the more recent study highlighted in its Written Representations where the lbb gull was the third most sensitive species to collision mortality and maintains that an in-combination assessment of collision mortality of this species breeding at the Baie de Seine Occidentale SPA is required.</p> <p>(These comments are also relevant for the Applicant's response 36.1).</p>
27	<p>Examining Authority's Question: The ES assesses the likely impact resulting from disturbance effects to herring, indirectly impacting on terns feeding on herring. The ES states that potentially significant effects would be mitigated through restrictions on timing of piling activities. Can the MMO, Sussex IFCA and the applicant comment regarding whether the submitted draft of the DCO provides adequate mitigation of the potentially significant effects upon herring?</p> <p>Applicant's Response 27.1-2 pg 24 WR It is agreed in the SoCG with the MMO and Sussex IFCA (Appendices 37 and 28) that potentially significant impacts to herring will be mitigated through restrictions on the timing and location of piling for monopiles. The Applicant proposes that this will be secured in the draft DMLs as follows:</p> <p>Seasonal restrictions on piling <i>No piling of monopile foundations within the Order limits shall take place within the area hatched blue on the works plan during the peak herring</i></p>	<p>Natural England's Annex E response n/a</p> <p>Natural England's response to Applicant The Applicant has proposed mitigation to reduce impact on spawning herring from underwater noise generated during the construction process. Natural England highlight that the seasonal restrictions proposed (December 1st - 31st) have no direct temporal relationship to the breeding season of Sandwich terns at Chichester and Langstone Harbour SPA/Ramsar and Solent and Southampton Water SPA/Ramsar and therefore would not provide the necessary mitigation on the breeding sites.</p> <p>We will discuss the matter with the Applicant and the MMO with the aim of reaching common ground on whether a sufficient mitigation requirement can be proposed.</p>

	<p><i>spawning season (1st December to 31st December), unless otherwise agreed with the MMO following consultation with Natural England.</i></p> <p>The plan referred to in the Condition is currently under consideration and will be submitted to the ExA in due course.</p>	
36	<p>Examining Authority's Question:</p> <p>The conclusion in relation to lesser black backed gull (1.8.15-16) states that there is the potential for the worst case assessment of collision risk to be of medium/ low magnitude. The ES identifies the species as being of very high sensitivity (Table 11.12). According to the information set out in Table 11.4 of the ES, this could result in an impact of medium to very high significance. The HRA report goes on to conclude that a significant collision risk is unlikely on the basis of empirical evidence from other wind farm studies suggesting that a worst case outcome is unlikely. On the face of the matter, the ExA is unclear whether or not this might be a relatively simplistic assessment given the potential for a significant effect. Can the applicant and NE comment? Other nature conservation bodies may wish to comment (applicant, NE, other interested IPs)</p> <p>Applicant's Response 36.1 pg 28 WR</p> <p>The Project lies on the fringe of the lesser black-backed gull SPA colony (the Baie de Seine Occidentale SPA (Iles de Saint Marcouf)) mean max foraging range, so is very unlikely to be used by significant numbers of birds from that SPA, thus reducing the level of sensitivity of this species. The collision risk (31 birds/year applying a 98% avoidance rate or 8/year applying a more reasonable 99.5% avoidance rate) would be low in a regional context, but as only a small proportion of that mortality would be on the SPA population and indeed that SPA population is only small (300 pairs), it can be concluded that there would be no LSE on the SPA.</p>	<p>Natural England's Annex E response</p> <p>According to a recent peer-reviewed paper investigating sensitivity of seabirds to collision with and displacement from offshore windfarms, lesser black backed gulls are at relative risk of collision with turbine blades (Furness <i>et al.</i> 2013). They rank 3 out of 38 species assessed. See Written Representations Annex C, Sections 4 for further comment.</p> <p>Natural England's response to Applicant</p> <p>Natural England is satisfied that the Applicant has followed our advice with regard to using mean maximum foraging distance to determine potential impacts on SPAs/Ramsar sites during the breeding season. However, Natural England advised in its WR that further assessment of the significance of the additional mortality as a result of collisions with wind generators at Rampion of gannet and lbb gull in relation to <i>Alderney West Coast and Burhou Islands Ramsar site and Baie de Seine Occidentale SPA</i> respectively.</p> <p>In the Applicant's NLSE Report Version B August 2013, paragraph 1.8.11 considers displacement of gannet breeding at Alderney West Coast and Burhou Islands Ramsar site from the windfarm area but not collision risk to this population. Paragraph 1.8.12 considers collision risk to the national gannet population, but not specifically to the in-combination impacts on the population breeding at this site as requested. In relation to lbb gull, the updated NLSE Report concludes that the worse-case scenario of collision mortality predicted in the ES is unlikely by reference to studies indicating gull species are not particularly at risk of collision with turbines. Natural England refers to the more recent study highlighted in its Written Representations where the lbb gull was the third most sensitive species to collision</p>

		<p>mortality and maintains that an in-combination assessment of collision mortality of this species breeding at the Baie de Seine Occidentale SPA is required.</p> <p>(These comments are also relevant for the Applicant's response 26.1).</p>
47	<p>Examining Authority's Question: ES paragraph 2a.6.91 states that monopole foundation designs are currently only suitable for use in depths of up to 30m and that another foundation design is therefore expected to be required to support those turbines located in deeper water. However no draft layout has been provided and the ES does not preclude the use of monopiles in any particular part of the development area. Can the applicant, MMO and NE comment regarding whether the use of monopiles should therefore be assumed as the worst case across the whole of that part of the Order area reserved for turbine development? (applicant, MMO, NE)</p> <p>Applicant's Response 47.1 pg 36 WR Whilst at the time of writing the ES, monopoles were generally only being installed on constructed or in constructed projects in water depths up to 30m, there is the possibility that monopoles could be designed for installation in greater depths. Having not yet conducted full geotechnical site investigations across the Project site, the Applicant wishes to retain the flexibility for monopoles to be installed within any area identified for turbine installation. The use of monopiles in any part of the site should therefore be considered as worse case.</p>	<p>Natural England's Annex E response Is this question referring to worst case scenario in respect to noise impacts? If not, Natural England would consider gravity based foundations to be presented as the worst case scenario.</p> <p>Natural England's response to Applicant Natural England is awaiting receipt of the site characterisation report. Additionally, Natural England is attending a meeting on the 24th September with the Applicant and MMO to discuss foundation types and WCS in more detail. Further comments on this matter will be provided in line with the October 15th deadline in response to Action 44 from the Action points arising from the DCO / DML Issue Specific hearing.</p>
<p>Landscape / Seascape / Visual and Heritage</p> <p>157</p>	<p>Examining Authority's Question: In relation to the content of the applicant's Environmental Statement in respect of landscape and visual effects and design: are there any concerns regarding the methodology employed by the applicant, and is there any evidence that the photo-montages and wireframe images included in the ES do not provide a reasonably accurate impression of the landscape and visual impact as the proposed project would be viewed from the principal significantly affected locations? (relevant LAs, NE, EH, applicant.)</p> <p>Applicant's Response 157.1 – 4 pg 118-119 WR: The method was initially informed by feedback received on the Scoping</p>	<p>Natural England's Annex E response In general Natural England agree that the methodology is fit for purpose. However, neither the LVIA nor the SLVIA make a distinction between significant and non-significant effects. The Applicant's Addendum provides clarification on this point in relation to the SLVIA, but not the LVIA. This assumes a general interpretation that moderate and major effects are significant and minor and negligible effects are not. Natural England agrees with this interpretation and the list of significant effects.</p> <p>The viewing distance for the photomontages within the SLVIA is 31cm</p>

Report in 2010 (feedback summarised in Table 12.1, Section 12.3 of the ES). A co-ordination meeting was then held on 21 October 2011 attended by representatives from South Downs National Park, East Sussex County Council, West Sussex County Council and Brighton and Hove Council (representatives from Natural England, English Heritage and Horsham District Council were also invited but unable to attend; however comment was subsequently provided in correspondence). As an outcome of the meeting, the method, and the extent of study area and consideration of cumulative development in particular, was discussed and agreed. Following publication of the Draft ES in June 2012 a further consultation meeting was held with Friends of the Earth, the Campaign for the Protection of Rural England, the South Downs Network and the South Downs Society and modification to the ES was agreed (refer to paragraph 12.3.18, Section 12.3 of the ES for extent of modification). The resulting published SLVIA methodology is set out in Section 12.3 of the ES.

A meeting was then held in April 2013 with the South Downs National Park, Natural England and West Sussex County Council, to begin the process of agreement of the content of SoCG. The points of discussion on method are summarised in the list below. Each of these points has been considered individually within the SLVIA Clarification Note (section references in brackets identify the relevant location):

- Sensitivity, magnitude and significance ratings (Section 1)
- Definition of significance (Section 2)
- Boundaries of seascape character areas (Section 4)
- Representation of cultural associations (Section 5)
- The extent of cumulative study area (Section 10)
- Representation of sea to land views (Section 11).

The second component of the Question seeks clarification of the robustness of photomontage and wireframe images. A meeting was held in April 2013 with the South Downs National Park, Natural England and West Sussex County Council, during which the format of photomontage presentation was questioned, suggesting that extensive panoramas were difficult to relate to

(when printed full size) and the viewing distance for the photomontages for the onshore substation in the LVIA is 30cm. These visualisations are therefore just within the minimum acceptable distance, but not within the recommended distances (Scottish Natural Heritage recommends that for material printed in an ES and intended to be hand held, a viewing distance between 400mm and 500mm is recommended, para. 126 SNH Visualisation of Windfarms). Appendix 1 to the Applicant's Addendum includes a number of images providing enlarged sections of the 120 degree panoramas presented in the ES figures. These have a viewing distance of 764mm when printed on A3 paper which is well above SNH's recommendations. These are useful and meet Natural England's requirements. It is important to note that visualisations, while useful in communicating information, can never replicate the experience of seeing a development in the landscape and the visualisations should not therefore be used in isolation (viewpoints should be visited in the field on a clear day).

On the whole we agree that they form a reasonably accurate impression of the landscape and visual effects of the proposal. However, we note that no night time lighting is shown on the visualisations and it is not clear from the text whether night time lighting is likely to be visible from the South Downs National Park or not.

Natural England's response to Applicant

On the whole we agree with the Applicant's response. However, we would like to reiterate the point from our Written Representations that no night time lighting is shown on the visualisations and it is not clear from the text whether night time lighting is likely to be visible from the South Downs National Park or not.

	<p>the view in its setting. In response to this, additional ‘zoomed-in’ 75mm viewpoint illustrations have been provided to assist in gaining an impression of the landscape and visual impacts of the Project (refer to images in Appendix 1 of the SLVIA Clarification Note).</p> <p>Scottish Natural Heritage guidance on ‘Visual Representation of wind farms’ is currently in circulation as a consultation draft (May 2013). The guidance refers to the presentation format for 75mm images, however as this is only at a consultation stage, the basis of presentation of Project viewpoint images in relation to current published best practice guidance is as described in Section 13 of the SLVIA Clarification Note.</p>	
158	<p>Examining Authority’s Question:</p> <p>Would the proposed development, when considered in isolation or in combination with other existing, under-construction and planned developments, result in any significant adverse effects upon achievement of the statutory objectives for the South Downs National Park or other relevant landscape/seascape, visual or design policy objectives, including those related to the Sussex Heritage Coast</p> <p>If so, would any of these impacts be so adverse following any proposed mitigation as to justify refusal of the proposed development? What reasoning or evidence is available to support any argument put forward in response to questions.</p> <p>Applicant’s Response 158.1 – 4 pg 119-120 WR:</p> <p>The Question seeks clarification of whether the Project would result in any significant adverse impacts on the statutory objectives of designations including the South Downs National Park and Sussex Heritage Coast. The two statutory purposes of the South Downs National Park Authority are:</p> <ul style="list-style-type: none"> • To conserve and enhance the natural beauty, wildlife and cultural heritage of the area; and • To promote opportunities for the public understanding and enjoyment of the special qualities of the area. 	<p>Natural England’s Annex E response</p> <p>There is scope within the relevant National Policy Statements to refuse a development proposal where it will have a significant adverse effect on the qualities for which a National Park has been designated (see EN-3 at 2.5.33); it is however, ultimately for the Secretary of State to consider such impacts against any environmental, social and economic benefits that the proposal may have when considering whether or not to authorise development consent.</p> <p>The Applicant’s assessment reports a major adverse effect on the South Downs landscape character area, a major/moderate adverse effect on the South Downs National Park and a major/moderate adverse effect on the Sussex Heritage Coast (Table 12.4 of the SLVIA clarification note). Natural England agrees with these judgements and confirms that these effects cannot be mitigated.</p> <p>The SLVIA clarification note includes typical descriptors of major and moderate effects in Table 12.3. This indicates that a major adverse effect would indicate that the Proposed Scheme would “<i>result in large scale change or introduce discordant or intrusive elements in the view; be at considerable variance with the character (including quality and value) of the seascape/landscape; degrade or diminish the integrity of a range of characteristic features or elements; damage the sense of place or key views; compromise the seascape/landscape objectives of</i></p>

- The South Downs National Park's special qualities are named as:
- Diverse, inspirational landscapes and breathtaking views.
 - A rich variety of wildlife and habitats including rare and internationally important species.
 - Tranquil and unspoilt places.
 - An environment shaped by centuries of farming and embracing new enterprise.
 - Great opportunities for recreational activities and learning experiences.
 - Well-conserved historical features and a rich cultural heritage.
 - Distinctive towns and villages, and communities with real pride in their area.

Table 12.4, Section 2 of the SLVIA Clarification Note (Appendix 23) provides a summary of the significant seascape, landscape and visual effects of the Project. This includes reference to major/moderate adverse effects on the purposes of designation of the South Downs National Park (and by association the Sussex Heritage Coast) and moderate effects on the purposes of designation of Kemp Town Enclosures (Brighton) registered historic park and garden. Further detail on the effects on the inherent components of the South Downs National Park and Sussex Heritage Coast is included in Sections 6, 7 and 8 of the SLVIA Clarification Note.

It is noted that the UK Offshore Energy Strategic Environmental Assessment (OESEA) (2011) reported the Rampion Round 3 offshore wind leasing development zone as potentially resulting in low to moderate impacts on the context of the Sussex Downs Area of Outstanding Natural Beauty (AONB), the proposed South Downs National Park and the Sussex Heritage Coast (paragraphs 12.3.1 to 12.3.2, Section 12.3 of the ES). Subsequent to publication of the OESEA, the transition of the South Downs from AONB to National Park was concluded in 2011. By comparison of AONB and National Park designations, an AONB (as defined in the Countryside and Rights of Way Act 2000) is an area of such outstanding natural beauty as to be designated for the purpose of conserving and enhancing the natural beauty of the area. With this objective also comes the purpose of increasing the understanding and enjoyment by the public of the special qualities of the AONB. In this

a designation" (Table 12.3 of the Addendum). The table goes onto to state that a moderate adverse effect would *"result in medium scale change or introduce some discordant or intrusive elements in the view; conflict with the character (including quality and value) of the seascape/landscape; have an adverse impact on characteristic features or elements; diminish the sense of place or key views; conflict with the seascape/landscape objectives of a designation"*. These definitions indicate that the Applicant assesses that there will be a conflict with, or will compromise, the objectives of the South Downs National Park and the Sussex Heritage Coast.

In particular, it is Natural England's view that the offshore wind farm will affect the following special qualities associated with the South Downs National Park and the Heritage Coast as listed on their website [<http://www.southdowns.gov.uk/about-us/special-qualities>]:

1. "Diverse, inspirational landscapes and breathtaking views" and
3. "Tranquil and unspoilt places".

The first of the special qualities (diverse, inspirational landscapes and breathtaking views) includes specific reference to the "stunning, panoramic views to the sea". The third of the special qualities (tranquil and unspoilt places) notes that "In some areas the landscape seems to possess a timeless quality, largely lacking intrusive development and retaining areas of dark night skies". Therefore any development that may be described as 'intrusive' in views or that affects the dark skies could affect these special qualities.

Natural England's response to Applicant

Natural England would like to note that the SLVIA identifies greater effects on the SDNP than the strategic assessment. We are unsure why the OESEA is mentioned here as it is thought that the SLVIA overrides this given the greater and more specific detail provided.

	<p>respect, the basis of AONB designation shares similar principles to that of National Park designation. The premise of assessment of SLVIA effects in relation to the broad underlying principles of the South Downs under either AONB or National Park designation are therefore broadly comparable at the level of assessment considered in the published OESEA.</p>	
159	<p>Examining Authority's Question: In the applicant's Environmental Statement the 'worst case' assessment in terms of visual impact of the offshore wind farm is based upon the largest number of smaller wind turbines rather than a smaller number of taller and larger turbines. Is the logic of this approach accepted? If not why not and what evidence is available to support the argument put forward? (relevant LAs, NE, EH, South Downs Society, applicant.)</p> <p>Applicant's Response 159.1 – 2 pg 120-121 WR: The basis of the Project assessment layout is described in Section 12.5 of the ES. This includes definition of the wind farm components in Table 12.10 and consideration of the turbine height/plan layout variables in paragraphs 12.5.6 to 12.5.9. Within the potential variation of turbine number and height, the judgement that a larger massing of smaller turbines will present a greater seascape, landscape and visual effect than fewer, taller turbines is explained in paragraph 12.5.11. To ensure that the relative differences in number and height variables are however represented and assessed in the ES, option extremes are illustrated as photomontages for viewpoints 2, 4 and 11. Alternative layout effects on seascape and landscape are also considered in paragraph 12.5.34 and alternative layout visual effects are considered in paragraphs 12.5.86 to 12.5.88.</p> <p>This has been agreed with Natural England (Appendix 35).</p>	<p>Natural England's Annex E response Natural England does not agree that the largest number of smaller wind turbines would represent the 'worst case'. Since larger turbines will be visible over greater distances (as demonstrated by the Applicant's wireline comparison of scheme layout variables in Figure 12.49b), the largest turbine over the greatest spread is likely to form the worst case scenario. The IPC's Advice Note Nine: Rochdale Envelope (2008) states that "The challenge for the EIA will be to ensure that all the realistic and likely worst case variations of the project have been properly considered and clearly set out in the ES...".</p> <p>Natural England's response to Applicant Future discussions between the Applicant and the South Downs National Park Authority are to be held to discuss the layout options and worst case / best case scenarios in greater detail. Further comments will be provided in line with the October 15th deadline in response to Action 26 from the Action points arising from the DCO / DML Issue Specific hearing.</p>
160	<p>Examining Authority's Question: What mitigation of any identified adverse landscape/seascape and visual effects of the proposed project would be practicable? Does the submitted draft Development Consent Order/Deemed Marine Licence provide adequately for appropriate visual and landscape impact mitigation measures? (relevant, LAs, NE, EH, South Downs Society, applicant)</p>	<p>Natural England's Annex E response Detailed design of the scheme in terms of positioning and size of turbines will be important to minimise adverse effects, but the effects of a development of this size and scale located at this distance from the coast will remain significant.</p>

	<p>Applicant's Response 160.1 specifically pg 121 WR:</p> <p>Mitigation measures within the ES SLVIA are limited by the principles of the Rochdale Envelope where a worst case and potential alternative development scenarios form the basis of assessment, rather than a defined layout. For the offshore wind farm the scope for mitigation therefore relates primarily to the turbine height/plan layout variables, as summarised in paragraphs 12.5.3 to 12.5.12, Section 12.5 of the ES. The design process recorded in Figure 12.50 and Section 2a of the ES illustrates the scope for the Project layout to incorporate 'mitigation' in terms of identifying those associations with potential to minimise adverse effect. The sensitivity of the Heritage Coast has been acknowledged with consideration of options which compress the site area and thereby reduce the horizontal extent of the wind farm from Heritage Coast vantage points. As a comparative reference, the draft ES assessment worst case layout has been presented alongside the final ES worst case layouts (Figures 12.48a and b in the ES) to illustrate progression in the design process in response to stakeholder feedback (and thereby convey the scope for mitigation within the design layout). A summary statement on the scope for mitigation is included in Section 12.8 of the ES. Ultimately the final Project construction layout will be refined in relation to assessed seascape, landscape and visual sensitivities, but the scope for mitigation will inherently be limited by what can be achieved within the defined application boundary and operational constraints.</p>	<p>Natural England's response to Applicant</p> <p>Natural England remains of the opinion that detailed design, positioning and size of turbines is important to ensure that the impacts on the National Park are minimised as far as practicable. Nevertheless the scale of this development at this distance will always be significant in terms of impact. Further comments will be provided in line with the October 15th deadline in response to Action 26 from the Action points arising from the DCO / DML Issue Specific hearing.</p>
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Desholm, M., Fox, A.D., Beasley, P.D.L. & Kahlert, J. (2006). Remote techniques for counting and estimating the number of bird-wind turbine collisions at sea: a review. *Ibis*, 148, 76-89.

Explanation Notes:

1. Key ornithological Issues

As outlined in the above table, specifically in response to Question 10, a summary of the key ornithological issues Natural England consider require further assessment are set out below. Please see Tables 1 and 2 of Natural England's Written Representations which provide more detail of these issues.

HRA

- In-combination assessment of non-breeding season collision mortality on breeding SPAs (Flamborough Head & Bempton Cliffs SPA for gannet and kittiwake, Alde-Ore Estuary SPA/Ramsar for lesser black-backed gull).
- Assessment of indirect impacts of noise impact zone on Sandwich tern breeding at Chichester and Langstone Harbour SPA/Ramsar; and Solent and Southampton Water SPA/Ramsar, through disturbance of prey species.
- Assessment of collision mortality impact of migratory waterbirds using methodology as outlined in Wright *et.al.* 2012.
- In-combination assessment of breeding season collision mortality on gannet and lesser black-backed gull (Alderney West Coast and the Burhou Islands Ramsar and Baie de Seine Occidentale SPA respectively).

EIA

- Impact of collision mortality on Brighton to Newhaven Cliffs SSSI (kittiwake and herring gull).
- Cumulative assessment of collision mortality at a biologically meaningful scale (lesser black-backed gull, great black-backed gull, herring gull, kittiwake, great skua, gannet, common tern and Arctic tern).

2. Sandwaves

Following the recent submission of Natural England's Written Representations and draft SoCG, additional information has been provided to the Applicant as a result of the assessment of the Applicant's report detailing sandwave information within the Project area. Please see the following paragraphs below for Natural England's response summary.

The introductory section notes that sandwaves can have an interaction with wave breaking as follows "*Those sandwaves which are located in shallow water may also be prone to interaction with waves and under certain conditions the bedform may act to enhance local wave steepening and lead to wave breaking.*" This helpfully shows that the Applicant has understood why Natural England raised concerns around potential sandwave clearance (i.e. that sandwave clearance might stop this process and so larger waves may reach closer to the coast).

The Applicant highlights the following with regard to available data on this issue; *“Local geophysical surveys have been commissioned to support the planning of offshore wind farm development and to compliment navigation charts describing the wider area. The geophysical surveys provide the most up to date and high resolution description of the profile of the local seabed and therefore provide the best available definition of any sandwaves that are present within an area of development.”* This therefore suggests that the Applicant should have data to confirm where sandwaves are located and whether they are likely to need to clear any closer to the coast as part of the development and therefore has the data to answer our concerns.

The first diagram within the document shows that there are sandwaves located both in the offshore area (within the windfarm area) and close to the coast in one area in front of Brighton Marina. The data which provides this information is relatively coarse in nature and is accumulated from other sources (i.e. not directly carried out for this project). The geophysical surveys which have been commissioned for the project provide more detailed information and this paper notes that the geophysical survey *“focuses on the northern part of Zone 6 which is proposed for development of the Rampion project, as well as a cable corridor for the intended route of export cables”*.

Sandwave removal closer to the coast was of most concern to Natural England and therefore the survey of the intended route for the export cables is of most importance. The results from the survey show that *“Within the coverage of the geophysical survey the only area with sandwaves is in the offshore and inside the boundary of Zone 6 and at a location within the Northern Paleovalley.”* The findings go on to say *“In context, a nearshore to offshore transect developed from the geophysical survey shows the sandwaves are located over 20km offshore and in depths of greater than 40m below LAT”*.

The report concludes by saying *“The review offered in this note shows that the specific area where sandwaves are present is located far offshore and in deeper water defined by the Northern Paleovalley. As a consequence, these sandwaves are well beyond the influence of waves and any seabed preparations that are required for project installation will have no influence on wave breaking processes at the coast. Furthermore, the escarpment feature is likely to remain as the major buffer (i.e. limiting any pathways) between any other changes in coastal processes at this location and the potential for effects at the coast.”*

The report has therefore satisfied any concerns around sandwaves, the detailed geophysical survey has demonstrated that there are no sandwaves in the planned export cable corridor and the only sandwaves present are in deep waters and as such will not have any influence on wave breaking for the coast. So as long as the export cable corridor route does not change then Natural England is satisfied that sandwave clearance (i.e. pre-sweeping) in the deeper water will not have any influence on coastal processes.

3. Comment on Notes of Actions Arising from the DCO/DML Issue Specific Hearing held on the 28th 29th August 2013

Action Point 24. Article 42.

Natural England has reviewed both the Triton Knoll and Galloper OWF decisions and, in accordance with the reasons of those decisions, is of the view that Natural England need not be excluded from the Article 42 Arbitration provision in this particular case. However, Natural England may seek to advocate exclusion from such provision in future cases in the event it is of the view that such a decisions would cause significant conflict with its statutory duties.