



THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES
2010

East Anglia TWO Offshore Wind Farm

Appendix E1b to the Natural England Deadline 1 Submission

**Comments to the Applicant Comments on Natural England's Relevant and Written
Representations [AS-036] Seascape and Landscape Visual Impact Assessment
(SLVIA)**

For:

The construction and operation of East Anglia Two Offshore Windfarm, a 900MW windfarm which could consist of up to 75 turbines, generators and associated infrastructure, located 37km from Lowestoft and 32km from Southwold.

Planning Inspectorate Reference: EN010078

2nd November 2020



Appendix E1b Natural England's comments on the Applicant's Review of Natural England's Relevant and Written Representations [AS-036] for Seascape and Landscape Visual Impact Assessment (SLVIA)

This document is applicable to both the East Anglia ONE North and East Anglia TWO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's (ExA) procedural decisions on document management of 23rd December 2019. Whilst for completeness of the record this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it again for the other project.

Summary: Natural England's (NEs) overall conclusions remain unchanged from our Relevant/Written Representation

Our concern is that, for East Anglia Two (EA2), commercial viability can only be achieved through design and technological choices which will result in significant adverse effects on the statutory purposes of the Suffolk Coast and Heath Area of Outstanding Natural Beauty (SCHAONB). It is agreed between The Applicant and NE that there will be multiple significant effects on both landscape and visual receptors located within the SCHAONB and that as a result there will be significant adverse effects upon some of the special qualities of the AONB.

Within the Environmental Statement (ES) The Applicant has concluded that the statutory purposes of the designation will not be adversely effected '*overall*' despite concluding that some of the special qualities of the designation will be significantly harmed.

Based on our review of The Applicant's evidence (as submitted in the PIER and ES) and site visits undertaken in the summer months of 2018 and 2019, NE concludes that the statutory purpose of the SCHAONB to conserve and enhance natural beauty, will be significantly harmed/adversely effected by the turbines of EA2.

Please note that following confirmation of the height of the turbines to be used for the EA1N and EA2 arrays (282m) the apparent height figures have been recalculated and used where NE presents new values for this measurement (NE - 3.3.4 for instance). Where we have done so a clear statement is provided. **Therefore, unless otherwise stated all other comments are based on height values of blade tip height of 300m as set out in the ES.** We will provide further advice should when a revised assessment is submitted into examination.



Mitigation measures

Whilst Natural England welcomes the reduction in turbine heights at EA2, we wish to highlight that there is likely to be conflict between potential mitigation to reduce SLVIA concerns with those of offshore ornithology with opposing requirements in relation turbine heights in reducing the scale of particular thematic impacts. Therefore, the Examining Authority may need to weigh up the overall merits of potential mitigation proposals and how the project design could be further adapted to meet all of the varying mitigation requirements. For example, turbines with higher draft height could be located further away from shore to avoid an increase in visual impact while still providing a reduction to collision mortality.



Table 1 Seascape and Landscape Visual Impact Assessment

Point	Comments and issues	Risk	EA1N	EA2
<u>Seascape (Suffolk Coast and Heath AONB and Suffolk Heritage Coast)</u>				
The majority of the comments below refer to EA2 ONLY. Page numbers refer to the document 'Applicant's Comments on Relevant Representations EA2 Volume 3 Technical Stakeholders 11 th June 2020'. Where comments apply to EA1N these are indicated accordingly.				
NE i - xii	Please refer to detailed comment below		Y	Y
NE 2.1 (p.393)	<u>Note about visible height of offshore turbines in respect of EA2</u> Ongoing: We note the Applicant's requirement to make the schemes ' <i>economically competitive</i> ' by maximizing energy gain through the use of technology which offers the best capacities and efficiencies available. And the contribution offshore wind makes towards meeting climate change targets. However, the scheme's design also needs to comply with planning policy as set out in the relevant National Policy Statements.		Y	Y
NE - 2.2	<p><i>Ongoing:</i> The Applicant has concluded that significant adverse effects on landscape and visual receptors will occur from the proposed EA2 offshore windfarm along a stretch of coast which extends in length up to 35 km. The entirety of the affected is area is defined as a Heritage Coast and located wholly within the SCHAONB. The Applicant has also concluded that these significant adverse effects will harm some of the special qualities of the SCHAONB. Therefore, the portion of the SCHAONB affected is immaterial as the statutory purpose of the AONB applies to the entirety of the designated area.</p> <p>It should be noted that the coastal portion of the Suffolk Coast and Heaths AONB is a critical element of the natural beauty of the designation. In addition the classification of the Suffolk Heritage Coast reinforces the value of this stretch of coastline. It is therefore Natural England's view it would be inappropriate to conclude the designation 'overall' is not adversely effect on the basis that as only the coastal portion of the designation is adversely effected</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	by the turbines of EA2.			
NE - 2.3	<p>Ongoing: NE, as the Government’s statutory adviser for landscapes in England, considers the formula shown in Figure 1 of NE’s Appendix E, which is an elementary application of Euclidean geometry, to be the most suitable for measuring the apparent height of structures for comparative purposes.</p> <p>Whilst we agree that the formula represented in Figure 1 does not appear in the SNH 2017 Guidance; an interpretation of it does in Annex D: Earth Curvature and Refraction of Light, page 49.</p> <p>The use of the diagram obtained from the Challenge Navitus website was purely due to expediency. NE consider it helpful to provide a diagrammatic representation of the formula as it illustrates the various components of the calculation, such as the height of the viewer, which we believe better aids understanding.</p> <p>Please note that whilst NE does not know why SNH choose not to use this formula in the recent updating of their guidance; we do note their emphasis on the presence of the Earth’s atmosphere as a critical factor i.e. the influence of the refraction of light in defining the apparent height of structures when seen from a distance. Therefore, the formula used by NE incorporates this emphasis on light refraction through the use of a refraction correct value (0.075) which is universally applied. If effects of light refraction on apparent height are to be excluded from the formula this value is switched to 0. The apparent height values provided by NE in our Relevant/Written Representation and this document have the light refraction value set at 0.075.</p>		Y	Y
NE – 2.4	<p>Ongoing: Please be advised that we always acknowledge that the ES for EA1N and EA2 accounted for the Earth’s curvature on apparent height. NE’s comment/advice was provide Applicant ‘...comparisons between the apparent height of the turbines with existing offshore wind turbines, such as those at Galloper and Greater Gabbard, as a scale reference to assist in the judgement of visual influence...’.</p> <p>Please be advised that the inclusion of Figure 2 was never intended to provide a ‘true relationship of the Project</p>		Y	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>[EA2 and EA1N] <i>with the existing offshore turbines at Galloper and Greater Gabbard</i> as none of the parameters set out in Figure 2 apply to EA2, EA1N, Galloper or Greater Gabbard. The purpose of Figure 2 is illustrative and simply represents the comparative appearance of turbines of differing heights located at differing distances from the observer. The BEIS 2020 Review and Update of Seascape and Visual Buffer study for Offshore Wind Farms (OSSEA) guidance uses the similar approach in order to illustrate comparative heights (see diagrams on page 204 to 206).</p> <p>NE notes the Applicant's recommendation that the photomontages included in the ES (Figures 28.25 – 28.54 [APP-355 to APP-384]) are the best way to appreciate the scale of the turbines. We agree that they provide a close representation, but we advise that the images are best interpreted (when printed at the correct scale and at a high resolution) at the site from which the original photography was captured. NE also agrees that it is the wireline diagrams which provide the best tool for assessment purposes.</p>			
<p>NE 2.5 to 2.8 (p.397 - p. 401)</p>	<p>Ongoing: NE agrees <i>'that judgements on significance should be properly based on the assessment material provided in the ES which have been undertaken with best practice GLVIA3'</i>. We also agree that there is <i>'no established guidance which reduces seascape, landscape and visual assessment to a quantitative assessment of values in a tabular matrix.'</i> At no point in our advice has NE advocated against the use of GLVIA3 or for an approach based on the latter.</p> <p>NE presented the comparative analysis of apparent height simply to provide additional evidence in order to assist the ExA in their decision making. As noted above the Applicant considers that evidence on comparative apparent height analysis to be useful.</p> <p>We note the brief analysis (p.399, 3rd paragraph) which measures the difference in degrees between the turbines of EA2, Greater Gabbard and Galloper stating that is a <i>'very small value'</i> - which indeed it is. However, we advise that the percentage value of the difference is most the useful evidence for comparative purposes. It is for this reason</p>		<p>Y</p>	<p>Y</p>



Point	Comments and issues	Risk	EA1N	EA2
	<p>that the Environmental Statement (ES) has concluded that the turbines of EA2 will have a significant effect whereas the turbines for the Greater Gabbard and Galloper do not. Hence our statement that the 300m turbines of EA2 <i>'would be around 1.54 times greater [i.e. 1.54 times taller] than those of Galloper'</i>. The figure 1.54 was based on the difference between the quoted values for EA2 (0.467*) and that for Galloper (0.309). NE recognises that this was a misleading figure; this will now be revised to <i>'51% taller'</i>.</p> <p>The other specific comments on the issues listed below are addressed later in our comments.</p> <ul style="list-style-type: none"> • Degrees of arc. • Observer height (m) • Closest distance to shore values (km) • Atmospheric visibility • Comparisons between the height of the Galloper and EA2 turbines south Thorpeness. <p>*The EA2 apparent height values presented here have now been updated. Please see recalculated apparent angles values presented under section NE – 3.3.4 (p.419 to p.423) below</p>			
NE – 2.9 (p.402)	<p>Ongoing: NE agrees that the Greater Gabbard and Galloper Environmental Statements were correct in predicting that the visual effects of these turbines would not be significant at minimum separation distances from Orford Ness. NE also agrees that this <i>'is a finely balanced judgement for the threshold of significance'</i></p> <p>NE notes the reference to apparent height for EA1N is 0.370 degrees (Applicant's figure) from Viewpoint 1 (Lowestoft). NE advises that is not relevant as the viewpoint is located outside of the SCHAONB and the SHC and therefore located within a landscape of lower value (in SLIVA terms).</p> <p>NE notes that the Applicant considers the horizontal spread of the turbines is the primary factor in reaching this</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>judgement. NE advises that it is the combination of the horizontal spread and the apparent height of the turbines which jointly form the primary factor for the judgement of significant landscape and visual effects upon the northern portion of the coastline of the SCHAONB.</p>			
<p>NE – 2.9 (p.403)</p>	<p>Ongoing: We note the list of other locations where the apparent height is greater than the figure quoted (*0.467) by Natural England. However, all of the locations listed are outside of a nationally designated landscape, and are therefore of a lower value in SLIVIA terms and are not relevant in the context of EA2 and the SCHAONB.</p> <p>In relation to the two other OWF examples provided which are located within the seascape setting of a designated where the apparent (angular) height exceeds 0.467 degrees* there is insufficient information about the elevation (viewing height; a value needed in order to calculate the apparent height) from which these structures are seen to support the use of these examples. NE provides the following context for these examples to demonstrate the limited comparability to the SCHAONB: -</p> <p>Clwydian Range AONB: there is an intervening strip of undesignated land between the northern boundary of the AONB and the coastline through which the A548 runs.</p> <p>South Downs National Park (SDNP): the section of coastline in question is located between Rottingdean and the eastern edge of Brighton Marina, extending for approximately 2.7km, with the A259 running through it.</p> <p>Neither stretch of coastline has been defined as a Heritage Coast. The predicted significant adverse effect of the EA2 turbines on the Suffolk Heritage Coast (which is wholly contained within the Suffolk Coast and Heath AONB) extends to approximately 35 km.</p> <p>It is stated at p.397 (final paragraph) that the effect of the EA2 on the statutory purposes of the Suffolk Coast and Heath AONB, as set out in the PEIR and ES, upon which the scheme should be determined and that comparisons with other OWF in the setting of other designated landscapes are not relevant. Hence NE has not sought to make</p>		<p>N</p>	<p>Y</p>



Point	Comments and issues	Risk	EA1N	EA2
	<p>comparisons with other arrays beyond the coastline of the SCHAONB and nor do we think it is helpful to do so. The apparent height values included in our advice for the Galloper and Greater Gabbard arrays are a 'like for like' comparison which could be made for Suffolk Coast and Heath AONB. It is for this reason that NE has not proposed a definite apparent degree value beyond which significant adverse effects will result. From the evidence presented in the ES and PIER a value of at least 0.407* (Aldeburgh) and potentially 0.382* (Orfordness Lighthouse) would result in harmful effect on the natural beauty of the SCHAONB.</p> <p>The importance of assessing the scheme within the <u>context</u> of the adjacent designated landscape was recognised by the ExA during the examination of the Navitus Bay OWF in 2014. The apparent visible angles of these turbines (when viewed from Durlston Castle, viewing height 51m, separation distance 19km, 210m turbines) would have been 0.573 degrees; so slightly more than the figure quoted for the SDNP and less than that for the Clwydian Range AONB.</p> <p>*The EA2 apparent height values presented here have now been updated. Please see recalculated apparent angles values presented under section NE – 3.3.4 (p.419 to p.423) below</p>			
NE – 2.9 (p.402)	<p>Ongoing: NE believes that there may have been a misunderstanding in the relevance of our advice. On land not knowing the actual height of a structure does not prevent one from understanding how big it is in relation to other objects around it. When viewed from Hempstead Heath both 30 St Marys Axe (the 'Gherkin') and 20 Fenchurch Street (the 'Walkie-Talkie') are tall and therefore amongst the most conspicuous features of the City of London's skyline. The former is taller (by 20m) to the latter but when viewed from Hempstead Heath they appear to be of a very similar height (180m compared to 160m).</p> <p>The same applies when views out to sea are experienced. However because of the lack of <u>reference points</u> against which the height of a proposed or new structure can be gauged and the greater difficulty in judging distances out to sea, NE provided the information it did in sections 2.1 to 2.11. It is the presence of the Galloper and Greater</p>		Y	Y



Point	Comments and issues	Risk	EA1N	EA2
	Gabbard arrays in the seascape setting of the SCHAONB which provides a <i>guide</i> against which the predicted adverse effects of the EA2 turbines can be gauged.			
NE – 2.10 (p.404)	Please see response to NE 3.9.2, this issue is still ongoing.			
NE 2.11 (p.405)	<p>Ongoing: Please see below for our comments in respect of landscape and visual receptors south of Aldeburgh; not Thorpeness as stated.</p> <p>NE agrees that use of the phrase ‘50% upscale of the visual impact’ is imprecise. NE advises that the sentence should read;</p> <p><i>‘...and would also represent at least a 50% upscaling of the apparent height turbines located off SCHAONB coastline’.</i></p> <p>NE agrees that other factors, as listed by the Applicant’s response, come into the significance assessments made in the SLVIA. These factors have combined to conclude that adverse significant landscape and visual effects will occur along the northern portion of the SCHAONB coastline.</p> <p>NE disagrees with the conclusion that the statutory purpose of the SCHAONB would not be harmed by the EA2 turbines. It is our conclusion, based upon the evidence presented in the ES, that the statutory purpose of the SCHAONB will experience significant adverse effects by the proposed design of EA2. As acknowledged by the Applicant ‘<i>specific aesthetic and perceptual aspects of its character relating to panoramic views offshore from the coast that will experience change</i>’. And it is these aspects set out in the sites special qualities which contribute to the natural beauty of the designation. Therefore, it is our view that the coastal landscapes of the northern portion of the SCHONB will be significantly adversely effected which leads NE to the conclusion that the statutory purpose of the designation will be harmed and it is immaterial if other landscapes within the SCHAONB are not adverse</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	effected.			
NE 3.1.1 (p.406 - 407)	<p><u>Good Design</u></p> <p>Ongoing: Whilst NE welcomes the reduced lateral (horizontal) spread of the array, it NE's view that the reduction in spread of the array as illustrated by the diagram on p.419 does not represent sufficient mitigation i.e. significant adverse effects on landscape and visual receptors and some special qualities of the SCHAONB concluded within the ES . Although it does provide an important contribution to reducing cumulative effects with the E1N scheme.</p> <p>NE is aware of the 375m turbines being proposed for the Hornsea 4 project and notes that the site of this array is located 65km from the nearest coastline.</p> <p>We note that the Applicant's commentary on the trade-off between fewer large turbines and a larger number of relatively smaller machines if the same generation capacity for the EA2, as set out in the project description is to be maintained.</p>		N	Y
N.E – 3.1.1 (p.408)	<p>Ongoing: Natural England RR/WR advice remains unchanged</p>		Y	Y
NE 3.2.1 (p. 412 to 415)	<p><u>Comments on Visibility</u></p> <p>Ongoing: We welcome the additional information contained in the table provided (p.412). We note that 8 turbines could be located within 35.8km of the coastline and with a further 8 potentially within 37.4km. Significant adverse effects on the SCHAONB (the portion located within the SCH) are predicated to occur up to distances of 35.9km (Aldeburgh) and potentially as far as 37.4km (Orfordness Lighthouse). This would mean that approximately 13% and potentially 26% of the array will be the primary source of these significant adverse effects. It would be helpful if</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>the Applicant could confirm this point.</p> <p>We note that the minimum distance quoted is for turbine 58 (33.6km) whereas in Table 28.3 the minimum distance is 32.6km for Viewpoint 4 Southwold (referred to as 'Distance from the Project'). We note also that Figure 28.28b (Viewpoint 4) states that the nearest turbine is 33.614km distant. Please could this also be clarified?</p>			
NE – 3.2.2 (p.415)	<p>Ongoing: We thank the Applicant for providing a copy the report quoted in both the PEIR and ES. Unfortunately in the limited time available we have not had the opportunity to thoroughly review the contents and understand how these relate to the EA1N and EA2 schemes. We will do so over the coming months and provide any comments or observations we believe to be of help as part of our statutory response at Deadline 1 2nd November 2020. Appendix E2</p>		Y	Y
NE – 3.3.1 – 3.3.3 (p.416 – p419)	<p>Natural England is in agreement with SPR based on the turbine heights included within the Application. However, we note that further consultation will be required on any revised assessments reflecting reduce turbine heights.</p> <p>However, we note that there may be conflict here between potential mitigation to reduce SLVIA concerns with those of offshore ornithology with opposing requirements in relation to turbine heights.</p>			
NE – 3.3.4 (p.419 to p.423)	<p><u>Revised layout design</u></p> <p>NE welcomes the corrected 'Distance from the Project (km)' (p.420) values and accompanying clarification that there has been '<i>no reduction of the minimum separation distance between the PIER windfarm site and the ES windfarm site</i>'. NE accepts the reasons for this.</p> <p>Ongoing: As a consequence of this the NE analysis of apparent height values has been amended. For completeness we take this opportunity to present the values for the following viewpoints. Additionally, and following commentary provided by the Applicant at 2.5 to 2.8 (p.399) and 3.11.1 (p.459) NE has also amended the eye level</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2																																																						
	<p>height of viewer figure from a standardised value of 6.5m to the stated figures used in Figures 28.25 to 28.41 (ES SLVIA chapters) for each viewpoint.</p> <p style="text-align: center;">NB: a turbine height of 282m has been used</p> <table border="1"> <thead> <tr> <th>Viewpoint</th> <th>Name</th> <th>Stated eye level height of viewer (m)</th> <th>Turbine Height to blade tip (m)</th> <th>Distance from the Project (km)</th> <th>Apparent Height (degrees)</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>Covehithe</td> <td>7.73</td> <td>282</td> <td>33.0</td> <td>0.433</td> </tr> <tr> <td>4</td> <td>Southwold</td> <td>11.07</td> <td>282</td> <td>32.6</td> <td>0.450</td> </tr> <tr> <td>5</td> <td>Gun Hill, Southwold</td> <td>9.84</td> <td>282</td> <td>32.6</td> <td>0.447</td> </tr> <tr> <td>6</td> <td>Walberswick</td> <td>3.89</td> <td>282</td> <td>33.2</td> <td>0.412</td> </tr> <tr> <td>7</td> <td>Dunwich</td> <td>6.34</td> <td>282</td> <td>34.6</td> <td>0.399</td> </tr> <tr> <td>8</td> <td>Dunwich Heath and Beach</td> <td>18.28</td> <td>282</td> <td>34.7</td> <td>0.429</td> </tr> <tr> <td>9</td> <td>Minsmere Nature Reserve</td> <td>15.55</td> <td>282</td> <td>35.2</td> <td>0.416</td> </tr> <tr> <td>10</td> <td>Sizewell Beach</td> <td>7.24</td> <td>282</td> <td>34.8</td> <td>0.399</td> </tr> </tbody> </table>	Viewpoint	Name	Stated eye level height of viewer (m)	Turbine Height to blade tip (m)	Distance from the Project (km)	Apparent Height (degrees)	3	Covehithe	7.73	282	33.0	0.433	4	Southwold	11.07	282	32.6	0.450	5	Gun Hill, Southwold	9.84	282	32.6	0.447	6	Walberswick	3.89	282	33.2	0.412	7	Dunwich	6.34	282	34.6	0.399	8	Dunwich Heath and Beach	18.28	282	34.7	0.429	9	Minsmere Nature Reserve	15.55	282	35.2	0.416	10	Sizewell Beach	7.24	282	34.8	0.399			
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Point	Comments and issues						Risk	EA1N	EA2
	11	Suffolk Coastal Path (between Sizewell and Thorpeness)	11.34	282	34.8	0.412			
	12	Thorpeness	4.68	282	35.1	0.383			
	13	Aldeburgh	5.96	282	35.9	0.376			
	18	Orford Ness	5.8	282	37.4	0.352			
	A	Southwold Common*	13.00	282	32.1	0.464			
	B	Southwold Pier	7.0	282	31.4	0.460			
	<p>As a result of this recalculation the maximum apparent height value has decreased from 0.467 to 0.450.</p> <p>*EA2 is not visible from this viewpoint.</p>								
NE - 3.3.4 Continues (p.423)	Ongoing: NE notes the reduction in the magnitude of change judgements for Covehithe. For the reasons we set out at NE 3.7.2 (p.432) we disagree with this adjustment from medium to medium-low.							N	Y
NE 3.3.5	<u>Ongoing: NE advises that there are still cumulative effects from the presence of EA2 in conjunction with EA1N</u>								
NE – 3.4.1	<p><u>Night-time effects</u></p> <p>NE welcomes the Applicant’s commitment to reduce the intensity of the aviation lighting to 200cd whenever</p>							Y	Y



Point	Comments and issues	Risk	EA1N	EA2
(p.425)	atmospheric conditions permit this.			
NE – 3.4.1 (p.425)	<p>Please be advised that the notion that <i>'landscape character is not really perceived at night'</i> is incorrect. The guidance on landscape character assessment (Landscape Character Assessment. Guidance for England and Scotland (CAX84). The Countryside Agency and Scottish Natural Heritage (2002) is clear that landscape character is <i>'not just about the visual perception or how we see the land but also how we hear, smell and feel our surroundings, and the feelings, memories or associations that they evoke.</i> See Figure 1.1 p.2. These aspects of landscape character do not cease to exist when the sun goes down. And at night time a different of aspect of landscape character emerges, that of the night sky. The character of the night sky, how dark or free from light pollution the night sky is, contributes to the landscape character of a given place in the same why as the 'big Suffolk skies' contribute to the special qualities of the SCHAONB. This is the reason why we have asked for photomontages for coastal rural locations as it is in these locations that these dark skies are too be found.</p> <p>Whilst we accept that dark skies do not feature significantly in the description of the special qualities of the SCHAONB they nevertheless are an important component of the natural beauty of the designation. The opportunity to experience a dark night sky is limited within England due the extensive distribution of urban light pollution. England's designated landscapes provide locations from which dark night skies, which extend down to the horizon, can be more readily viewed. It is Natural England's advice that this resource/ landscape characteristic, does contribute to the natural beauty of these places.</p> <p>However NE notes the Applicant's commitment to reduce the intensity of aviation lighting to 200cd and we therefore accept that there is no longer a need to produce night-time effect photomontages for viewpoints 03, 06, 08, 11, 12 and 18. Having reviewed again Figure 28.35f (Viewpoint 13 Aldeburgh) we advise that the effect of the 200cd lighting will not be significant for all receptors and the special qualities of the SCHAONB. Although the photomontage has some foreground light spill the image of the night sky out to sea is sufficiently dark for a</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	judgement to be reached on the likely effect of the scheme.			
NE 3.5.1 (p.427)	Ongoing: In addition to the comment provided in our Relevant/Written Representation please note that Sizewell C has now been submitted.			
NE 3.5.2 (p.428)	<u>AONB baseline</u> Ongoing: NE agrees that EA2 will have ' <i>significant effects on the perception of panoramic offshore views from parts of the AONB coastline</i> ' but disagrees that this ' <i>will not result in harm to the statutory purposes of the AONB</i> '.		N	Y
NE 3.6.1 (p.429)	<u>Seascape baseline</u> Resolved: We thank the Applicant for confirming that maintenance activities have been incorporated into the assessment of the operational effects of the project. NE agrees that no further assessment of maintenance activities is required.		Y	Y
Table 3.7, 3.71 and 3.73 (p.432)	Please see more details comments on Landscape Character Types (LCTs) below where we have outstanding issues.			
NE 3.7.2 (p.432)	<u>LCT 06 Coastal Levels – Area B</u> Please refer to our comments for LCT 29 below.		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>Ongoing: NE maintains its advice that the magnitude of change should be medium for the coastal portions of this LCT (as it is for LCT 07 Areas A and C) and that a significant adverse effect will result from placing the 300m turbines in the seascape setting of this portion of LCT 06 Area B.</p> <p>As the Applicant states <i>'there is very limited visibility from the Town Marshes / Havenbeach Marshes'</i>; but the ES (6.3.28.4 Appendix 28.4 p.22) makes clear there are <i>'localised areas [where] the construction and operation of the offshore infrastructure will result in some changes to the open, wide, exposed characteristics near the sea, resulting in a partial loss of open sea skyline on the seaward backdrop and the addition of distant vertical elements which may change the wide/horizontal emphasis of the LCT'</i>. As with LCT 07 Areas A and C therefore there is still inter-visibility between this LCT and its' seascape setting.</p> <p>It is immaterial that there is <i>'limited access to perceive changes to its character'</i> as the LCT is the receptor and not people (the visual receptors) within it.</p>			
NE 3.7.2 (p.432)	<p><u>LCT 06 Coastal Levels – Area D</u></p> <p>Please refer to our comments for LCT 29 below.</p> <p>Ongoing: NE maintains its advice that the magnitude of change should be medium for the coastal portions of the LCT (as it is for LCT 07 Areas A and C) and that a significant adverse effect will result from placing the 300m turbines of EA2 in the seascape setting of this portion of LCT 06 Area D.</p> <p>As the Applicant states <i>'there is very limited visibility from within the LCT'</i> but the ES (6.3.28.4 Appendix 28.4 p.22) makes clear there are <i>'there are long distance and panoramic views to the seaward horizon which form a key component of the character of this area'</i>. As with LCT 07 Areas A and C therefore there is still inter-visibility and its' seascape setting.</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
NE 3.7.4 (p.433)	<p><u>LCT 29 Covehithe Broad and Easton Broad</u></p> <p>The landscapes of Covehithe Board and Easton Broad are rare landscapes within Suffolk. Covehithe Broad and Easton Broad are the only two occurrences of this LCT. Both areas are located wholly within the SCHAONB and to a lesser extent within the SHC. They are '<i>generally in excellent condition</i>'. See Suffolk CC LCA http://www.suffolklandscape.org.uk/landscapes/Wooded-fens.aspx.</p> <p>NE was in attendance on the site visits of Wednesday 19th June 2019. NE mistakenly stated this to be 23rd June 2019 in our Relevant/Written Representation. NE can confirm that the site visit took place on the 19th June and included a visit to Covehithe Beach (Viewpoint 3). At this location, as the ES Figure 28.27c in part shows, this is a very small LCT. Easton Broad, located to the south is bigger and extends further inland. In both instances these LCTs extend to the coast. As the image in Figure 28.27c shows there is clear inter-visibility between the Covehithe Board and the sea. The shingle ridge is low and does not interrupt views out to sea. Panoramic views out to see from this LCT 29 are therefore possible.</p> <p>Ongoing: NE notes the Applicant's observation that the '<i>eastern edges of LCT 29 extends to the shoreline</i>'. It is however immaterial that that these '<i>consist of short sections</i>' (which when combined extent to over a 1km) as the Suffolk CC LCA has judged these features to be a part of the landscape character of LCT 29. NE agrees that these areas within LCT 29 have a distinct character '<i>which is typically part of LCT 05 (Coastal Dunes and Shingle Ridges)</i>'. The ES has concluded significant adverse effects on Area C of LCT 05 (Southwold to the north side of Orford Ness) which is located further away from the western boundary of EA2 than LCT 29 at Covehithe Broad and Easton Broad. In addition there is little difference in the lateral spread of the array at these locations (see figures 28.27b and 28.36b). We note (as set out at NE 3.3.4 p. 423 3rd para.) that the due to the reduction in lateral spread of the array that the magnitude of change judgement has been lowered from medium to medium-low for Viewpoint</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>3 (Covehithe, located within LCT 29). Therefore, we disagree with this reduction in the magnitude of change judgement.</p> <p>Ongoing: The Applicant's argument that adverse effects would only effect the coastal margins of LCT 29 is also inconsistent with the judgements made for LCT 07 Areas A and C. LCT 07 also extends inland from where views out to sea are also interrupted by either woodland or landform. For these 'coastal' areas of LCT 07 the judgement for magnitude of change was medium. NE maintains its advice that the seascape setting of both Covehithe Broad and Easton Broad will be adversely and significantly affected by the turbines of EA2. This significant effect will also apply to the natural beauty of the designation as expressed through multiple special qualities.</p>			
<p>Table 4 (p.436)</p>	<p><u>Special Qualities of the SCHAONB</u></p> <p>Ongoing: This is the critical point of disagreement between the Applicant and NE.</p> <p>Table 4 lists in total 18 special qualities for the SCHAONB and where we agree and disagree with the Applicant. The Applicant concludes significant adverse effects on 5 of these and not significant effects on the remaining 13. NE agrees that no significant effects will occur on 5, but disagrees with the conclusion for another 6 meaning that we judge that significant adverse effects will occur on 11 of the 18 listed special qualities. The assessment of special qualities has sought to determine if there will or will not be an adverse effect on the natural beauty (as expressed by the special qualities) of the SCHAONB.</p> <p>The ES has concluded that there will be significant adverse effects on some of the special qualities of the SCHAONB and that the natural beauty of that portion of the designation defined as Heritage Coast will experience significant harm. Therefore the statutory purpose of the SCHAONB to conserve and enhance natural beauty, will be significantly harmed by the turbines of EA2.</p> <p>The Applicant concludes that in 'overall terms' (3.12.8 p.464) there is not a significant effect on the special qualities</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>(and hence the statutory purpose) of the SCHAONB. NE disagrees. We have reached this conclusion based on our review of the Applicant's evidence (as submitted in the PIER and ES) and site visits undertaken in the summer months of 2018 and 2019. We have provided our reasoning for this in our Relevant/Written Representation and submission for the s42 consultation and this advice remains unchanged.</p> <p>The Applicant refers to the EA2 <u>site</u> rather than the EA2 <u>windfarm</u> at 3.12.8 p.464. NE sets out below why we consider this to be misleading. See NE comments for NE 3.12.8 (p.463) below.</p>			
NE – 3.8.1 p. 437	Introductory comment with no further actions. Please see our response to 3.8.2 – 3.8.7.			
NE 3.8.2 (p.437 to p.450)	<p><u>Summary of comments for the special qualities assessment</u></p> <p>Ongoing: Please be advised that the principal point of disagreement between the Applicant and NE centres around the assessment of the magnitude of effect. GLIVA3 defines magnitude as comprising 3 factors; size or scale of the scheme, the geographical extent of the area influenced and the duration and reversibility of the scheme. For the 6 special qualities where there is disagreement the Applicant judges the magnitude of effect to be medium-low; NE judges it to be at least medium. This difference results in the concluding judgements on the significance of effect of not significant (Applicant) and significant (NE) for the 6 special qualities in question.</p> <p>Having reviewed the further narrative provided by the Applicant in their response to our Relevant/Written Representation our position remains unchanged for those 6 special qualities where we disagree with the Applicant's conclusion. For clarity we provide a response to the Applicant's additional commentary for these 6 special qualities.</p>		N	Y
NE 3.8.2	<u>Landscape Quality – Influence of Incongruous Features</u>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
(p.437 – p.439)	<p>Ongoing: The Applicant lists 4 examples of incongruous features currently present in the landscape and seascape setting of the SCHAONB. These are:</p> <ul style="list-style-type: none"> • Sizewell A and B nuclear power stations (within designation) • The Greater Gabbard and Gallop OWFs, which when viewed from the SCHAONB appear as a single feature in the seascape (in setting) • Orford Ness Transmitting Towers (within designation) • Lowestoft Ness Point Wind Turbine (a single wind turbine) (in setting) <p>With the exception of the Sizewell nuclear power stations NE advises that the influence of these features is localised, does not detract from the natural beauty of the SCHAONB and does not extend far along the coastline in either direction.</p> <p>Whilst the visual influence of the Sizewell A and B nuclear power stations complex is more prominent it should be noted that the former was consented (in 1960) before the SCHAONB was designated in 1970 (the SHC was defined in 1973). The visual influence of Sizewell A is however now less prominent in long distance views as it is seen within the context of Sizewell B.</p> <p>The design of the Sizewell B power station was the subject intense scrutiny via a lengthy public enquiry in the 1980s where the relationship of the new power station with the landscape and natural beauty of the SCHAONB was a significant consideration. The housing of the PWR reactor resulted in current Reactor Dome which is, by its uniqueness (both locally and nationally), an incongruous feature of the SCHAONB landscape. However it is the uniqueness of this structure, it's strange or even bizarre nature within the context of the SCHAONB landscape which is recognized within this special quality of the designation. It may not contribute to natural beauty of the</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>SCHAONB, but it does help make the landscape of the designation exceptional and hence special. In comparison offshore windfarms are not unique features in either landscapes or seascapes and can be seen in the seascape setting a number of designated landscapes. In the majority of instances they do not adversely affect landscape quality and unlike the predicated effects of the EA2 turbines, the natural beauty of these designations. The ES has concluded that the significant adverse effect of the EA2 turbines will extend for approximately 35 km along the SCHAONB coastline (all of which is defined as a Heritage Coast).</p> <p>For multiple landscapes types and viewpoint locations along the SCHAONB coast between Covehithe and Aldeburgh the Applicant has judged the magnitude of effect to be medium; on 4 occasions for landscape receptors and 9 visual receptors. But in the assessment of this special quality the magnitude of effect has been judged to be medium-low. NE fails to understand this mismatch in assessments when landscape quality is key a component of the natural beauty of the designation, which the quality of the views out to sea greatly contributes to.</p>			
<p>NE 3.8.3 (p.440 – p.443</p>	<p><u>Scenic Quality – Appeal to the senses; Sensory stimuli and ‘big Suffolk Skies’</u></p> <p>Ongoing: Generally people visually experience a place in three dimensions; this is best envisaged as a sphere or dome with the viewer located in the centre of its base. The Applicant refers to these views as panoramic (NE 3.5.2 p.428) and predicts that ‘<i>significant effects on the perception of panoramic offshore views from parts of the AONB coastline</i>’ will occur. The sense of openness and lack of enclosure which currently predominates in many locations along the Suffolk Heritage Coast e.g. Dunwich Heath and Covehithe Beach is the result of the opportunity to take in and be a part of these 360 degree, three dimensional views. Big Suffolk skies not only extend vertically, but also horizontally to the far horizon. In views out to sea, to the place where the sea meets the sky, are as much a part of big Suffolk skies as the large cumulonimbus clouds which form above one’s head on a hot June afternoon. It is the combination of the generally flat or low lying landscapes of the SCHAONB with the uninterrupted views to the far horizon available of offshore which makes these views special.</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>NE agrees with the Applicant's assertion that the turbines of the EA2 windfarm would only form a small part of 'big Suffolk skies' on the basis that the turbines would occupy of a small portion of the '180 degree of sky visible from coastal locations'. NE notes that if this vertical 180 degree approach to defining views of the sky is applied to views from within mountainous landscapes then views of the sky still occupy the vast majority of the 'view' even from valley floors; the difference of course is that open uninterrupted views to the far horizon are not possible from such locations.</p> <p>The Applicant makes reference to 3 specific 'development elements' within the SCHAONB which influence 'big Suffolk Skies' to a greater degree than the turbines of EA2 would. Taking each of these in turn:</p> <ul style="list-style-type: none"> • Communication masts of the Orford Transmitting station (total number 11, height 106.7m). These structures are free standing steel lattice towers of triangular construction with 6 being driven i.e. rotatable and the other 5 being fixed. They are positioned in two groups, one of which is orientated approximately NW – SE and the other as a grouping of 5. They are seen at their widest in views from the north and south although even when viewed side-on they still only occupy a small percentage of the available horizon. Their height is however readily apparent when viewed from the south of Aldeburgh (approximately 4.5km distant, 4.5m eye height, 1.362 apparent height) or Quay at Orford (approximately 2.75km distant, 2.5m eye height, 2.229 apparent height). However, and unlike wind-turbines, these are 'light-weight' steel lattice towers which allows light to pass through thus affording views of the sky to their rear. Even from the locations mentioned above they do not obscure the sky and have transparent quality to them; unlike a wind turbine they do not appear 'solid' and nor are they kinetic. Generally at distances beyond 6kms they are not readily apparent within the landscape. Their influence, such that it is, is confined to the landscape located south of Aldeburgh and north of Orford. Their influence on views of the 'big Suffolk skies' can be gauged using the Figures 28.38c and 28.38e (Viewpoint 14 Orford Castle) of the ES. Figure 28.38e also allows for a direct comparison with the EA2 turbines. 			



Point	Comments and issues	Risk	EA1N	EA2
	<ul style="list-style-type: none"> Sizewell nuclear power stations complex - this complex is oblong in shape with the longest sides being oriented north to south i.e. parallel to the coast. When viewed from the north and south the complex is viewed from its narrow side. Viewpoint 8 Dunwich Heath and Beach (Coastguard Cottages), located to the north, affords one the clearest views of the complex from this orientation. As can be seen in Figure 28.32d the complex occupies a very narrow portion of the horizon and although clearly visible, sits low on the horizon. At 65m the height of the Reactor Dome (approximately 4.5km distant, 18.25m eye height, 0.828 apparent height from Viewpoint 8) and, just as importantly the mass of the complex, is readily apparent. South of the power station complex clear views from coastal locations are more infrequent with the complex being glimpsed, rather than seen in plain view as it is from Viewpoint 8. <p>NE considers that, for views along the coastline, these structures do have a localised influence on 'big Suffolk skies' but do not influence views available of the sky out to sea. With the exception of Viewpoint 10 (and then only for views inland) none of these structures significantly detracts from the opportunity to experience 'big Suffolk skies'</p> <ul style="list-style-type: none"> Urban development within urbanised areas. NE understands this to mean Aldeburgh, Thorpeness and Southwold. The relatively low elevations of these settlements means that they detract little from the opportunity to experience 'big Suffolk skies'. See Figure 28.32b. <p>As agreed with the Applicant the turbines of EA2 will occupy a small <u>vertical</u> portion of the 'big Suffolk skies' (NE judges this to be less than that of the Reactor Dome of Sizewell B when viewed from Viewpoint 8) but the turbines will be spread <u>horizontally</u> across the far horizon for a considerable distance. The turbines will occupy a far greater portion of the horizon than both the Orford Transmission Towers and Sizewell power stations complex, and this when viewed from distances which are considerably greater.</p> <p>As the Applicant has committed to using 200cd intensity aviation lighting on all occasions where weather conditions permit NE offers no further advice on the issue of fixed night time lighting. Please refer to our comments at NE –</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>3.4.1(p.425).</p> <p>NE accepts that marine traffic operating in and out of Lowestoft is already an influence on the far northern seascape setting of SCHAONB, but maintains that it is less pronounced, particularly in respect of vessel size, than in views out to sea from the southern portion (south of Orfordness). In addition these are not fixed in the seascape i.e. they are transiting through.</p> <p>Please also see response to 3.8.2.</p>			
<p>NE 3.8.4 (p.443 – p.446</p>	<p><u>Relative Wildness – Sense of remoteness; pockets of relative wildness</u></p> <p>Ongoing: NE agrees that the project ‘<i>will not increase the proximity of habitation to the AONB</i>’ and that ‘<i>it may, as recognised in the ES increase the perceived influence of apparent human activity as result of the introduction of other, man-made structures in the seascape setting</i>’.</p> <p>Along with the rest of the English landscape the SCAONB has been transformed by the impact of people. However unlike many other English landscapes this transformation has not been total and there remain multiple ‘pockets of relative wildness’ along the coastline. The Applicant is correct to assert that specific landscape character types such as LCT 08 (Open Coastal Fens) and LCT 05 (Coastal Dunes and Shingle Ridges) are the locations where ‘pockets of relative wildness’ are most likely to be experienced at the coast. NE advises that an experience of ‘relative wildness’ is also afforded by LCT 29 (Covehithe Broad and Easton Broad). Additionally ‘pockets of relative wildness’ can also be experienced within other LCTs. For instance at Dunwich Heath (LCT 07 Estate Sandlands) and Minsmere (LCT 06 Coastal Levels).</p> <p>Not all of these LCTs will be adversely effected by EA2. However for some of these LCTs the Applicant has predicted that significant adverse effects will result from the turbines of EA2. The LCTs affected adversely are:</p>			N



Point	Comments and issues	Risk	EA1N	EA2
	<ul style="list-style-type: none"> • LCT 05 (Area C: Southwold to the North side of Orfordness)* • LCT 07 (Area C: Dunwich Heath)* <p>The Applicant did not predict significant effects for:</p> <ul style="list-style-type: none"> • LCT 05 (Area D and E) • LCT 06 (Areas B to F) • LCT 08 (Areas A to C) • LCT 29 (Covehithe Broad and Easton Broad)*. <p>For those LCTs where the seascape setting is an integral component of landscape character and which also contributes to the experience of relative wildness afforded (these have been marked *) NE advises that in these locations a significant adverse effect on this special quality will result from the construction and operation of the EA2 windfarm. NE advises that any significant adverse effects to the LCTs where this experience is possible will also have a significant adverse effect on the statutory purpose of the SCHAONB.</p> <p>The Applicant asserts that these pockets of ‘relative wildness’ are geographically limited within the SCHAONB and therefore the ‘<i>changes to the sense of remoteness is not widespread, and will be very limited to these isolated pockets</i>’. However, it is our view that because these pockets are geographically and spatially limited i.e. they are both small in number and small in area, they are special and thereby contribute to the natural beauty of the designation. It is because these ‘pockets of relative wildness’ are confined to the ‘<i>narrow coastal strip</i>’, within the SCAONB and SCH which are most adversely effected by the turbines EA2, that this special quality will be significantly harmed.</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>On p.445 it is asserted that '<i>at distances over 32km [the turbines of EA2] it is considered to be relatively remote from the AONB in terms of distance</i>'. However, 'relatively remote' remains undefined.</p> <p>Please see response to 3.8.2.</p>			
<p>NE 3.8.5 (p.446 – p.447</p>	<p><u>Relative Wildness – Sense of remoteness; relative lack of human influence</u></p> <p>Ongoing: NE accepts the Applicant's correction in the second paragraph (p.446) and thanks the Applicant for drawing attention to this. NE agrees that the '<i>largely undeveloped coastline and offshore areas is the key area of relevance</i>'.</p> <p>Semi-natural habitats are covered in Relative Wildness – Sense of remoteness; 'pockets of relative wildness'.</p> <p>Accessing the coastline of the SCHAONB, particularly at certain locations such as Orford Ness, Minsmere, Dunwich and Covehithe is not easy. The Suffolk Coastal Path is currently the only linear route along the coast and in order to maintain linearity at certain locations the path has to divert inland due to the physical nature of the landscape. Access by vehicle is only possible on roads which end at the coastline. Even from within Suffolk these locations feel remote. There is a real sense of arrival in a place which feels separate (in space and to some extent time) due to it having a '<i>largely undeveloped coastline</i>'. With a few notable exceptions the influence of the 20th and 21st centuries, 'modern development', on this landscape is limited. It is this quality, the sense of being physically remote from the rest of the county and in a place which has a relative lack of human influence which makes the coastline of the SCHAONB special and thereby contributes to the natural beauty of the designation. This characteristic is shared with other designated landscapes, the coastlines of the Dorset AONB, North Devon AONB and Exmoor National Park for instance. But for the Suffolk coast its importance is such that the very title of the SCHAONB includes the word 'coast'.</p> <p>The character of the four locations listed above, (Ordford Ness, Minsmere etc.), along with other places along the</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>coastline of the SCAONB, is generally free of intrusive man-made structures which would otherwise adversely affect and thereby detract from this 'relative lack of human influence'. NE agrees with the Applicant that the EA2 windfarm will not '<i>render it [the coastline] largely developed</i>'. For the reasons we set out in our Relevant/Written Representation, we advise that the introduction of the EA2 turbines into the seascape setting of the SCHAONB (for the northern portion of the coastline) would in all likelihood lead to a loss of a sense of having an <u>undeveloped</u> coastline i.e. it would add a significant development into a seascape which is currently completely free of fixed man-made structures, and thereby erode that sense of having a 'relative lack of human influence'.</p> <p>Should the EA2 turbines be built visitors arriving at the coastline would no longer see an empty seascape with clear uninterrupted views to far distant horizon. They would see the turbines EA2 and be instantly reminded of human influence on the landscape and seascape setting of the SCHAONB. Therefore, the introduction of the EA2 turbines would increase the human influence on the seascape setting of the SCHAONB.</p> <p>On p.447 the Applicant states that the '<i>apparent height of the turbines is relatively small</i>'. NE requests that the Applicant provides evidence to substantiate this statement.</p> <p>The Applicant also states that it '<i>would expect that a development would need to have such a fundamental change to this special quality to be significant</i>'. NE maintains that the change which the turbines of EA2 would bring about such a fundamental change and that the effect on this special quality will therefore be significant and adverse. NE disagrees '<i>that a relative lack of human influence will continue to prevail</i>'. If built the project would place up to 50 visible 300m turbines (see Figure 28.27f) into the seascape setting of the SCHAONB and that rather than a '<i>few built elements</i>' there would be many built elements.</p> <p>NE maintains that the EA2 would provide a sense of enclosure in views out to sea from the SCHAONB. The Applicant asserts that the '<i>apparent height of the turbines is relatively small and would not provide a sense of enclosure, due to the large portion of the big skies that will remain undeveloped</i>'. It is our view that features, both</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>onshore and offshore, which generate a sense of enclosure do not extend far into the sky. The portion of the sky which is obscured does not need to be large; with a few notable exceptions neither hedges, walls or fences are especially high yet all act as enclosing features.</p> <p>Please see response to 3.8.2.</p>			
<p>NE 3.8.6 (p.447 – p.449</p>	<p><u>Relative Wildness – Sense of passing of time and a return to nature</u></p> <p>Ongoing: NE agrees with the Applicant that the ‘<i>sense of passing of time</i>’ is one of the more abstract qualities of the defined AONB special qualities. If the time depth of a landscape is considered then nearly all landscapes to a greater or lesser extent exhibit a sense of passing time. However, how this is valued varies from place to place. Fundamentally it is how natural and man-made modern, historic or even ancient features combine together in a given landscape which determines how much that place is valued. This mixture is clearly valued in the landscape of the SCHAONB as it is expressed as a special quality; it contributes to the natural beauty of the designation.</p> <p>However, it does not follow that the introduction of further man-modern features into the seascape setting of the AONB will positively contribute i.e. enhance the natural beauty of the designation. So whilst the ‘<i>sense of passing of time could be increased by the presence of an offshore windfarm</i>’ (i.e. EA2 turbines could <u>enhance</u> the natural beauty of the SCHAONB); but the ES does not conclude that enhancement will occur. This would be contrary to the conclusions reached in the ES which predict significant adverse effects on the seascape setting component of the landscape character of numerous landscape character types located within the designation.</p> <p>NE notes that the Applicant agrees that ‘<i>it is unlikely that the EA2 windfarm...would contribute to the sense that nature is returning</i>’.</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>NE agrees that land use within the SCHAONB will not be directly influenced by the EA2 turbines (although it will be temporary influenced by the associated onshore underground cabling operations). However, the seascape setting component of the landscape character will be significantly and adversely effected, as detailed by the Applicant in the ES.</p> <p>For further commentary on semi-natural habitats see our advice for sense of remoteness; pockets of relative wildness above at 3.8.5. We note the Applicant makes no reference to the extensive habitat restoration projects, for instance at Minsmere, which have been active along this coastline for decades.</p> <p>NE fails to understand the reference to the lost settlements of Sizewell and Dunwich in the context of the baseline landscape character against which the effects of the project are being assessed.</p> <p>Please also see response to 3.8.2.</p>			
<p>NE 3.8.7 (p.449 – p.450</p>	<p><u>Relative Tranquillity – Distractors from Tranquillity</u></p> <p>Ongoing: There is frequent misunderstanding of the term ‘tranquillity’ as it relates to the natural environment. For this reason The Countryside Agency (a founder body of Natural England) and others undertook a thorough and robust study of the subject in 2006. The findings of this study are contained in ‘Tranquillity Mapping: Developing a Robust Methodology for Planning Support: Technical Report on Research in England. Northumbria University, 2006’. The principle conclusion of this study is that multiple factors, environmental, spatial, temporal and anthropocentric need to come together in particular combinations in order that, for a given person, an experience of tranquillity induced by a natural environment can be achieved.</p> <p>Natural England highlights that tranquillity, or a lack of, is often incorrectly equated to noise, often ‘excessive’ man-made noise. In addition to dismiss tranquillity as purely ‘<i>particularly subjective</i>’, and therefore not within the</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2		
	<p>discipline of social-science, is also incorrect as the study referenced here demonstrates.</p> <p>The Applicant maintains that for the EA2 turbines to have a significant effect on tranquillity (i.e. the experience of tranquillity) they would need <i>'to be audible and/or viewed in close proximity, with large scale, surrounding and prevailing visual movement of the rotor-blades'</i>. NE disagrees with this assertion. We advise that simply seeing the EA2 turbines, which from locations such as Covehithe beach would number up to 50 machines (see Figure 28.27f) spread across the seaward horizon would be sufficient to negate opportunities to experience tranquillity. In certain lighting conditions the movement of the rotor blades would be visible and we doubt a feeling of <i>'calm'</i> would be universally induced by this. In addition NE disagrees with the conclusion that the other <i>'natural heritage features'</i> would prevail i.e. aspects of the natural environment which <u>positively</u> contribute to experiences of tranquillity, would be sufficient in extent to negate the negative influence of the turbines.</p>					
NE 3.9	Introductory comment to this section no further comment required.					
NE 3.9.1 Table 5	Please see detailed comments below on Viewpoint 10 and 18 where there are matters of outstanding concern.					
NE 3.9.2 (p.451 to p.454)	<p><u>Viewpoint 10 Sizewell Beach</u></p> <p>Ongoing: The essence of the argument put forward by the Applicant for this viewpoint is that the visual amenity, referred to as <i>'scenic qualities'</i> afforded by the SCHAONB in this location, is already degraded and that the introduction of the EA2 scheme into the seascape setting of the designation will therefore be less harmful than at other locations along the coastline of the AONB. This argument fails to take into account the statutory purposes of the AONB; to conserve and enhance natural beauty. This purpose applies equally to the entirety of the designation including locations where the natural beauty is already adversely effected by the presence of intrusive man-made features e.g. Sizewell A power station. The logic of the Applicant's argument, if applied universally, would lead to a steady erosion of natural beauty throughout the designation as locations already compromised by intrusive man-</p>					N



Point	Comments and issues	Risk	EA1N	EA2
	<p>made structures would be considered suitable for further major development which failed to either conserve or enhance the natural beauty of AONB.</p> <p>Whilst we agree that the <i>'the view [from Sizewell Beach] has lower scenic qualities...than other parts of the AONB'</i> due to the cooling water intake / outlet piers, it does not follow that this resource can be further degraded through the introduction of additional instructive made-made features i.e. the EA2 turbines which (for the rest of the AONB coastline between Covehithe and Aldeburgh) are predicted to have significant adverse effects.</p> <p>As we stated in our comments to both the PIER and ES the opportunity to experience high quality views <i>out to sea</i> from Sizewell Beach, which also contribute to the natural beauty of the SCHAONB, as an alternative to the view of the Sizewell A power station should not be dismissed. The assumption that everyone who visits this location has lower expectations due to the presence of the power station may well be correct for views inland, but it does not follow that these expectations are lower for views out to sea. The influence of the cooling water intake / outlet piers on views out to sea is not universal and there are opportunities to look out to the far seaward horizon without incorporating these structures into the view. NE contends that the sensitivity of the users groups identified is therefore no different at Sizewell Beach than in other locations within the coastal portion of the AONB when views out to sea are considered.</p> <p>NE refers the Applicant to the Navitus Bay Wind Park Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for Energy and Climate Change 11th June 2015 (section 8.3.22 p.193). The key sentences are:</p> <p><i>'Policy in relation to National Parks (NP) affords the highest protection to all parts of the designated area. The Panel therefore agrees with the NFNPA that no one area is more important than another'.</i></p> <p>The policy in question is the purpose to conserve and enhance natural beauty; the same purpose applies to the</p>			



Point	Comments and issues	Risk	EA1N	EA2
	<p>SCHAONB.</p> <p>NB: These comments also apply the Applicant's response for the Suffolk Coastal Path Section 7 as set out at NE. 3.10 p.457 to p.459.</p>			
<p>NE 3.9.3</p> <p>(p.454 – p. 457</p>	<p><u>Viewpoint 18 Orfordness Lighthouse</u></p> <p>Ongoing: NE accepts the Applicant's point that the reduced lateral spread of the EA2 array has contributed to a reduction in the magnitude of change to medium-low '<i>resulting on balance, to a judgement of not significant within the ES</i>'.</p> <p>NE disagrees with the Applicant's statement '<i>that the presence of the Galloper and Greater Gabbard windfarms also have a notable influence on the assessment from this viewpoint and that the introduction of the windfarm site [i.e. the turbines of EA2] represents a lower degree of contrast / higher degree of integration of new features with the existing windfarm elements [i.e. with the Greater Gabbard and Galloper arrays] and characteristics that are more prominent in this view than others.</i> Is the Applicant therefore implying that the presence of the Galloper and Greater Gabbard arrays means it is acceptable for the EA2 turbines to be consented? If this is the case our reasoning as to why we disagree with the Applicant on this issue is the same as set out for Viewpoint 10.</p> <p>NE disagrees with the Applicant's assertion that '<i>the austere simplicity and unique scenic qualities afforded by this location would still be appreciated by visitors, even with the addition of a further windfarm element on the visible seaward horizon.</i> NE maintains its advice that the in-combination of the Galloper, Greater Gabbard and EA2 arrays will be harmful to the statutory purpose of the SCHAONB. NE would also wish to see evidence that visitors would still appreciate the '<i>austere simplicity and unique scenic qualities afforded by this location</i>' with the EA2 turbines present in the seascape setting of the designation.</p> <p>NE notes the Applicant's concern over the use of the word 'dominate' for the in-combination assessment for</p>		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p><i>Greater Gabbard plus Galloper plus EA2.</i> If not 'dominate' then NE would use the following wording: -</p> <p><i>'NE considers the in-combination effect i.e. Greater Gabbard plus Galloper plus EA2 would be contrary to the statutory purposes of the SCHAONB as these structures would be seen to diminish views out to sea (from the northeast through to south east) thereby detracting from the natural beauty afforded by this location'.</i></p> <p>We welcome the provision of the apparent height figures for EA2 (both 300m and 250m turbines) and Galloper array, which allows for a comparison between these arrays to be made. These values are similar to those we calculated and presented in our Relevant/Written Representation. The slight variation is down to the minimum separation distance used and are not significant in this context.</p> <p>However, we can only calculate the figure quoted for Greater Gabbard (0.350) if a viewing of height of at least 37m and a turbine height of 180m are used, whereas the turbines of Greater Gabbard are 134m (separation distance to Greater Gabbard from Orford Ness is approximately 25.1km). The only viewpoint in either the EA1N or EA2 ES documentation with an elevation near to this figure is Viewpoint 14 in the EA2 ES (Figures 28.38a to 28.38e. A value of 40.66m AOD is stated). This viewpoint is located at the top of Orford Castle, a location which is only accessible when the castle is open to the public. Before we provide further comment we request that the Applicant also provides the viewing height figures and the other relevant data used in the table on p.456.</p> <p>For the completeness here is a comparison of the figure presented by the Applicant and those of NE. Note that NE have used the values quoted by the Applicant in the table on p.456.</p>			



Point	Comments and issues						Risk	EA1N	EA2
	Windfarm	Viewing height (m) (VP 18 Orford Ness)	Turbine height Blade Tip (m)	Minimum Distance (as measured from Viewpoint 18) (km)	Apparent height of closest turbine (degrees) NE Figure	Apparent height of closest turbine (degrees) Applicant Figure			
	EA2	5.8	300	37.4	0.379	0.365			
	EA2	5.8	282	37.4	0.352	tbc			
	Greater Gabbard	5.8	134	25.1	0.268	0.350			
	Galloper	5.8	180	29.3	0.300	0.301			
	<p>As stated in our Relevant/Written Representation NE maintains its advice that the turbines of EA2 (300m) would appear to be taller than those of the Greater Gabbard array and will not be '<i>similar to the apparent height of the Greater Gabbard turbines</i>' as stated by the Applicant on p.456. In comparison with the turbines of Galloper, the EA2 (300m) will also to be appear taller to an extent which is more than '<i>marginally higher</i>'. The figures provided in the above table quantify the difference. Whilst the wireline visualisations many show an apparent similarity in height the calculated values do not support this.</p> <p>NE still considers that determining the significance of effect for visual receptors at this viewpoint is a finely balanced judgement. We welcome the Applicant's agreement on this point. However, NEs advice remains unchanged. NE still advises that significance adverse effects on landscape and visual receptors at this viewpoint will result from the construction and operation of the EA2 windfarm. Please note that GLIVA3 provides guidance on this point. At 3.34 (p.41) the guidance states that '<i>it should be made clear that effects not considered to be significant will not be</i></p>								



Point	Comments and issues	Risk	EA1N	EA2
	<i>completely disregarded</i> '. Once again we advise that the Applicant take a precautionary approach at this location as it is a nationally designated landscape, a nationally defined Heritage Coast and possesses a landscape character that is unique.			
Table 6	Suffolk Coast Path: Natural England continues to disagree with the Applicant on the significance of the impact at Section 7 Minsmere to Sizewell.			
NE 3.10 (p.457 – p. 459)	<u>Suffolk Coastal Path (English Coastal Path) Section 7 Sizewell to Minsmere</u> Please refer to our comments for Viewpoint 10 Sizewell Beach NE 3.9.2 (p.451 to p.454).		N	Y
3.11.1 (p.459)	<u>Cumulative Effects (with EA1N)</u> Ongoing: As set out above the values presented by NE are intended to allow for a comparison between existing structures located in the seascape setting of the SCHAONB (the Galloper and Greater Gabbard arrays) and the proposed turbines of EA2 and EA1N. It was not our intention to provide either a set of absolute values or provide alternative evidence which counters that presented by the Applicant as we agree with many of the Applicant's conclusions on the likely significant of effect on landscape and visual receptors located within the SCHAONB. The stated height for each viewpoint location (see ES Volume 2 Part 4A Scheme Wide Figures Visualisations Figures 6.2.28.25 to 6.2.28.45) could have been used in our calculations. Perhaps with hindsight we should have used these values. However as the flat and generally low lying character of the SCHAONB coastline allows for the use of a standardised viewing height of 6.5m (5m AOD plus 1.5m) and as we lacked the resource to confirm how representative the elevations of viewpoint locations used in the ES were, the decision was taken to use a standardised single value. For completeness therefore here is a list of the values presented in ES Volume 2 Part 4A Scheme Wide Figures Visualisations Figures 6.2.28.25 to 6.2.28.45 compared to the standardised viewing height of		Y	Y



Point	Comments and issues				Risk	EA1N	EA2
	6.5m.						
	Viewpoint	Name	Stated eye level height of viewer (m)	Difference +/- 6.5m (m)			
	3	Covehithe	7.73	+1.23			
	4	Southwold	11.07	+4.57			
	5	Gun Hill, Southwold	9.84	+3.34			
	6	Walberswick	3.89	-2.61			
	7	Dunwich	6.34	-0.16			
	8	Dunwich Heath and Beach	18.28	+11.78			
	9	Minsmere Nature Reserve	15.55	+9.05			
	10	Sizewell Beach	7.24	+0.74			
	11	Suffolk Coastal Path (between Sizewell and Thorpeness)	11.34	+4.84			
	12	Thorpeness	4.68	-1.82			
	13	Aldeburgh	5.96	-0.54			
	18	Orfordness	5.8	-0.7			



Point	Comments and issues				Risk	EA1N	EA2
	A	Southwold Common*	13.00	+6.5			
B	Southwold Pier	7.0	+0.5				
3.11.1 (p.460)	<p>As a consequence of using 6.5m value NE's calculations initially underestimated the likely apparent angle values for the majority of viewpoint locations (11 out of 16).</p> <p>Once the corrected distance from project values (Table 28.3 p.420) are used in the calculations significant increases in the apparent height value result. In our comments on the ES we presented a figure of 0.467 for Covehithe as the maximum value. The corrected distance figures and stated eye level height of viewer elevations result in the maximum value decreasing to 0.450 for Viewpoint 4 Southwold. Although this decrease doesn't alter the conclusions of the SLIVA for any of the viewpoints already assessed as experiencing a significant effect by the Applicant (and nor does NE seek to do so) it nevertheless decreases the difference between the apparent height values calculated for Greater Gabbard and Galloper arrays and those of EA2 by 0.017 degrees.</p> <p>*EA2 is not visible from this viewpoint.</p> <p>We welcome the provision of the apparent height figures for the EA1N (both 300m and 250m turbines) and Galloper array. These values are similar to those we calculated and presented in our Relevant/Written Representation. The slight variation is down to the minimum separation distance used and are not significant in this context.</p> <p>As at point 3.9.3 (p.454 – p. 457) NE has concerns about the apparent height value of 0.350 quoted for the Greater Gabbard array. Please above for details.</p>					Y	N



Point	Comments and issues	Risk	EA1N	EA2
3.11.1 (p.461) 3.12.2 (p.463)	Resolved: Following confirmation that the maximum blade tip height for EA1N will be 282m NE agrees with the Applicant that further mitigation of turbine height for EA1N is not required.		Y	N
NE 3.12.1 – 3.12.7 (p.461-463)	‘3.12.1 – Nothing further to add for this point’. ‘3.12.2 – Please refer to our comments at NE - 3.3.4. Nothing further to add for this point’. ‘3.12.3 – We thank the applicant for clarification provided. Nothing further to add for this point’. ‘3.12.4 – Please refer to our comments at NE - 3.7.4. Nothing further to add for this point’. ‘3.12.5 – Please refer to our comments at NE - 3.8.3. Nothing further to add for this point’. ‘3.12.6 – Nothing further to add for this point’. ‘3.12.7 – Nothing further to add for this point’. 			
3.12.8 (p.463)	<u>Summary and Conclusions</u> It is immaterial that the adverse significant effects are confined to ‘ <i>a narrow strip avoiding widespread effects on the AONB further inland</i> ’. This adversely affected coastal strip extends for approximately 35km in length, and is also defined as a Heritage Coast. The SLIVA has predicted that significant adverse effects on landscape and visual		N	Y



Point	Comments and issues	Risk	EA1N	EA2
	<p>receptors, along with some of the SCHAONB's special qualities, will result from EA2 turbines in the seascape setting of the SCHAONB.</p> <p>Based on our review of the Applicant's evidence (as submitted in the PIER and ES) and site visits undertaken in the summer months of 2018 and 2019 NE concludes that the statutory purpose of the SCHAONB to conserve and enhance natural beauty, will be significantly harmed/adversely effected by the turbines of EA2. Therefore it is the adverse effect on the statutory purpose of the designation which is the key consideration.</p>			
3.12.8 (p.463)	The phrase ' <i>EA2 Wind Farm site is misleading</i> ' because it refers to the site of the array i.e. an area of open water and associated sea floor and not the array itself. It is the latter, specifically the 300m (282m) high turbines of EA2, which are the source of the predicted significant adverse effects and not their site.		N	Y
3.12.8 (p.464)	We note the Applicant's use of the phrase ' <i>overall terms</i> '. For the reasons set out in this response NE considers this conclusion is incorrect.		N	Y

References

Guidelines for Landscape and Visual Impact Assessment, 3rd Edition. LI and IEMA, 2013.




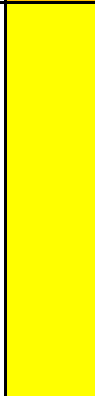
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Offshore Energy Strategic Environmental Assessment. (OESEA). Review and update of Seascape and Visual Buffer study for offshore wind farms. BEIS, 2020

Tranquillity Mapping: Developing a Robust Methodology for Planning Support: Technical Report on Research in England. Northumbria University. 2006.

Visual Representation of Wind Farms. Guidance. SNH. 2017



Natural England's key to RAG status	Risk
<p>Purple</p> <p>Note for Examiners and/or competent authority. May relate to DCO/DML</p>	
<p>Red</p> <p>Natural England considers that unless these issues are resolved it will have to advise that (in relation to any one of them, and as appropriate) it is not possible to ascertain that the project will not affect the integrity of an SAC/SPA and/or comply fully with the Environmental Impact Assessment requirements and/or avoid significant adverse effect on landscape/seascape, unless the following are satisfactorily provided:</p> <ul style="list-style-type: none"> new baseline data; significant design changes; and/or significant mitigation; <p>Natural England feels that issues given Red status are so complex, or require the provision of so much outstanding information, that they are unlikely to be resolved during examination, and respectfully suggests that they be addressed beforehand.</p>	
<p>Amber</p> <p>Natural England considers that if these issues are not addressed or resolved by the end of examination then they would become a Red risk as set out above. Likely to relate to fundamental issues with assessment or methodology which could be rectified; preferably before examination.</p>	
<p>Yellow</p> <p>These are issues/comments where Natural England doesn't agree with the Applicant's position or approach. We would flag these at the PEI stage with the view that they would be addressed in the Application. But otherwise we are satisfied for <u>this particular project</u> that it will not make a material difference to our advice or the outcome of the decision-making process. However, it should be noted that this may not be the case for other projects. Therefore it should be noted by interested parties that just because these issues/comments are not raised as part of our Relevant Representations in this instance it should not be understood or inferred that in other cases or circumstances Natural England will take this approach. Furthermore, these may become issues should further evidence be presented.</p>	
<p>Green</p> <p>Natural England supports the Applicant's approach.</p>	