

East Anglian Two SLVIA

Comments on Mitigated Layout for Examination

1 Introduction

1.1 Appointment

- 1.1.1 Alison Farmer Associates (AFA) was appointed by the Suffolk Coast & Heaths Area of Outstanding Natural Beauty (SCH AONB) to undertake a review of the East Anglian Two (EA2) Seascape, Landscape and Visual Impact Assessment (SLVIA) documents accompanying the relevant DCO for proposed wind farm development.
- 1.1.2 The proposed windfarm comprises a revised mitigated layout that has evolved from an earlier iteration put forward by ScottishPower Renewables (SPR) in the Stage 4 Preliminary Environmental Information Report (PEIR) (section 42) consultation. AFA previously commented on the PIER proposals in February 2019 on behalf of the SCH AONB.
- 1.1.3 This report focuses on the AONB and reviews the revised mitigated scheme and the predicted landscape and visual effects set out in Chapter 28 of the Environmental Statement (ES). In particular it reviews the proposed mitigation and how judgements on effects have changed.
- 1.1.4 This report will be used by the SCH AONB Partnership to inform its input into a Statement of Common Ground and written response for the public examination of this proposal through the Nationally Significant Infrastructure Project procedures.

1.2 Scope of work

- 1.2.1 This work focuses on the seascape, landscape and visual effects of the offshore components of the scheme on the AONB landscape. Therefore, effects on landscape beyond the AONB designation and on shore components of the scheme, are not considered as part of this report. Policy context has not been repeated in this report.
- 1.2.2 EA2 documents which have been reviewed include:
- ES Chapter 28 Offshore Seascape, Landscape and Visual Amenity
Environmental Statement Volume 1 October 2019
 - Coastal Visualisations
 - Appendix 28.2 SLVIA Methodology
 - Appendix 28.3 Seascape Assessment
 - Appendix 28.4 Landscape Assessment
 - Appendix 28.5 Visual Assessment
 - Appendix 28.6 Suffolk Coastal Path Assessment
 - Appendix 28.7 Cumulative Seascape, Landscape and Visual Assessment
 - Appendix 28.8 Offshore Windfarm Visibility

- ES Chapter 24 Heritage
- Appendix 24.8 Offshore Infrastructure Impact on Coastal Heritage Assets

1.3 Approach

1.3.1 The review has been desk based only, although familiarity of the study area from previous work in the area has informed the review. Where specific aspects of the scheme are not mentioned in this report it should not be taken as acceptance of what is proposed or assessed.

1.3.2 The structure of the report is as follows:

- Section 2 considers the key changes to the scheme and embedded mitigation
- Section 3 compares the assessment of landscape effects between the PEIR scheme and mitigated proposals
- Section 4 reviews the assessment of effects on the special qualities of the AONB
- Section 5 considers the difference in visual effects between the PEIR scheme and mitigated proposals and thresholds and capacity of the landscape to accommodate the proposed development

2 Changes to the Proposed Scheme

2.1 Embedded Mitigation

2.1.1 Following consultation on the PEIR, amendments were made to the proposed scheme in terms of turbine layout which sought to reduce the windfarm site area or geographic extent when viewed from the shore. The changes in the proposed scheme are set out in section 28.3.3 of the ES and resulted in the following:

- **Changes in distance** from the shore/viewpoints
- **Reduction in lateral spread** of the wind farm when viewed from the AONB and subsequent reduction in the magnitude of change from certain viewpoints
- **Concentration of turbines to form a denser grouping** of turbines where individual turbines appear less spread out

2.1.2 The height and number of turbines remain the same i.e. 60no. 300m high turbines.

2.2 Distance and Lateral Spread

2.2.1 Viewpoints 3 to 18 fall within the AONB. Using the data in Table 28.3 of the ES chapter 28, I have set out below the differences between the PEIR and mitigated schemes in relation to distance from the nearest turbine and horizontal angle of view occupied by the scheme for each viewpoint.

Viewpoint (shaded numbers include those in the visualisations showing PEIR and mitigated schemes)	Difference in distance of closest turbine between PEIR and mitigated schemes (km) ¹	Difference in horizontal angle between PEIR and ES Schemes i.e. lateral extent reduction (degrees)
3	2.3	11.39
4	1.1	12.39
5	0.9	12.40
6	0.5	12.39
7	-0.3	12.20
8	-1.0	12.39
9	-1.0	12.09
10	-1.0	12.09
11	-0.7	12.20

¹ Note minus figures reflect the nearest turbine becoming closer to the viewpoint.

12	-0.6	12.09
13	-0.5	11.80
14	-0.2	14.40
15	-0.2	8.3
16	-0.3	7.4
17	0.29	6.2
18	-0.2	10.7

2.2.2 The table above shows that of the viewpoints within the AONB, the nearest turbine will be **further away for just 5 of them** (viewpoints 3-6 and 17). **For the other 11 viewpoints** (viewpoints 7-16 and 18) **the nearest turbine will become closer** in the mitigated proposals. The greatest difference occurs in relation to viewpoints 3 and 4 (where distance will increase by over 1km). However, all of these differences are relatively minor and are not readily perceived, as such they are unlikely to result in a material difference in effects.

2.2.3 In terms of changes in the lateral extent of the wind farm seen from each of the viewpoints, the greatest change is felt for viewpoint 14 where there is a 14.40 degree reduction in lateral spread. For all other viewpoints the change is between 11.08 and 12.40 or an average of 12.1 degrees. This difference is perceived in all viewpoints where the extent of EA2 turbines fills a smaller portion of the 90 degree horizontal field of view. Chapter 28 of the ES concludes that *'the magnitude of change has reduced towards the lower threshold of medium in the assessment of many of the viewpoints.'*

2.2.4 The Environmental Statement (ES) provides visualisations for Viewpoints 3, 4, 8, 13 and 18 comparing the PEIR layout with the mitigated layout. These have been reviewed and are helpful in showing the difference between the two schemes. They are also useful in understanding the cumulative effects of the proposals and the concept of capacity which is discussed in section 5.0 below.

3 Landscape Effects

3.1.1 This section reviews the landscape effects in the ES for the mitigated scheme.

3.1.2 The LVIA for the mitigated scheme has made a number of adjustments to the sensitivity of landscapes types which are relevant to the AONB and which experience effects. These are set out in the table below:

Landscape Type	EA2 PEIR Sensitivity	EA2 Mitigated Layout Sensitivity
05	Medium-High	High
06	Medium	Medium-High
07	Medium at coast	Medium-High at coast
08	Medium	High

3.1.3 These adjustments to the sensitivity of the landscape are welcomed and concur broadly with the findings in the earlier AFA report (Feb 2019).

3.1.4 In terms of adverse affects and magnitude of change the SLVIA for the mitigated EA2 scheme acknowledges there will be some adverse effects on the Coastal Levels (06) and Coastal Fens (08). It recognises that in places the turbines will break the skyline, their vertical form in a horizontal landscape, and their movement, will intrude on these landscapes. It is also noted that the magnitude of change is marginally reduced for 06B and 06C but increased for 06D in coastal areas where turbines are likely to intrude.

3.1.5 The magnitude of change increases marginally for 07C (Dunwich Heath/cliffs) and 08A, B and D despite mitigation of the scheme.

3.1.6 In terms of LCT 05D there appears to have been an inconsistency in judgements. For this landscape, the magnitude of change remains unchanged from the PEIR assessment i.e. medium. **The sensitivity of this landscape is increased to high, and yet the overall significance is no longer regarded as significant. This is not consistent with the SLVIA methodology nor the assessment for LCT 05C which is also regarded as high sensitivity, medium magnitude and significant effect.**

3.1.7 The following can be concluded from this review:

1. The EA2 mitigated scheme does not dramatically alter the magnitude of effect on landscape character in the SLVIA.

2. In a number of cases (especially for LCT08 and the coastal sections of LCT06) the magnitude of change increases marginally, although this does not result in a significant effect in the SLVIA. Nevertheless, Table A28.5 of the methodology shows that a medium-low magnitude of change acting on a Med-High sensitive landscape can result in an significant effect.

3. Similarly for LCT07D coastal sections a medium-high sensitivity coupled with a medium-low magnitude of change can result in a significant effect.
4. The significance of effect on LCT 05D appears inconsistent with the SLVIA method and judgements made for LCT 05C.

3.1.8 Overall, the EA2 mitigated scheme is considered to make little difference to the effects on landscape character within the AONB and the significance of effect is still considered to have been underestimated in a number of cases.

4 Special Qualities of the AONB

4.1 EA Assessment

4.1.1 Appendix 28.4 of the ES provides an assessment of the effects of the proposed wind farm on the special qualities of the AONB. Section 28.7.3.2.3 of the ES provides a summary. The assessment concludes that there will be significant long term effects on landscape quality, scenic quality and relative wilderness.

4.1.2 In relation to **landscape quality** it states that:

'EA2 will be seen on and beyond the horizon, as a 'horizontal development' to a large, open seascape...

'EA2 will...introduce a further element into the seascape setting of coastal areas of the AONB'.

4.1.3 It goes on to state that:

'Vast, largely open partially developed (by offshore windfarm development) seascape form one of the key characteristics, as part of the simple landscape composition of sea, sky and shingle, and it is this quality in particular, that is exposed to changes arising from EA2

4.1.4 In relation to **scenic quality** it states that:

'EA2 will result in a partial reduction of open sea skyline in long distance and panoramic views out to sea and along the Heritage Coast, from some elevated vantage points due to the lateral spread of wind turbines on the seaward horizon experienced from the AONB coastline'.

4.1.5 It goes on to state that:

'The open sea skyline of the large vistas would remain unaffected across the majority of the field of view out to sea and the large scale of the open sea vistas are more likely to be able to accommodate windfarm development than smaller scale, complex seascapes.'

4.1.6 In relation to **relative wilderness** it states that:

'the expansive views out to sea from the AONB, which emphasise a sense of openness and exposure on the open and exposed coastline and on the Sandlings heaths.'

'the sense of openness through its relationship with the horizon.'

4.1.7 This analysis serves to illustrate the role the open sea horizon plays in the special qualities of the AONB.

4.1.8 The SLVIA also considers effects on tranquillity and cultural heritage. In relation to the former it discusses the factors which contribute to tranquillity separately from factors which detract from tranquillity rather than considering the overall level of tranquillity expressed in the AONB. In many of the coastal areas the level of tranquillity is high, the open expanse of sea and unfettered sea skyline and dark skies contributing to perceptions of tranquillity. The SLVIA states that EA2:

'introduces development influence in the offshore waters that form the seascape setting to the AONB, as viewed from the relatively undeveloped character of parts of the Suffolk coast. The technological appearance of the wind turbines and the visual movement of the rotor blades may contrast with the perceived tranquillity of these landscapes, evident in the least developed pockets of the AONB coastline.'

4.1.9 **This change is likely to give rise to significant effects on perceptions of tranquillity within the majority of coastal sections of the AONB.**

4.1.10 In terms of effects on cultural heritage the SLVIA cross refers to chapter 24 of the ES. Appendix 24.8 specifically looks at the effects of the offshore elements of the scheme on cultural heritage. However, its focus is clearly set out in the introduction:

'The purpose of this report is to identify those onshore heritage assets where there is potential for heritage significance to be materially affected by change in their settings.'

4.1.11 The report makes no reference to the AONB and is clearly not an assessment of the contribution of cultural heritage to the special qualities of the AONB and the subsequent influence of the proposed windfarm on these qualities. GLVIA makes it clear that conservation interest in terms of historical and cultural interest can add to the value of the landscape as well as having value in their own right (Box 5.1. page 84). **The ES cultural heritage assessment considers the effects of the EA2 on the value of heritage assets in their own right i.e. their significance, but not the role these features play in the special qualities of the AONB.** This aspect therefore remains missing from the assessment. It is specifically relevant to vertical heritage features which are landmarks along the coast and are experienced in a simple uncluttered setting, including an unfettered sea skyline/horizon. In terms of 'associations' and 'written descriptions' no reference can be found in Chapter 24.

- 4.1.12 Overall the assessment of effects on AONB special qualities is not comprehensive. In reaching judgements on the magnitude of change on special qualities the SLVIA relies on a number of arguments and assumptions which are discussed below.

4.2 Arguments Advanced in the SLVIA

- 4.2.1 The SLVIA, when assessing the level of effect on the special qualities of the AONB, relies on the following arguments which are considered in turn below. These arguments are considered to result in an underplaying of the likely effects of the proposed EA2 mitigated scheme on the AONB landscape.

Position of the windfarm in relation to the setting of the AONB and horizon

- 4.2.2 The SLVIA states that EA2 does not fall within the immediate setting of the AONB and lies beyond the horizon. Whilst this may be true i.e. the wind farm is located c 32.6km or more from the AONB and the bottom of the turbines are not visible due to this distance and curvature of the earth, the turbines nonetheless break the skyline. It is their visibility on the skyline even at a distance of greater than c. 32.6km that results in landscape and visual effects. In other words, **the location of the turbines beyond the skyline is not a critical factor where the turbines continue to be apparent on the skyline and especially so where they have a lateral spread.**

Effects on Aesthetic and Perceptual Qualities of the AONB

- 4.2.3 The SVLIA concludes that EA2 only affects some of the aesthetic/perceptual aspects of character and only on the coastal fringes of the AONB. Other special qualities and characteristics remain unchanged and will continue to contribute to the distinctiveness of the AONB.
- 4.2.4 It is accepted that some of the AONB special qualities are more affected than others. Whilst the assessment of effects on special qualities invariably requires the key factors which contribute to natural beauty to be considered in turn, this should not lead to the justification of a scheme on the basis that only some qualities are unaffected for the following reasons.
- 4.2.5 Firstly, not all factors contribute to natural beauty to the same extent – **adverse effects on a single fundamental quality can lead to a significant effect overall.** Secondly, all factors collectively contribute to the natural beauty of a designation. It is for this reason that when designating an area as AONB it is necessary to step back and consider the weight of evidence as a whole to justify designation. In the same way it is necessary to step back and consider the magnitude of effects on all special qualities collectively. Clearly any special qualities that rely on the open, emptiness of the sea and horizon are likely to be affected including landscape quality, scenic quality, relative wildness, tranquillity and aspects of cultural heritage.
- 4.2.6 In the case of the SCH AONB, the coastline is an essential component of its character and special qualities. The SLVIA for the mitigated scheme recognises the role of the open skyline in continuing to some of the special qualities. As noted above the assessment is considered to be incomplete.

Extent of AONB Landscape Affected

- 4.2.7 The SLVIA acknowledges that relatively long stretches of the AONB coast are affected by the windfarm but these coastal areas are only narrow.
- 4.2.8 It is accepted that the effects of EA2 are felt over long stretches of the coast within the SCH AONB including landscape types 05, 06, 07 and 08, and that not all of the AONB landscape is affected by the proposed EA2 windfarm. However, the acceptability of a development should not be justified based on the proportion of the designation affected. The landscapes affected by EA2 may well be narrow but these coastal landscapes nonetheless form an essential part of the AONB. Many of the views are from the Suffolk Coast Path, a promoted long distance route. The perceptions of visitors, who are drawn to the coast as part of their visit to the AONB, will be altered by the effects of the proposed wind farm breaking the skyline. **Long stretches of coast will be affected and sequential views will mean the effects will not be fleeting but will be of considerable duration.**

Presence of Existing Turbines on the Skyline

- 4.2.9 The SLVIA states that the skyline, as seen from the AONB, is already affected by wind farm development and this forms part of the perceived character of the AONB. EA2 would not introduce wind energy development into an area which is not already characterised by wind turbines. EA2 will be seen as an extension to the existing windfarm influence and not as a new element in the seascape.
- 4.2.10 Currently the only turbines visible from the AONB are those at Greater Gabbard and Galloper. These turbines affect some views from the southern half of the AONB only. **The visibility of existing wind turbines on the skyline from the AONB should not be used to justify EA2. Rather it should raise the question as to whether the seaward skyline, which is an appreciated quality and characteristics of the AONB, can accommodate further development without compromise.** This is considered in more detail in section 5.0 below.

5 Thresholds and Capacity

5.1 Visual Effects

5.1.1 In relation to visual effects arising from the EA2 mitigated scheme the SLVIA states on page 12 of Chapter 28 that:

'The magnitude of change has reduced towards the lower threshold of medium in the assessment of many of the viewpoints'.

5.1.2 The difference in the lateral extent of the EA2 mitigated scheme is illustrated in the visualisations. However, a number of observations can be made:

- In viewpoints from the northern part of the AONB, the lateral extent of EA2 remains larger than the gap between it and EA1N and still covers a significant proportion of the view.
- In views from the central part of the SCH AONB e.g. Viewpoints 8 and 13 the turbines on the northern side of the windfarm, appear as a separate group – this means that the windfarm does not form a discrete group, but rather a more dispersed pattern of turbines.
- Of the viewpoints within the SCH AONB only three (V/P 3, 10 and 18) have had the magnitude of change reduced from 'medium' to 'medium-low' as a result of the mitigated scheme. In each of these, the sensitivity of the visual receptor was also increased from the previous PEIR assessment.

5.1.3 **Overall, the magnitude of change for the majority of viewpoints within the AONB remains medium adverse. Whether the magnitude of change is considered to be a 'lower threshold of medium' or not, does not alter the fact that the overall significance of effect remains unchanged. The SLVIA judges 10 out of 15 viewpoints within the AONB will experience a significant adverse effect.**

5.2 Cumulative Effects and Capacity

5.2.1 The ES considers the cumulative effects of the proposed development on the basis of the effects of the proposed mitigated scheme with existing/proposed windfarm development (Greater Gabbard/Galloper and EA1 North). It does not consider the combined cumulative effect.

5.2.2 This is considered in more detail with the use of the visualisations provided as part of the SLVIA which reflect views using a 90 degree horizontal field of view, in accordance with SNH Guidance. Whilst these views do not reflect the full seaward horizon from each viewpoint, they do represent the view centred on EA2 and in the context of other existing and proposed schemes, and have been adopted in the

SLVIA as representative. As a means of expressing the changes and effects which are likely to occur, the table below sets out the percentage of skyline within the illustrated views affected by turbines, looking firstly at the percentage reduction of the EA2 scheme between PEIR and the mitigated layout, and then in relation to all wind farms within each view.

View-	Percentage of horizon affected in a 90 degree horizontal field of view						
	EA2 PEIR	EA2 Mitigation	EA1	Galloper/ Greater Gabbard	Reduction of EA2 between PEIR and Mitigated layout	Total horizon affected by all windfarms	Total, horizon affected, excluding windfarms likely to be less evident
3	43	29	18.4	8	14	55	47.4
4	46.3	31	18	7.6	15.2	57	49
8	47.4	32.6	16	8.3	14.7	57	48
13	46.5	32.5	15.4	9.7	13.9	58	42.2
18	42.3	30.2	15.3	21.4	12.1	70	51.6
Ave.					14%	59%	47%

5.2.3 The table above illustrates that the average percentage reduction between the PEIR and mitigated layouts for these 5 viewpoints is 14%. This is clearly an improvement and welcomed. However the figures also demonstrate that, taking the mitigated layout for EA2, and in association with all other wind farms (EA1N and Galloper/Greater Gabbard), **the total skyline, within the illustrated view, affected by wind farm development is nearly 60%**. Even discounting Galloper and Greater Gabbard in viewpoints 3, 4 and 8, and EA1N in viewpoints 13 and 18 (where turbines may be less evident), the total skyline, within the illustrated view, affected by turbines remains on average 47%.

5.2.4 This analysis is useful to demonstrate the likely benefits which might arise from a reduction in the lateral extent of EA2 (i.e. a mitigated scheme). The SLVIA visualisations illustrate the improvements which arise as a result, for example, in no views will EA2 be seen overlapping with EA1N or Galloper and Greater Gabbard windfarms. Nevertheless, even with a greater gap between windfarms, the extent of skyline, within the illustrated view, affected by turbines remains significant. **Given that the open unfettered skyline is a key component of the views from the AONB, the presence of turbines for nearly 50% of the horizon in each of the illustrated views, demonstrates the extent to which this quality is compromised, even with a mitigated scheme.**

5.3 Conclusions

5.3.1 Appendix 28.7 sets out the cumulative effects of the schemes both in terms of cumulative effects with EA1N and also effects associated the Greater Gabbard and

Galloper. The analysis makes it clear that the northern parts of the AONB are likely to experience cumulative effects with EA1N and the southern parts of the AONB with Galloper and Greater Gabbard. This reflects the fact that EA2 is located between these two windfarms in an area of open sea skyline, visible from the majority of the AONB – this is illustrated on figure 28.

- 5.3.2 Whilst the SLVIA for the mitigated scheme shows a reduction in effect from viewpoints due to reduced lateral spread, this does not alter the fact that when taken in association with EA1N and Galloper, Greater Gabbard, **EA2 will continue to cause a substantial ‘curtain’ effect of turbines on skyline views from the AONB and would not conserve and enhance its special qualities.**