East Anglia ONE North and East Anglia TWO Offshore Windfarms

Written Summary of Oral Case (ISH8)

Issue Specific Hearing 8 on 18th February 2021: Seascapes

Applicants: East Anglia TWO Limited and East Anglia ONE North Limited
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Applicable to East Anglia ONE North and East Anglia TWO

Revision Summary				
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Description of Revisions			
Rev	**Page**	**Section**	**Description**
001	n/a	n/a	Final for Deadline 6 submission

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Glossary of Acronyms

AONB	Area of Outstanding Natural Beauty
dDCO	Draft Development Consent Order
DCO	Development Consent Order
ES	Environmental Statement
ExA	Examining Authority
GLVIA	Guidelines for Landscape and Visual Impact Assessment
ISH	Issue Specific Hearing
LCT	Landscape Character Type
NE	Natural England
NPS	National Policy Statement
NSIP	Nationally Significant Infrastrucutre Project
SLVIA	Offshore Seascape, Landscape and Visual Amenity
SoCG	Statement of Common Ground
VP	View Point
ZTV	Zone of Theoretical Visibility

Glossary of Terminology

Applicants	East Anglia ONE North Limited and East Anglia TWO Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia TWO project Development Consent Order but will be National Grid owned assets.
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO / East Anglia ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO project Development Consent Order.
Projects	The East Anglia ONE North project and the East Anglia TWO project.

1 Introduction

1. This document is applicable to both the East Anglia ONE North and East Anglia TWO Development Consent Order (DCO) applications (the 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 23 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.

2. The Issue Specific Hearing 8 for the Applications were run jointly and took place virtually on 18th February 2021 at 10:00am (Hearings).

3. The Hearings ran through the items listed in the agendas published by the ExA on 8th February 2021. The Applicants gave substantive oral submissions the Hearings and these submissions are set out within this note.

4. Speaking on behalf of the Applicants were:

    - Mr Colin Innes, partner at Shepherd and Wedderburn LLP;
    - Mr Paolo Pizzolla, project director for EIA and consenting at Royal HaskoningDHV;
    - Mr Simon Martin, associate at Optimised Environments ('OPEN'); and
    - Mr Brian Denney, chartered landscape architect, Fellow of the Landscape Institute and principal Environmental Impact Assessment practitioner.

2 Agenda Item 2: Visibility

5. The Applicants discussed this agenda item in below agenda items during the Hearings.

3 Agenda Item 3: Onshore Seascape Effects

3.1 Overall findings and interpretations of the ES SLVIA

3.1.1 Geographical Extent

6. The Applicants note that only the East Anglia TWO project was discussed during this part of the agenda item given it its closer distance from the coast.

7. The geographic extent over which the landscape and visual effects will be experienced as a result of the East Anglia TWO project is described and assessed in the ***Chapter 28*** of the ES, ***Offshore Seascape, Landscape and Visual Amenity*** (APP-076).

8. It is line with guidance in GLVIA3[1] (paragraph 5.50):

   'The geographical area over which the landscape effects will be felt must also be considered. This is distinct from the size or scale of the effect – there may for example be moderate loss of landscape elements over a large geographic area, or a major addition affected a very localised area'.

9. GLVIA3 (paragraph 5.50) also identifies a series of scales of geographic extent over which landscape effects may occur:

   - *'At the **site level**, within the development site itself.*
   - *At the level of the **immediate setting** of the site.*
   - *At the scale of the **landscape type** within which the proposal lies.*
   - *On a larger scale, influencing **several landscape types** or character area'.*

10. Effects occur from geographically focused areas along the immediate coastal edges where these panoramic, long distances views offshore are available and an aspect of character and qualities.

11. Views of the East Anglia TWO project will primarily be experienced from the narrow strip where the coastal edges of Suffolk meet the sea, between Kessingland and Orford Ness, at distances of between approximately 34km near Kessingland, 32.6km near Southwold to 38km near Orford Ness.

12. There is agreement between the Environmental Statement assessment (see ***Chapter 28 – Offshore Seascape, Landscape and Visual Amenity*** (APP-076))

[1] Landscape Institute (2013), Guidelines for Landscape and Visual Impact Assessment

and NE that the East Anglia TWO project results in some significant effects on views and landscape character experienced at the coastal edge of the AONB.

13. The effects on special qualities of these areas of the AONB coast would be experienced intermittently, not continuously, from different sections of the Suffolk Coast Path, shown in ***Figure 28.24a*** (APP-353) and ***Figure 28.24b*** (APP-354) or informally when walking along the shingle beaches in these areas (off the defined route of the Suffolk Coastal Path). The significant effects on AONB special qualities are therefore limited to specific locations along its length, as set out in the Environmental Statement, and are not experienced continuously along the AONB coastline, which is stated as 76km long (or 283km including the five estuaries) in the 2018 – 2023 AONB Management Plan. The Suffolk Coastal Path does not allow a continuous exposure to the effects, as the Suffolk Coastal Path often diverts from the coast outside these areas, passing through landscapes that have limited visibility, or landscapes where the AONB special qualities are less apparent.

14. The total length of the route with actual visibility of the construction and operation of the Projects is less than a third (29.4%, 25.7 km) of the entire route and that assessed as having a significant cumulative impact is only 15% (13.1 km) of the full route. These sections of significant cumulative visual impact have a relatively limited contribution to the overall visual amenity experienced in views from the Suffolk Coastal Path when considered as a whole, with views from the large majority of the route not being affected at all.

15. The Suffolk Coastal Path is promoted and way-marked as a long-distance footpath and is undergoing development to incorporate it within the England Coastal Path, a high-profile national trail around all of England's coast

16. The matter of the frequency of the effects, and in particular, concerning weather and visibility, other than in a worst-case good visibility scenario, is also an important matter to consider in understanding the likely effects upon the special qualities and peoples enjoyment of them.

17. The SLVIA includes a summary assessment of visibility frequency at ***28.8.3.1*** and more detail in ***Appendix 28.8*** (APP-563), to assess the potential duration over which the East Anglia TWO project would be visible from the coast.

18. The Met Office definitions are the best terms used to consider visibility – ranging on a scale from 'very poor' to 'excellent'. 'Very good' visibility range is 20 - 40km; and 'excellent visibility' range is over 40km. The East Anglia TWO project is located approximately 32.6km offshore at its closest point near Southwold/Walberswick. The East Anglia TWO project therefore requires 'very

good', but generally 'excellent' visibility conditions for it to be visible from the coastline. This is illustrated in ***Figure 28.20*** (APP-345).

19. Photographs for all viewpoints were taken in 'very good' or 'excellent' visibility conditions, during summer and in the afternoon or evening when the sun was setting to the west and lighting up the turbines - to represent a 'worst-case' maximum visibility scenario. The judgements made in the SLVIA are based on this 'worst-case' maximum visibility scenario but in reality the frequency and duration of visual effects arising from the East Anglia TWO project will be reduced by the prevailing weather and visibility conditions.

20. The varied visibility will reduce the number of days upon which views of the East Anglia TWO project will be available from the coastline, and is likely to inhibit clear views, rendering the wind turbines more visually recessive within the wider seascape.

21. The SLVIA confirms that the assessed worst case optimum visibility out towards the turbines and the horizon is infrequent. For the greater part of the time the clarity of long-distance views out to sea will not be part of the experience of those enjoying the coast. Under the more frequent sub optimal conditions, the effect of the turbines on views will not be significant. This needs to be taken into consideration alongside the nature of the effects (magnitude) and the effects subsequently being on the threshold of significance, alongside the geographical extent over which they are likely to be experienced.

22. Met Office visibility data is mapped in ***Figure 28.20*** (APP-345) in the context of the East Anglia ONE North project and visibility frequency over a 10 year period at different distance ranges. The visibility range is shown in bands extending offshore and these can be correlated against the percentage visibility frequency graph (in ***Figure 28.20***) to show the frequency of visibility at different ranges.

23. Based on visibility from the closest point of the East Anglia TWO project (32.6km), the Met Office visibility data indicates that the closest parts of the East Anglia TWO project will have a visibility frequency of approximately 33% i.e. 120 days of the year on average (or approximately one-third of the year) with visibility over 32.6km.

24. Of this period of 'very good' and 'excellent' visibility, the totality of best visibility will not just occur in summer months, when south westerly winds and summer haze can reduce visibility, but also during the winter and a notable portion of this very good and excellent visibility will be in periods of darkness. The SLVIA therefore takes a precautionary approach in relation to 'frequency of effect'.

25. Variations in weather, limitations on the visibility and how infrequently these effects will be experienced have not been downgraded either in magnitude or

significance. Effects are assessed based on the worst-case with clear visibility and therefore need to be considered and balanced in the context of the limited amount of time that 'very good' or 'excellent' visibility out to sea will be available.

26. In other times of less than optimal visibility (very poor, poor, moderate and good), which represent a large proportion of the visibility frequency, effects are that are experienced are likely to be lower than assessed, as the East Anglia TWO project will not be visible.

27. The Applicants consider it is reasonable to conclude that the prevailing visibility and weather conditions will combine to reduce the probability and frequency of effects to limited periods when particularly clear offshore views are available.

3.1.2 Comparison with Other Offshore Windfarms

28. The Applicants submit that the baseline conditions are likely to change as a result of further offshore wind energy development in this seascape, with other offshore windfarms under construction nearby (East Anglia ONE) and consented (East Anglia THREE).

29. There are other proposals for large scale offshore windfarms at long distance from the Norfolk coastline at Norfolk Boreas, which are anticipated to change the baseline of the wider seascape.

30. Comparisons of the Projects with Rampion and Navitus Bay were discussed and in response to action point 2 of ***Action Points from Issue Specific Hearing 8 (ISH8) - 18 February 2021*** (EV-114), the Applicants have submitted a 'think piece' to set out their position in respect of action point 1 ('Effects of Rampion Off-shore Windfarm on South Downs National Park and potential effects of Navitus Bay Offshore Windfarm on the heritage coast') at Deadline 6 (ExA.HA.D5.V1).

3.2 East Anglia ONE North

3.2.1 Night-time Effects

31. The Applicants have committed to reducing lighting intensity to the lowest permissible level of 200cd when visibility from every turbine within the windfarm group is greater than 5km and have secured this commitment through Requirement 31 of the ***draft DCO*** (REP5-003).This is permitted through Article 223 of the Air Navigation Order 2016which applies international requirements.

32. Night-time effects of the Projects have therefore been mitigated through the requirement to operate the aviation lights at the lowest permissible level during periods of good visibility.

33. There is agreement with NE that the effect of 200cd lighting will not be significant for all receptors and the special qualities of the AONB.

34. During periods of poor visibility (when visibility is less than 5km), where the aviation lights could be operating at their brightest setting of 2,000cd, the distance of the lights offshore combines with poor visibility conditions will mitigate/remove their visual effect in long distance views over 36km from the coast.

35. Night-time photomontages were included in the Environmental Statement to illustrate the likely impacts of aviation lighting, from Lowestoft (Vp1, ***Figure 28.25f*** (APP-355)), Kessingland (Vp2, ***Figure 28.26f*** (APP-356)), Southwold (Vp4, ***Figure 28.28f*** (APP-358)) and Aldeburgh (Vp13, ***Figure 28.37e*** (APP-367)).

36. The SLVIA and the night-time photomontages assumed full lighting intensity of the 2,000cd aviation warning lights in 'very good' to 'excellent' visibility conditions as a worst case, yet no significant effects were found.

3.3 East Anglia TWO

3.3.1 Good Design

37. The Applicants have further reduced the effects of the East Anglia TWO project by committing (***Notice of Intent to Make Non-material or Material Changes*** (REP1-039)) to a reduction in the maximum turbine height from 300m to 282m to blade tip given developing understanding of the technical feasibility of various turbine designs, thus reducing the height and appearance of the windfarm when viewed from the AONB. The Applicants do not have an intention to make any further adjustments to the turbine height. It is important that the project can deliver efficient technology throughout the lifetime of the consent. This is a key objective of EN-1.

3.3.2 Effects on the Landscape Receptors within the AONB

3.3.2.1 LCT 06 – Area B

38. The Applicants maintain their assessment of LCT 06 Area B as set out in the ES. Only a very small part of this LCT extends down to the coast (at Sole Bay), with the majority set back and covering land 'behind' Southwold (to its north and west), where there is limited visibility shown on the ZTV and further screening by intervening urban development.

39. There is very limited visibility from the Town Marshes / Havenbeach Marshes area, due to intervening raised shingle/dunes landforms towards the sea which 'shelter' the coastal levels on its inland side.

40. The large majority of Area B of the Coastal Levels LCT 06 does not have a seascape setting and is in fact, set back and covering marshland 'behind' or inland of Southwold and Reydon.

41. On balance, the magnitude of change on character of this Area B of the LCT is considered to be lower than other areas of this type that have more associative

seascape setting. Areas of inter-visibility between this LCT and its' seascape setting and thereby the East Anglia TWO project are very limited.

42. There are also numerous more prominent existing development influences in the context of the LCT around Southwold.

43. Much of the LCT is marshland with limited access to perceive changes to its character. GLVIA3 paragraph 3.15 notes that *'the way the landscape is experienced'* is relevant to understand the area that may be affected. Much of this area of the LCT is marshland and has limited access to people to perceive changes to its character.

44. The aesthetic and perceptual aspects that define its baseline marshland character will not be lost and will remain fundamental to defining its character, and that on balance, the perceived character of this area of the Coastal Levels LCT will not be significantly affected.

45. Overall, the perceived character of these areas of the LCT would be medium-low as assessed in the Environmental Statement and would not be significantly affected by the East Anglia TWO project, which is located on the sea skyline at long distance over 32km from this area of LCT 06.

3.3.2.2 LCT 06 – Area D

46. The Applicants maintain its assessment of LCT 06 Area D as set out in the ES. Similar to Area B above, there is very limited visibility from within the LCT which drops down to lower levels inland of the low shingle ridge contained in LCT 05, which limits direct views of the sea and is predicted to provide screening of the turbines within the East Anglia TWO project.

47. Although visibility is indicated from central parts of the LCT in the ZTV, field survey verification confirms limited visibility from the Suffolk Coast Path crossing the LCT, which is on a raised embankment, with the surrounding levels being lower in elevation.

48. The coastal side of Area D of the Coastal Levels does not have a direct 'coastal portion' or edge to the seascape, as such, being entirely separated from the sea by an approximately 200m wide strip of intervening Coastal Dunes and Shingle Ridges LCT 05.

49. The eastern, coastward side of the LCT is often the area that is most screened behind the raised shingle ridge contained in LCT 05 (as is evident in the ZTV and from field survey assessment), which limits directs views of the sea and is predicted to provide screening of the turbines within the East Anglia TWO project from the low coastal levels behind the Shingle Ridges LCT 05.

50. There are also numerous more prominent existing development influences in the context of the LCT around Southwold and Thorpeness.

51. The aesthetic and perceptual aspects that define its baseline character as a former mere will not be lost and will remain fundamental to defining its character, and that on balance, the perceived character of this area of the Coastal Levels LCT will not be significantly affected.

52. Overall, the perceived character of the coastal portion/edges of this area of the LCT would be medium-low as assessed in the Environmental Statement and would not be significantly affected by the East Anglia TWO project.

3.3.2.3 LCT 29

53. The Applicants maintain that the effect of the East Anglia TWO project on the perceived character of LCT 29 Wooded Fens (Covehithe Broad and Easton Broad) is not significant as a whole, as set out in the ES.

54. The eastern edges of LCT 29 extends to the shoreline to cover part of the shingle/dunes area that is typically part of the LCT 05 (Coastal Dunes and Shingle Ridges), however these consist of short sections of shoreline associated with LCT 29, of approximately 400m at Covehithe Broad; and 800m at Easton Broad.

55. Although these locations have a distinctive character as areas where these two broads meet the coast, they are not representative of the overall character of these wooded fens, which extend further inland as coastal valleys with extensive bodies of water, grazing marsh and plantation woodlands on higher ground surrounded the broads.

56. The majority of the LCT extends inland of these short coastal edges, at low level, consisting of low lying valley floor of marshland and areas of open water. These areas are contained by the gradually rising landform of adjacent land.

57. Land at ‘Green Heath’, forming the southern part of Covehithe Cliffs, provides screening of views out to sea from within Covehithe Broad. Further visual containment is also provided within the low-lying broads of the LCT by extensive reed beds and marsh habitat, which contain views.

58. There is also limited access to people to these wet valley floors of Covehithe and Easton broads where there is considerable amount of water either in drainage ditches or wider open broads, which afford limited opportunity to people to perceive changes occurring in the wider landscape context.

59. The general perception when alongside these areas of water is of being contained 'within' the landscape, with the exception of the short sections of the LCT at the shoreline.

60. The LCT description in the Suffolk Landscape Assessment recognises the amount of woodland screening provided around these wooded fens, including the '*larger amounts of plantation woodlands on the higher ground surrounding them' and that the broads are 'framed by woodland on the rising ground around them'.*

61. This is particularly applicable to Benacre Broad, and only partially applicable to the areas of Covehithe Broad further inland, where woodland lines the southern side of the broad and provides substantial screening.

62. While the Applicants note the potential for changes to the perceived character of small areas of the coastal edges of the LCT with offshore sea views, on balance the effects of the Project windfarm site on the perceived character of the Wooded Fens LCT 29 are considered to be of medium-low magnitude and not significant as a whole.

63. While the Applicants note the potential for localised significant effects to the perceived character of small areas of the coastal edges of the LCT with offshore sea views, the aesthetic and perceptual aspects which define its baseline character as a low-lying wooded fen/broad will not be lost and will remain fundamental to defining its character.

3.3.3 Effects on the AONB Special Qualities

64. Landscape quality is '*a measure of the physical state of the landscape*'. It may include '*the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of the individual elements*' (GLVIA3, p157). The East Anglia TWO project would only marginally affect these aspects of the landscape quality of the AONB, as it would not affect its physical state, only its setting through perceived change.

65. Changes to landscape qualities occur as a result of views from the AONB, rather than within it. Changes to the landscape qualities arise as a function of the juxtaposition of elements derived from the views experienced from within the AONB looking out to sea or along the coast. In terms of these landscape qualities, the East Anglia TWO project does not affect the immediate setting of the AONB, but will be seen on and beyond the horizon, as a 'horizon development' to a large, open seascape, rather than being viewed 'within' its seascape/landscape. Vast, largely open partially developed (by offshore windfarm development) seascape forms 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 the East Anglia TWO project.

66. As with landscape qualities, changes to scenic qualities occur as a result of views from the AONB, rather than internal views or views of the AONB with change to some views out to sea and along the coast. Due to the relatively low elevation of the heaths, simple form of the coastline and its long distance offshore, the East Anglia TWO project will be seen on and beyond the horizon, as a 'horizon development' which will substantially limit its potential to compete with landmarks within the AONB. 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 accommodate windfarm development than smaller scale, complex seascapes.

67. The term 'wild land' qualities encompasses both physical attributes and perceptual responses, reflecting that it is a combination of both physical and perceptual factors that contributes to the value and appreciation of wildness. No physical attributes that contribute to wildness special qualities of the AONB will be changed as a result of the construction and operation of the offshore infrastructure. Development located outside the AONB may only impact on perceptual responses or the perception of relative wildness. A number of coastal locations within the AONB provide opportunities to experience attributes of relative wildness. There are pockets of relative wildness associated with coast, in this largely farmed and settled landscape. These include, but are not limited to, areas such as Orford Ness, Minsmere, Dunwich Heath and some of the marshlands/estuaries/fen landscapes near the coast.

3.4 Cumulative Effects

68. In the Hearings, Suffolk County Council raised the Sizewell C material changes submitted to the ExA in October 2020 and stated that they consider a new Cumulative Impact Assessment should be undertaken to take these material changes into account. The Applicants maintain their Deadline 4 position on this (***Applicants' Comments on Natural England's Deadline 3 Submissions*** (REP4-016)) being that due to the advanced stage the Projects are at within the examination process, it is not considered necessary or appropriate for the Applicants to consider these changes within the applications. It is noted that Sizewell C will need to take the Projects into account in its cumulative assessment. Therefore, any effects arising from these changes at the cumulative level will be fully considered during determination of the Sizewell C application

3.5 Natural England position

69. In response to a direct question from the ExA, NE made submissions at the hearing that the East Anglia TWO should be refused on the grounds of the significant effects on the special qualities of the ANOB. Further, that their concerns could only be overcome by reducing the maximum tip height of the turbines to 210m and removing the first row of turbines. The Applicants do not

consider it appropriate to make such modifications to the projects. Such tip heights would be overly restrictive and not justified. The policy test for considering these effects is set out in EN-1 paragraph 5.9.12.