



Five Estuaries Offshore Wind Farm Ltd
Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire
SN5 6PB
fiveestuaries@rwe.com

Date: 7 June 2023
Our Ref: ESC Final Response - Statutory Consultation
Enquiries to: Grahame Stuteley
Email: grahame.stuteley@eastsoffolk.gov.uk

FAO: James Eaton – Onshore Consent Manager

Re: East Suffolk Council's Final Response - Five Estuaries Offshore Wind Farm Statutory Consultation (14 March to 12 May 2023).

Thank you for your letter dated 14 March 2023 inviting East Suffolk Council (ESC) to comment on the Five Estuaries Offshore Wind Farm project statutory consultation in accordance with Section 42 of the Planning Act 2008 ('the Act') and Regulations 11 and 13 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the 2017 Regulations').

This letter provides ESC's final response to the statutory consultation following our initial holding response letter dated 10 May 2023. As previously stated, in June 2020, Suffolk County Council (SCC) and Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) Partnership (in consultation with ESC and Natural England (NE)) commissioned a seascape sensitivity study for offshore wind farms located in the inshore and offshore waters off the Suffolk coast (Suffolk Seascape Sensitivity Study, White Associates 2020).

The seascape of Suffolk is sensitive to offshore wind farm development primarily due to its relationship with the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, with seascape contributing significantly to the AONB's setting and natural beauty. To fully assess the potential seascape impacts on East Suffolk's coastal communities and designated landscapes, an update to the Suffolk Seascape Sensitivity Study 2020 was required as the original scope of works did not cater for the proposed Five Estuaries project parameters. The findings of this updated study have now been published and inform our response to the statutory consultation set out below.

In your recent correspondence with elected members, you advised that National Grid has indicated that they would like Five Estuaries to connect to their proposed East Anglia Connection Substation south of Lawford in Essex, which is part of their East Anglia GREEN project. The cable route is expected to make landfall between Frinton-on-Sea and Holland-on-Sea in Tendring, Essex, and the onshore cables would be laid underground. As previously set out in our response submitted to the Planning Inspectorate (PINS) for the Environmental Impact Assessment (EIA) Scoping Report consultation held in Autumn 2021, ESC is not a host authority, or a direct neighbouring authority of the onshore scoping area. However, whilst no onshore infrastructure is proposed within our District, you have previously acknowledged that there will be some wind turbine visibility from the Suffolk Coast.

ESC has concerns regarding the potential significance of visual impact on our coastal regions resulting from the introduction of up to 79 wind turbine generators with associated foundations having a maximum tip height of 424m above mean sea level. At a distance of approximately 37km from the offshore array, the proposed wind turbines will be visible from the designated Suffolk Coast and Heaths AONB and this response provides comments primarily relating to potential seascape, landscape and visual impacts and their anticipated significance.

Our response is provided on the basis that the Five Estuaries Offshore Wind Farm proposes an onshore grid connection located outside of Suffolk and beyond the East Suffolk Council District, however, should this change in future, our position on this project may need to be revisited. This letter should be read in conjunction with our previous non-statutory consultation response (11 August 2022)¹, the response submitted to PINS for the EIA Scoping Report consultation², and the Inspectorate's Scoping Opinion published in November 2021³.

Need case and coordination

ESC acknowledges that renewable energy will play a central role in tackling climate change and in meeting Government targets in the lead up to net-zero by 2050. A significant amount of new offshore wind generation and associated infrastructure is required to connect 50GW by 2030. However, the shift towards the delivery of low carbon and renewable sources of energy must consider the potential impacts it may have on the landscape, natural environment and local communities set to host or neighbour such development. Developers must also explore opportunities for greater levels of coordination between projects in relation to the objectives set out in the Offshore Transmission Network Review (OTNR).

ESC supports Five Estuaries' submission into the Government's Offshore Coordination Support Scheme (OCSS), noting that this seeks to provide grants to offshore energy projects to develop coordinated options for offshore transmission infrastructure. Five Estuaries is also engaging with the OTNR as is the developer of the North Falls project, and whilst it is welcomed that the Five Estuaries project, alongside other developers, has committed to exploring options within the Early Opportunities workstream⁴, ESC remains disappointed that the project has not been put forward as a Pathfinder. Every opportunity should be undertaken by the two developers, given it is likely that they will have the same connection location, to seek maximum coordination between the projects in order to minimise impacts on local communities and the environment. The Sheringham Shoal and Dudgeon extension projects located in Norfolk are demonstrating that greater coordination is possible, and this should be replicated. ESC would welcome the opportunity to engage in future pathfinder discussions should these options be pursued within East Suffolk.

ESC welcomes the intention for coordination between the Five Estuaries and North Falls offshore wind farm projects, noting that an opportunity to coordinate more closely has been identified by the developers. We understand that coordination will seek to reduce the potential impact of building the onshore connection to the national electricity transmission network for the two projects, however, note that Five Estuaries is also considering submitting an application for a Development Consent Order (DCO) that would allow for flexibility to accommodate a coordinated connection at a later date, provided there is greater certainty on the

¹ <https://www.eastsuffolk.gov.uk/assets/Planning/Energy-Projects/Offshore-Windfarms/Document-C.pdf>

² <https://www.eastsuffolk.gov.uk/assets/Planning/Strategic-engagement/2-East-Suffolk-Council-response-to-the-Five-Estuaries-Offshore-Wind-Farm-Scoping-Report-consultation-271021.pdf>

³ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010115/EN010115-000014-5EST-Scoping%20Opinion.pdf>

⁴ [Joint statement from North Falls, Five Estuaries and National Grid: Commitment to exploring coordinated network designs in East Anglia](#)

commercial, regulatory and technical environment. The viability of any coordinated connection is dependent on the progress made by the OTNR process, associated regulatory and commercial policy changes and the individual offshore connector projects involved.

It is noted that the Preliminary Environmental Information Report (PEIR) is based on the principle of an onshore connection for just the Five Estuaries project, taking into account the potential cumulative impact of other projects. Five Estuaries will continue to develop coordinated plans on the basis of existing regulations to provide an onshore connection to avoid delays to the planned grid connection date in order to support the UK Government's 2030 targets. The PEIR cites regulatory, technical and commercial challenges to delivering an offshore connection as being a hurdle to coordination, noting that overcoming these hurdles is a complex challenge which is being considered as part of the government led OTNR process. In order for a coordinated connection by 2030 to be a viable option, the PEIR identifies reform to policy, associated regulations and licensing needs as an urgent requirement alongside commercial certainty.

Whilst the proposed onshore connections for both Five Estuaries and the North Falls projects are not within the East Suffolk District, offshore options for connection should continue to be fully explored, minimising the need for onshore infrastructure. ESC understands that Five Estuaries is considering drafting its DCO on the basis of an onshore connection with the option to move to a coordinated connection should it become a viable alternative within project timescales. ESC supports the proposed coordination effort between the Five Estuaries and North Falls projects regarding key elements such as cable corridor selection (to optimise both onshore routes), environmental surveys and by sharing consultation feedback. It is encouraging to read that coordination and cooperation will continue between the projects throughout their development and may enable elements of joint delivery should the technical and commercial conditions allow for this, reducing the potential impact of building the onshore connection to the national electricity transmission network for the two projects.

ESC is being consulted on and is aware of a number of energy related projects that may have an impact on our District, and we welcome and support collaborative working between all Applicants and the National Grid to ensure that the optimal solution is delivered. We expect this to involve coordination and the sharing of infrastructure where feasible to reduce the amount required onshore.

Seascape and cumulative impacts

We have reviewed the relevant statutory consultation material including the PEIR Non-Technical Summary and PEIR Report including (but not limited to) Volume 1, Chapter 3 EIA Methodology, Volume 2, Chapter 10 Seascape, Landscape and Visual Assessment, Volume 6, Annex 10.1 Seascape, Landscape and Visual Methodology, Volume 6, Annex 10.2 Seascape, Landscape and Visual Viewpoint Assessment, which collectively sets out the current environmental baseline, potential impacts, and initial proposals to mitigate those impacts.

The Five Estuaries Stage 2 consultation assessment concludes that at approximately 37km off the Suffolk coast at the closest point that the proposed wind turbines would be located behind existing wind farms when viewed from most East Suffolk coastal viewpoints. The assessment also finds that despite the Five Estuaries wind turbines being taller than the existing intervening wind turbines which have a maximum blade tip height of 180.5m, they are unlikely to be visible frequently due to distance, weather conditions and earth curvature.

It is acknowledged as part of the Five Estuaries' project development that the turbine array area has been reduced following the last consultation, with a section of the northern array being removed to help avoid filling in the 'gap' between existing wind farms as seen from the Suffolk coast. The justification presented for this refers to the sensitivity of views from the coast, particularly from within the AONB.

Section 5.9 'Seascape, landscape and visual impact assessment' within the PEIR Non-Technical Summary states that a number of impacts have been assessed during all phases of the project (construction, operation and maintenance and decommissioning) including the impact of the array areas upon the seascape character and the characteristics of the designated landscapes, such as the AONB. This concludes that the majority of the wind turbines will be viewed behind and in the same section of the view as the existing Greater Gabbard and Galloper offshore wind farms, thereby minimising additional visual impact.

In terms of cumulative effects with future projects, Section 5.9 states that the Five Estuaries Offshore Wind Farm array areas would have limited potential to interact with planned third-party projects such as East Anglia ONE North, East Anglia TWO and Sizewell C due to the long distance and lack of visibility from the coastline. The PEIR acknowledges that cumulative visibility effects with proposed future East Anglia ONE North and East Anglia TWO projects are possible from parts of the coastline between Felixstowe and Lowestoft, however it concludes that the visual effects are not considered to be significant on balance, due to the low level of change and the long distance over which the effect would be experienced.

The PEIR therefore concludes that the selection of a maximum allowable blade tip height and rotor diameter for the wind turbines would help minimise the impact upon the seascape, and there will be no significant effects upon the seascape, landscape and visual amenity surrounding the Five Estuaries offshore wind farm.

The commissioned update to the Suffolk Seascape Sensitivity Study (2020) reviews the sensitivity assessment previously undertaken using the same study area limits, assessing for wind turbines greater than 400m to blade tip above Lowest Astronomical Tide (LAT) (more appropriate for the Five Estuaries project at 424m to tip). The report update forms an addendum to the original assessment and together they will act as a framework and background study for assessing the likely seascape and visual effects of wind farms off of the Suffolk coast. It also undertakes a review of the Five Estuaries Seascape and Landscape Visibility Impact Assessment (SLVIA) methodology used in the PEIR.

The update addendum to the Suffolk Seascape Sensitivity to Offshore Wind Farms Study (2020) was produced by White Consultants (June 2023) and is appended to this letter in Annex A. It finds that wind turbines over 400m should be located no less than 40km from the coastline (with turbines at 425m >42.5km) for the introduced visual effects on the AONB to fall below the medium magnitude threshold. It also assessed the average offshore visibility distances related to the percentage of days each year that turbines can be seen from coastal receptors. This assessment concluded that the Five Estuaries arrays (with the closest row of 424m turbines at approximately 37.7km from the Suffolk coast at the closest point) would be visible less than 33% of days each year due to visibility modifiers (i.e. meteorological/atmospheric conditions). However, on days where the turbines will be visible, it is expected that visual effects from within the AONB will be worse than medium magnitude. It is however noted that the precise magnitude of effect will depend on the findings of a detailed assessment of AONB special qualities as discussed below.

Additionally, it was found that there are multiple references within the PEIR to the Five Estuaries array not being within the AONB's 'immediate setting' but rather within the 'open seascape'. Section 10.11.181 within PEIR Volume 2, Chapter 10 Seascape Landscape and Visual Assessment states that *'the VE array areas do not*

affect the immediate setting of the SCHAONB, 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.' Section 10.11.357 also states *'In views from the Suffolk coast at night, the VE WTG aviation lighting will not occur in the immediate setting of the coast or the SCHAONB, but will be on the horizon of a large, open seascape, rather than being viewed 'within' its seascape/landscape.'*

'Immediate setting' is not a reference supported by planning policy. It is the view of ESC that the limit of a seascape setting is the visual horizon, therefore if the Five Estuaries array can be seen on the visual horizon, it is considered to be within the seascape setting for the AONB. ESC therefore does not agree with the Five Estuaries conclusion that the wind turbine array is not within the AONB's 'immediate setting'. Setting refers to the surroundings in which the AONB is experienced, the extent of setting is therefore not fixed or measured. The visual horizon (and Five Estuaries array) will be experienced by users within the AONB; therefore 'immediate setting' has no real value in this context.

In parallel to the Suffolk Seascape Sensitivity Study update addendum, White Consultants also undertook a comparison of seascape and visual impact assessment methodologies for East Anglia TWO/East Anglia ONE North offshore wind farms and the Five Estuaries offshore wind farm to ensure consistency in the PEIR approach adopted. The comparison report is appended to this letter in Annex B. Sections 2.4-2.10 of the appended methodology review finds that whilst special qualities are referred to at various points in the method, no focussed assessment of them has been undertaken for the PEIR. It is therefore recommended that a full assessment of the effects on AONB special qualities is carried out as special qualities reflect what is important about the AONB (i.e. they describe its natural beauty and express the qualities for which it was designated). As such, great weight must be accorded to them (as set out in national planning policy), noting that all special qualities are of high value and important whether physical, historical, cultural or perceptual. Special qualities can be affected by development in the AONB's setting and this in turn can affect the primary statutory purpose of the designation.

The comparison report also highlights the potential limitations of the cumulative impact assessments supporting the Five Estuaries development. Understanding a combined and in totality scenario will be essential to understanding the scale of effects and potential impact on AONB special qualities and purposes of designation. The Planning Inspectorate noted in their Scoping Report that there are a number of other projects, including Nationally Significant Infrastructure Projects (NSIPs) such as East Anglia ONE North and TWO Wind Farms, North Falls Offshore Wind Farm and Sizewell C, located within the likely study area for the Proposed Development. There is the potential for cumulative impacts to occur as a result of temporal and spatial overlap of the Five Estuaries project with these other NSIPs which needs to be adequately assessed.

This view was supported by ESC, noting that the relevance of the AONB's special qualities extends beyond its legal boundaries and into its setting, especially in respect of 'out to sea'. A focussed assessment of AONB special qualities is therefore required to contribute to the decision-making process. As yet this has not been undertaken in detail and will be necessary to fully understand the magnitude of visual effect on the AONB. ESC previously highlighted the importance of the AONB's special qualities and its purposes for designation in the EIA Scoping response. This advised that these must be given consideration in ongoing assessments, given the size and location of the proposed wind turbines. It is considered that the statutory purposes of the designation may be put at risk from the project alone and cumulatively with other projects, and ESC's final position on seascape impacts on the AONB will be informed by the findings of this assessment.

Coastal Processes

To inform our response on potential impacts on coastal processes, we have reviewed the relevant statutory consultation material including the PEIR Non-Technical Summary and the Five Estuaries offshore wind farm PEIR Report Volume 2, Chapter 2, Marine Geology, Oceanography and Physical Processes; Volume 4, Annex 2.1: Physical Processes Baseline Technical Report; Volume 4, Annex 2.2: Physical Processes Model Design and Validation; and Volume 4, Annex 2.3: Physical Processes Technical Assessment.

ESC acknowledges that the landfall location for subsea transmission cables will not be within the East Suffolk District and we are generally satisfied with the scope and level of detail applied in the Coastal Processes related Impact Assessments. However, it is noted that several reference documents are 20+ years old, notably those regarding sediment (SNSSTS 2002) and structure scour assessment. The impact assessments conclude low/negligible impacts on coastal receptors and/or pathways in every case, noting that the assessment of magnitude is based on the fact that changes to the wave regime will not extend to the coast and therefore there is no potential for morphological change. It was also concluded that suspended sediment, tidal currents, accretion/scour around structures, and landfall impacts appear to pose a very low risk of causing a negative impact on the ESC coastline.

Our comments therefore focus on the assessment of how wave energy will be affected as this appears to have the greatest potential to cause an impact on the East Suffolk coastline. The study has assessed the impact of wave energy interruption by turbine foundations arising from both this development in isolation and also the entire licensed turbine field, for a number of wave directions. The results show an impact zone on the lee side of each turbine group that is limited in plan extent to relatively close to each turbine field. In no modelled case does the zone of interruption extend to the ESC shoreline.

However, the impact assessment does not consider how the turbines will reduce wind energy on their lee side which has potential to increase the zone of wave energy disruption. This is considered important because if there is a measurable impact which reduces wave energy on approach to the East Suffolk shoreline from an east/southeast direction, then it has potential to alter the net sediment drift balance at the shoreline. There are coastal locations where a reduction in the southerly component of net drift may be significant e.g., East Lane Bawdsey and Thorpeness.

The impact assessments use a threshold for Impact Significance of 5% which is a standard value. It appears unlikely that the model will show an impact at the shoreline above this value, however, ESC questions this threshold on the grounds that a permanent reduction in wave energy from this direction, albeit potentially <5%, may over several years, have a cumulative significant impact.

We are aware that the counter argument to this could be that if such a potentially small change in forcing conditions at the coast were to arise, it would probably be subsumed within natural variability and so identification by post-installation monitoring, with a view to mitigation, would be challenging. However, it is requested that the final impact assessments undertaken for this project demonstrate consideration of the impact of wind energy interruption by the turbine array on lee side wave energy, in addition to turbine foundation interruption impacts, and this should provide a commentary on how this impact may impact net sediment trends over East Suffolk shorelines.

Traffic and transport

It is acknowledged that transport assessment is focussed on the vicinity of the onshore scoping area within Essex, however there are pressures experienced from port related activities. ESC defers to SCC Highway Authority for detailed comments on potential traffic and transport impacts within Suffolk and/or East Suffolk.

Socio-economic effects and tourism

ESC has reviewed the consultation materials including the PEIR Non-Technical Summary and PEIR Volume 3, Chapter 3 'Socio-economic, tourism and recreation'. Section 5.14 within the PEIR Non-technical summary concludes that there will be no significant negative effects upon Socio-Economic, Tourism and Recreation receptors, rather there would be several positive impacts anticipated including local jobs creation and investment in the local area. The study area for the assessment was split into two spatial levels: the wider study area and a local area of impact. The wider study area was intended to include the area where significant effects on employment and the local economy could occur, whereas the local area of impact focuses on receptors that could experience effects at a local level, specifically community, tourism and recreational assets. It is acknowledged from PEIR Volume 3, Chapter 3 that the wider study area *'is set at the boundary of the counties of Essex and Suffolk, within which the majority of the local supply chain and labour market effects that could occur would be experienced'*. It is noted that this assessment considered impacts during construction and operation upon levels of employment, visitor displacement, and impacts on recreational activities both onshore and offshore, with similar impacts, potentially being experienced during the decommissioning phase.

In the non-statutory consultation response previously provided, ESC highlighted that there is a possibility that tourism effects may be felt in East Suffolk due to seascape visual impacts introduced by the proposed wind farm extension, either alone or in-combination with other NSIP projects. This was however caveated as we awaited further assessments being completed before providing detailed comments regarding whether economic impacts are anticipated. Noting the matters raised in the seascape section of this letter, ESC still awaits further assessment being completed. The need for a detailed assessment of AONB special qualities has been highlighted to inform ESC's final position on the visual effects within the AONB, and we reserve the right to provide more detailed comments on socio-economic effects and tourism once this has been completed.

ESC is therefore unable to support the PEIR's conclusion that *'there will be no significant negative effects upon Socio-Economic, Tourism and Recreation receptors'* at the time of submitting this Stage 2 consultation response.

Future consultation and engagement

We understand that this response will also be shared with North Falls Offshore Wind Farm as part of the coordination effort between the two projects. It is understood that the feedback received as part of this consultation will be used to refine the assessment and mitigation proposals within the final Environmental Statement submitted for Examination as part of the DCO process. ESC welcomes ongoing engagement with the Five Estuaries project as the DCO application progresses and we trust the feedback provided in this letter is useful, being read alongside our earlier consultation responses and the EIA Scoping response submitted by ESC to PINS in Autumn 2021.

Conclusion

As set out in this letter, a detailed assessment is required to understand the level of visual effects likely to be introduced on the AONB and its special qualities. ESC will remain concerned until the special qualities assessment has been undertaken. If once completed it is found that the mitigation hierarchy would be unable to fully mitigate the anticipated effects and that residual impacts remain, ESC (in conjunction with SCC as

host Authority and the SCHAONB Partnership) will be seeking appropriate compensation to offset the seascape impacts.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Philip Ridley', with a large, sweeping underline stroke.

Philip Ridley BSc (Hons) MRTPI | Head of Planning and Coastal Management
East Suffolk Council

Annex A - Suffolk Seascape Sensitivity to Offshore Wind Farms Study update addendum - White Consultants (June 2023).

Annex B - Comparison of seascape and visual impact assessment methodologies for East Anglia TWO/East Anglia ONE North offshore wind farms and Five Estuaries windfarm – White Consultants (June 2023).