

**From:** [REDACTED]  
**To:** [East Anglia ONE North; East Anglia Two](#)  
**Subject:** Email 3 of 4. SEAS (Suffolk Energy Action Solutions) Submissions - Deadline 1  
**Date:** 02 November 2020 19:19:28  
**Attachments:** [4.1 SEAS WR- Habitats & Biodiversity - DEADLINE 1.pdf](#)  
[4.2 SEAS WR - Thorpeness, Cliffs & Coralline Crag - DEADLINE 1.pdf](#)  
[4.3 SEAS WR - Air Quality, Traffic & Transport - DEADLINE 1.pdf](#)  
[4.4\(a\) SEAS WR - Tourism & Economic Decline - DEADLINE 1.pdf](#)  
[4.4\(b\) SEAS WR - Tourism & Economic Decline - DEADLINE 1.pdf](#)  
[4.4\(c\) SEAS WR - Tourism & Economic Decline - DEADLINE 1.pdf](#)  
[4.5 SEAS WR - Social & Health Issues - DEADLINE 1.pdf](#)  
[4.6 SEAS WR - Alternative Sites & BEIS Review - DEADLINE 1.pdf](#)  
[4.6.1 SEAS WR -Appendix 1 - future planned projects connecting to Friston.pdf](#)  
[4.6.2 SEAS WR - Appendix 2- EAC Submission 1.5.2020 - DEADLINE 1.pdf](#)  
[4.6.3 SEAS WR - Appendix 3 - Preliminary Meeting Oral Rep - DEADLINE 1.pdf](#)

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Dear Inspectors,

Please find attached SEAS DEADLINE 1 SUBMISSION as follows:

Section 4 - SEAS WRs

<b>4. WRITTEN REPRESENTATIONS (WRs)</b>	
4.1	Habitats & Biodiversity
4.2	Thorpeness Cliffs and Coralline Crag
4.3	Air Quality, Traffic and Transport
4.4a,b&c	Tourism and Economic decline (three documents)
4.5	Social & Health issues
4.6	Alternative sites/BEIS Review, with Appendix 1 & 2
4.6.1	Appendix 1 – SEAS Future Planned Energy Projects Connecting to the National Grid in the Sizewell/Friston Area of Suffolk
4.6.2	Appendix 2 – SEAS Environmental Audit Commission submission
4.6.3	Appendix 3 – SEAS OFH representation by Fiona Gilmore

Kind regards  
Glynis Robertson

[REDACTED]  
For and on behalf of  
SEAS (Suffolk Energy Action Solutions) Campaign Group

**SEAS (Suffolk Energy Action Solutions)**  
**Unique Ref. No. EA1(N): 2002 4494**  
**Unique Ref. No. EA2: 2002 4496**

## **4.6.3 - APPENDIX 3**

### **FIONA GILMORE, SEAS ORAL REPRESENTATION AT THE PRELIMINARY MEETING 2, 6 October 2020**

**Good Morning.** As I stated earlier, my name is Fiona Gilmore and I am speaking today on behalf of Suffolk Energy Action Solutions (or SEAS for short).

We wish to call for a delay to the DCO Examination process and to disagree with the Applicant's interpretation of the BEIS Review Terms of Reference. There are compelling reasons to press the PAUSE button on this DCO Examination process, NOW. It is not enough to have ONE eye on the BEIS Review. New evidence has come to light. It is in the interests of this country as a whole that the BEIS Review initial workstream takes place before the Examination.

Today, I'm first going to give a very brief introduction to our campaign, who we speak on behalf of and what our proposal is. Second, I will address the BEIS terms of reference and the reasons why the Applicant's interpretation of those terms of reference is misconceived. Third and finally, I will set out further reasons why the DCO process should be delayed until the findings of the BEIS Review initial workstream are available.

#### **SEAS Campaign**

Our campaign, Suffolk Energy Action Solutions (or SEAS for short), represents thousands of British people today. We are in favour of green energy in any format, but are equally opposed to any plans that are needlessly destructive of the environment, such as these plans.

We set up this campaign in order to complement other campaigns, such as SASES and SOS, but with an emphasis to call for a BEIS Review to find a better, alternative solution than the current ill-conceived plans.

During 2019, SEAS representatives hand delivered thousands of signed postcards and sent emails, to Andrea Leadsom, then Secretary of State for BEIS. Leadsom was on the point of calling for a Review in December 2019. Indeed, George Freeman, MP for mid-Norfolk, announced in the Press that this Review had been agreed. Ultimately, the announcement was delayed until 15 July 2020, because of a range of competing circumstances, the General Election, very real problems associated with Covid Pandemic, Brexit and who knows what else.

## Our proposal

We propose a twenty-week delay, until March 2021, before this DCO Examination begins. This Examination may become irrelevant as a result of the initial findings from the BEIS Review, superseded by alternative better conceived proposals. By March 2021, if this Examination is still necessary, we may then be able to hold more easily physical Hearings at Snape Maltings giving local people a greater opportunity to speak.

## The BEIS Review and Terms of Reference

The BEIS Review Terms of Reference provide that the Review will be split into two main workstreams, a medium-term and a long-term workstream. Amongst other things, the medium-term workstream will seek (and I quote) “to identify and implement changes to the existing regime to facilitate coordination in the short-medium term”, (and I quote) “to explore early opportunities for coordination...considering regulatory flexibility to allow developers to test innovative approaches” and (and I quote further) **“to focus primarily on projects expected to connect to the onshore network after 2025”**.

The Government itself states: the BEIS Review Terms of Reference (and I quote) “focus on identifying tactical near-term actions that can be taken and early opportunities for coordination for projects in the short- to medium-term”.

## Our interpretation of the Terms of Reference

It is the view of our campaign that EA1N and EA2 obviously come within the terms of reference within the BEIS Review. In particular, on Scottish Power’s own timeline the earliest anticipated start date for just the *CONSTRUCTION* of both projects is 2024 and 2025, respectively. It is therefore clear both are expected to connect to the onshore network after 2025 and come within the purview of the BEIS Review. In other words, when the Energy Minister announced this Review, he had in mind that (and I quote) the “FOCUS” of the review would be on projects such as EA1N and EA2.

I am now going to address:

## The Applicant’s interpretation of the Terms of Reference

The Applicants do address the request to delay the DCO Examination to wait for the findings of the BEIS Review at paragraphs 15 to 23 of their Submissions of Oral Case dated 29 September 2020 and I would invite you to have that document in front of you.

At paragraph 16, the Applicants acknowledge that an update will be produced by the Review by the end of this year but go on to state: “it is understood this update will not provide conclusions for the medium-term workstream nor implement changes to the existing regime. No date is provided as to when the outputs of the review will be published or implemented”.

It is true and we acknowledge that no specific date is provided in the Review's Terms of Reference as to when the outputs of the Review will be published or implemented, but we deny that this advances the Applicants' case. This completely ignores the fact that the Review's Terms of Reference specify that it is to focus on projects intended to connect to the onshore network after 2025, such as EA1N and EA2. Of course, as one would expect, the precise date of when the outputs can be expected is not included in the Terms of Reference but it is clear, from the express terms of reference, that the Review is intended to have outputs which can affect projects intended to connect to the onshore network after 2025, such as EA1N and EA2.

Moreover, the Applicants state: "it is understood the update at the end of 2020 will not provide conclusions for the medium-term workstream" without providing any evidence for that "understanding".

Our campaign invites you to ignore that statement given they have failed to support it. Conversely, we would invite you to draw the inference that the update at the end of this year may well provide recommendations for the medium-term work stream, given its focus is primarily on projects intended to connect to the onshore network after 2025.

At paragraph 21 the Applicants state that there would be (and I quote) "considerable time period... involved in developing" "a coordinated approach on offshore transmission" on the basis it would require regulatory change and public procurement and that this justifies the legitimate expectation that the Projects will be considered within the regulatory framework.

Once more this ignores the timescale contemplated by the Terms of Reference. In particular, it is inconsistent with the medium term work stream focusing on work projects intended to connect to the onshore network after 2025, such as EA1N and EA2 and that (and again I quote), the Review will "identify and implement changes to the existing regime to facilitate coordination in the **short-medium term**", and "explore early opportunities for coordination...considering **regulatory flexibility** to allow developers to test innovative approaches". We deny that the Applicants have the expectation that they say they do given the express wording of the Terms of Reference. Insofar as they do have that expectation, we deny that they hold it legitimately.

At paragraph 20, the Applicants quote from the National Grid's report of 2015 [Integrated Offshore Transmission Project East], that "**the project team does not believe it would be economic and efficient to progress with the development of an integrated design philosophy ...**". It is not clear why they quote from this report, but they appear to do so on the assumption the only alternative being suggested by campaigns such as ours to EA1N and EA2 is an offshore ring-main (or ORM for short).

The Applicants base their argument on outdated thinking. There are many reasons why ORMs are not the right answer here, which we happily agree with.

Independent consultant engineers, who specialise in integrated offshore transmission systems have discovered a much less complicated and fit-for purpose mid-term offshore solution. This beats an ORM in terms of cost, timescale, a much faster timescale, security, consistency and simplicity. An ingenious step change solution would avoid needless destruction of unspoilt countryside and habitats.



Germany and the Netherlands are but two countries leading the way in these new generation offshore schemes, motivated by the wish to do the right thing for the environment, as well as for climate change purposes and the economy. They recognise that everything is connected and their equivalents of National Grid are state-run without private sector interference. These countries have instigated Master Plans for offshore infrastructure, unlike the UK, which has adopted a fragmented approach to planning offshore transmission infrastructure.

**I would add that the delay we are suggesting is actually quite short – only 20 weeks. ScottishPower can still deliver on its goal contrary to paragraph 22 of their submissions.**

## **Conclusion**

It would be irrational and unreasonable to permit the Examination to go forwards without waiting at least for the first update in February 2021.

To forego this opportunity to allow the findings to be presented by February 2021 with proposals for a short- to mid-term solution (2025 onwards) before starting the DCO Examination, would be a grave mistake and makes little sense. How can it be right that just as the Government announces a Review that the Country has been waiting for over a period of at least 10 years, which, according to its own Terms of Reference, is plainly intended to address projects such as EA1N and EA2, according to Scottish Power's own timetable, that the Examination is permitted to continue so as likely to exclude all of the evidence, recommendations and policy and regulatory changes of the Review?

**The Projects were conceived and planned at a time when an integrated, coordinated offshore strategy was felt to be expensive and complex. That time has gone, which is why the Government ordered the Review. It is clear the developers are trying to rush through the projects now because they are concerned the Review will cause them to have to make a step change.**

The various institutions involved owe it to East Anglia to give enough time for the chance to make this a pilot test for the whole of the UK, providing a step-change to an integrated, cheaper offshore solution, where synergies and efficiencies are gained together with the avoidance of needless destruction to the countryside and ruination of medieval villages and hamlets.

We are confident that there is a cheaper and more innovative, intelligent solution, which can be implemented within the existing time constraints for this project.

**To summarise:** we would like you, therefore, to delay the Examination for twenty weeks in order that BEIS first has the opportunity to receive submissions from relevant strategic planners and engineering specialists, pioneers of new advances and intelligent solutions for a 'greener' delivery of offshore energy, **and importantly**, time for BEIS to share their conclusions.

**Thank you.**

## FIONA GILMORE, SEAS ORAL REPRESENTATION AT THE OPEN FLOOR HEARING ONE, 7 October 2020

### GOOD EVENING

My name is Fiona Gilmore and I speak on behalf of Suffolk Energy Action Solutions, the SEAS Campaign (in short), which has a growing number of supporters from across the UK, as well as from Norfolk and Suffolk. SEAS supporters have sent thousands of postcards to the Secretary of State, Andrea Leadsom, in the Autumn 2019 asking for a BEIS Review into offshore transmission infrastructure and now it has been called. We believe the short-medium term workstream for the BEIS Review can make a positive difference to this DCO Examination before Deadline 4, date TBC.

People across the UK have united behind a common cause. A call for fairness and justice. I speak tonight for the people whose voices may not be heard. We are strongly in favour of wind energy.

With the growing sense of excitement around the country regarding the opportunities for the UK to lead the world in Renewables and particularly, in wind energy, we are hugely disappointed in the Applicant's offshore transmission infrastructure plans for EA1N and EA2.

These plans defy credibility, make no sense to us. We can really sum them up in just two words: **IRRATIONAL** and **DISINGENUOUS**.

The adverse impacts of this 12-year construction programme, building the UK's largest wind energy industrial complex outweigh any benefits. For the health of our environment, economy and well-being of our communities, these plans are deleterious.

Amongst diverse communities, there is a profound sense of anger and frustration and for others a feeling of apprehension. A nightmare surely that one will wake up and see that it was just a horrid dream? But, no.

I speak for the SEAS campaigners when I say that we are:

**DISAPPOINTED:** that there's no logical trail between the green credentials of the energy generation at sea and its connection to the Grid on unspoilt countryside. We ask the question, as long as **wind generation** is green, is it then: **to hell with everything else?**

**DISAPPOINTED:** in the NSIP process, which was never intended for a single site with designation for multiple substation and interconnector usage. The legal criteria for the NSIP process are narrow and seem to be no longer fit for purpose given these multiple substation objectives. The consequences for this small area merit more considered and contextualised evaluation than a DCO process permits. **DISAPPOINTED:** that the UK had no Master Plan for offshore transmission infrastructure, during the last ten years; how embarrassing is that? Given its critical role in the delivery of our zero carbon emission targets and given our much talked about world leadership ambition.

**DISAPPOINTED:** in Ofgem's and National Grid's role in all of this as well as the Crown Estates.

**DISAPPOINTED:** that these plans are flaky. The assessment methodologies are at times limited to just desk research and that is inadequate given the unique circumstances and context of coastal Suffolk and scale of projects. Key evaluation factors have been omitted and quantitative assessments have at times used outdated methods and not taken into account the cumulative impacts.

**DISAPPOINTED:** that local people live under this cloud, they are so worried and fearful of the “threat “, because that’s what they call it, that some have become sick with worry, others have fallen into depression. Those of a certain age, came to live here after years of working in the ‘smoke’, now looking for the golden years to be sweeter in the countryside, living within a thriving rural community, enjoying the tranquillity, the wildlife and beauty in Nature. Simple things that we wish to preserve, not in aspic, but protected from needless destruction. Younger people are simply appalled that in the name of green energy, we are about to ravage one of our most fragile, precious parts of the countryside. **Is that a noble legacy?**

The pressure for local interested parties, especially at a time of personal and national upheaval cannot be underestimated. We believe that these plans are materially flawed.

For the Open Floor Hearings, we can only summarise major concerns but rest assured, these will be amplified in the written submissions and at issue specific hearings where we wish to speak on the following issues: BEIS Review, choice of site, roads and air quality, wildlife, Thorpeness, as well as economic prognosis for Aldeburgh, Snape Maltings and SMEs in coastal Suffolk.

**For now, just a few of the issues in no particular order:**

1. The UK has no **Master Plan** for offshore transmission infrastructure. The BEIS Review called on 15 July 2020 puts emphasis on ensuring the appropriate balance between (*and I quote*) “environmental, social and economic costs in finding the most appropriate way” to deliver transmission connections for offshore wind. We believe that the DCO for EA1N and EA2 should not be granted at this premature stage. The DCO should only be granted when a more suitable way forward is decided upon and policy recommendations and proposed changes to the existing regime are made. With a majority Government, this reform can be fast-tracked.
2. The Applicant (in this case National Grid is included) have failed in their duty of care to keep up to date and to consider new generation transmission technologies as better alternatives to the current planned technology system, and that failure in turn has contributed to the wrong choice of site for the location of the substations. We say better alternatives. We are talking about proven technology solutions, which deliver substantial benefits for all parties concerned: more synergies and efficiencies can be achieved and these solutions tick the key boxes: cost, security, consistency, timescale and most importantly because these are offshore solutions, **needless damage to the environment is avoided as the onshore connection is then made at a brownfield site.**
3. The Applicant (in this case National Grid) has failed despite Freedom of Information requests to give any reasonable explanation as to why **Bramford** was not chosen as the site location, given that it was originally selected. In their “Note on the Assessment of options for the connection of SPR EA1N and EA2 offshore wind farms to the National Grid Network”, dated 28 June 2018, this explains why the offshore wind farms are proposing to connect to the NETS in Sizewell/Leiston

area, but given that Bramford was an already brownfield site with EA1 and EA3 designated there, **it is curious that this site selection was abandoned relatively late in the process.**

4. The Applicant (in this case National Grid) does not give a rationale as to why **Bradwell** was not fully considered; the Rt Hon Therese Coffey, MP for Suffolk Coastal, states in her Relevant Representation, received by the Planning Inspectorate on 27 January 2020: (and I quote)

“Throughout the consultation stages, I have suggested alternatives to SPR, **including Bradwell**, which would have meant less onshore cabling and substations in a more appropriate location...”

5. Deficiencies in the Red-Amber-Green (RAG) assessment for the substation(s).

The RAG assessment does not consider the combined effect/suitability of co-locating 3 substation sites in one location, or a greater number as is now becoming apparent. Use of the correct methodology early in the process would have resulted in a different conclusion and led to the choice of a site with less significant environmental and socio-economic impacts being taken forward.

If one is simply looking at 2 years of construction and one set of substations, the degree of horror is not as great as 12 years of ongoing construction and a concatenation of 8 substations and inter-connectors. Make no mistake. The Applicant is the harbinger, the **Trojan Horse** for this onslaught on our precious countryside.

6. Others will elaborate in great depth as to why the medieval village of Friston was a very poor choice of location. We are therefore going to reference other places and communities impacted directly or indirectly in no particular order with questions relating to the thoroughness and rigour of assessment methodologies.

Our economic prognosis for coastal Suffolk, based on the cumulative impacts is of grave concern.

Things here for most SMEs are finely balanced. Profit margins are tight. The tourism and visitor industry accounts directly or indirectly for at least 30% of total revenue streams. We have concerns for the future of Thorpeness, Aldeburgh and the Snape Maltings. In our written submissions, we shall amplify our specific concerns based on numerous studies and assessments that have already sought to address this threat to this region.

***A conservative evaluation according to the DMO Energy Coast report of the potential loss caused by the cumulative impact could be £40m per annum.***

7. The Wildlife has no voice, so SEAS is speaking up for our rare habitats and thriving communities in the cable corridor areas, in particular.

One of our young SEAS members is a Zoologist, who has written a full report of the prognosis for permanent destruction to these habitats. There is a biodiversity crisis occurring right now and this site location is emblematic of hollow words. We hear on the one hand from those who have a platform that Biodiversity goals are paramount and yet here we are breaking up, fragmenting protected areas into islands which become more isolated as there is less migration.



Most populations of animals are a meta population connected to each other by migration paths. If these pathways are severed, such as by a gouged-out cable trench, inevitably declines and extinctions follow. This is an issue for the mammals, amphibians and reptiles.

Then the bird habitats become unavailable for sensitive wildlife, such as the red listed nightingale, turtle dove, linnnet and other migratory birds who would have nested there.

As Sir David Attenborough states: “people must feel that the natural world is important and valuable and beautiful and wonderful and an amazement and a pleasure”.

**How do we then value the countryside, the loss of a nightingale, or a pure, red deer?**

**In conclusion:**

**Is this the legacy for now and future generations? Wind energy infrastructure that robbed us of our precious countryside, forever.**

**We cannot accept these plans.**

End



Offshore Wind Farms

**EAST ANGLIA ONE NORTH**

PINS Ref: EN010077

and

**EAST ANGLIA TWO**

PINS Ref: EN020078

Written Representation on  
**HABITATS and BIODIVERSITY**

by

**SEAS (Suffolk Energy Action Solutions)**

Unique Ref. No. EA1(N): 2002 4494

Unique Ref. No. EA2: 2002 4496



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## Summary

SEAS is concerned about:

- Lack of detail and consideration on the impact of the project on European and National Statutory Protected Sites (SAC, SPA, SSSI, AONB)
- Lack of evidence in measures suggested to safeguard protected marine and benthic species
- Lack of detail on coastal design, which makes it difficult to determine impacts on coastal processes and the communities of plants and animals living in this coastal zone
- Scant examination by the applicant of wildlife areas, leading to a dismissal of their importance and astonishing lacunae
- Apparent unawareness by the applicant of RSPB North Warren in the SSSI into which the River Hundred flows within a few hundred metres of the bisection point
- The hydrological impacts on water quality and chemistry on protected sites, particularly the Aldeburgh-Leiston SSSI and RSPB North Warren
- Underestimation of importance of foraging areas available for red-listed species
- Scant assessment of impact of noise and lighting on bats, birds and rare insects
- The loss of ancient hedgerow and old woodland and the unrealistic plans for their mitigation where these are proposed
- The overall impact on the important population of bats
- The loss of hibernation sites for protected reptiles and mammals
- The loss of nesting habitat for protected migrating species
- The loss of river access and facilities to protected species
- The bisection and fragmentation of the coastal B-lines and IIA
- The impact of biodiversity fragmentation and loss across the development site
- The serious impact on the local population, particularly the elderly and children, of airborne pollution from proximity to haul roads



## Sections

### Introduction

#### 1 Marine, Benthic and Littoral

- 1.1 Mortality of red-listed species from turbine blades
- 1.2 Harm to cetaceans and marine animals from underwater noise and shock
- 1.3 Benthic Ecology
- 1.4. Littoral

#### 2 Terrestrial

- 2.1 B-lines and IIA
- 2.2 Coastal and Cliff
- 2.3 Hedgerows and Woodland
- 2.4 Bats
- 2.5 Reptiles
- 2.6 Badgers
- 2.7 The River Hundred
- 2.8 Nightingales, Turtle Doves, Nightjars, Polecats: red list, amber list, priority species in the path of drilling
- 2.9 Noise and Light
- 2.10 Fragmentation
- 2.11 "Confirm that species remain absent?"

#### 3 Harm caused by Atmospheric degradation

#### 4 Conclusions

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## **Introduction**

The British Government's 25 year environment plan, 'A green Future', 2018, declared the need to arrest the decline in native species and improve our biodiversity. Connection corridors between our remaining pockets of wildlife were proposed. However, the Government admits in 'UK Biodiversity Indicators 2020' that species loss is of grave concern. The UK is now one of the most species-poor countries on the planet. Our move towards sustainable energy should not be in contest with the aim to reverse our environmental decline. Both clean energy and ecological restoration are necessary for human survival.

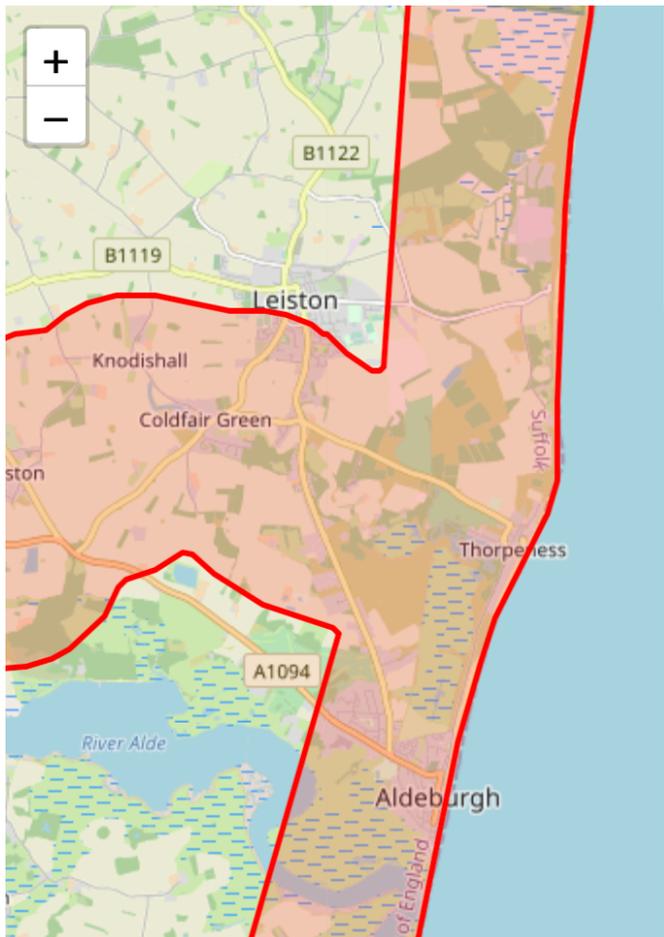
In this context, SPR's plans for EAN1 and EA2 require challenging.

SPR proposes the removal of around 30 acres of wildlife habitat in the area of the substation at Friston. The twelve miles of cable route on land will remove mature woodland, orchards, ancient hedgerow, and parkland, not all of which has been recorded by the applicant, none of which can be reinstated, and all of which supports a variety of protected and red-listed species. We do not agree that hedgerow and shrub planting mitigates the loss of ancient hedgerow or mature woodland, which has developed its own, mature biome. Even where SPR is able to propose planting, the practicalities of supporting whips and saplings in this, the driest area of the UK, are not addressed.

The cable route crosses the Sandlings SPA and grazes the northern edge of the Aldeburgh-Leiston SSSI, including RSPB North Warren. The damage to the SPA is unlikely to be repaired as it is dependent on ancient ecosystems.

The bisection of the River Hundred just north of the Aldeburgh-Leiston SSSI, whose ecology is vital to the SSSI's delicate wetlands and fen, ensures that what is done just upstream of the SSSI will be carried into it. There is a lacuna here in SPR's assessment and survey: SPR does not adequately address this proximity, nor does it seem aware of RSPB North Warren. No botanical survey has been carried out; no survey of invertebrates, and only a guesstimate of scant reptile, bird and other animal life has been offered for the area around the River Hundred. In fact, River Hundred at the crossing point reflects the typical richness of wetland habitat and, according to the National Biodiversity Database, 872 species have been formally recorded in its 1000m orbit there. (Compare this with the 72 acres of Kensall Green Cemetery, which records 33 species.)

The essential connectivity corridors for invertebrates (B-lines), established by the Invertebrate Conservation Trust and funded by Natural England, on which our soil and food pollination depend, run North-South, East-West across this important habitat. The cable corridor will drive straight through them, thereby damaging, if not destroying, an important national resource (map below).



Map of part of Suffolk's B-Lines

The landfall at Thorpeness is in the marine SPA and SAC, which support a variety of protected and red-listed creatures. SPR has not provided evidence that it will be able to *not* harm the harbour porpoise, nor address as far as is possible the high mortality associated with collision by the internationally important populations of sea birds in the area, which include Kittiwake, Red-Throated Diver, Tern and Little Tern, nor mitigate for their disturbance and loss of access to feeding grounds.

The noise, pollution and disruption from the helicopters, heavy plant, cable haulage, trenching, blasting and drilling, plus night time light pollution, are not able to be mitigated and will cause long-term damage to these internationally important wildlife areas.

*“If decision-makers continue to ignore the bigger picture resulting from adding more and more turbines into already crowded seas we risk losing our seabirds to ‘a thousand cuts’ where no individual scheme is responsible but collectively the impact is devastating.”* RSPB conservation director Martin Harper, July 2020

**It is astonishing that this route and this location were chosen.**

## 1 Marine, Benthic and Littoral Ecology

### 1.1 Mortality of red-listed species from turbine blades

1.1.1 Wind farms are a known cause of mortality for seabirds through collision. The Outer Thames Estuary SPA exists to protect endangered seabirds, many of which nest, live, migrate, overwinter or oversummer at or in the vicinity of the proposed landfall at Thorpeness.<sup>1</sup> Those considered most at risk from collision include Red-Throated Diver, Tern, and Little Tern, plus Kittiwake, which are nesting closer than 1000 metres from the proposed landfall, and also nest at Lowestoft, which is within 19 miles of EA2. These are red-listed, protected species.

1.1.2 SPR has not provided evidence that its proposition to alter the height of the blades has lowered mortality and the plan is largely theoretical.

Can we have confidence that suitable trials of improved safety, and therefore evidence, can be produced in a timely manner?

1.1.3 Recently-published studies concur that painting one of three rotor blades black helps counter the problem of avian mortality. Birds experience 'motion smear' in their forward vision, which seems to prevent birds perceiving obstructions ahead. Painting one of three blades a dark colour is shown to reduce avian mortality by 70%, but the process is resource-demanding unless the blades are painted before construction.<sup>2</sup>

Will SPR act on this evidence and properly prepare the blades of its turbines before construction to protect endangered sea birds of the SPA?

### 1.2 Harm to cetaceans and marine animals from underwater noise and shock

1.2.1 The Southern North Sea SAC exists in part to protect Harbour Porpoise, which are found offshore at Thorpeness and along the Littoral.<sup>3</sup>

1.2.2 Studies have shown that animals respond to underwater disturbance over large areas by changing activity and communication patterns. Strandings are linked with the harm caused by acoustic underwater noise, like explosions, pile driving, blasting and sonar. This is because sound travels very efficiently underwater, so the potential area impacted can be thousands of square kilometres or more.<sup>4</sup> These effects can be long-lived and cumulatively damaging to the health of the creatures that suffer them. In legislating for the creating of the SAC, the Government notes that the installation of offshore wind turbines has already created noisy areas, with

<sup>1</sup> Suffolk Naturalists Society, Vols 1-64, Systematic Lists

<sup>2</sup> Roel May et al., 'Paint it black: efficacy of increased wind turbine rotor blade visibility to reduce avian fatalities', *Ecology and Evolution*, Vol. 10, 16, July 2020

<sup>3</sup> Suffolk Naturalists Society, *op.cit.*

<sup>4</sup> L.S. Weilgart, 'The impacts of anthropogenic ocean noise on cetaceans and implications for management', *Canadian Journal of Zoology*, 2007, 85(11): 1091-1116



lower densities of Porpoises.<sup>5</sup> The increased incidence of cetaceans stranded on Suffolk beaches has been reported in local news.<sup>6</sup> The scale of offshore wind installation planned over the next decades in the North Sea raises the potential for unprecedented and cumulative disturbance, on top of a continuing background of noise from oil and gas and other sources, and it is necessary to devise some sort of protection for sea animals.<sup>7</sup>

1.2.3 The applicant has not assessed the actual risk to sea animals in this project, nor provided a clear or coherent strategy to protect them.

What effective, evidence-based measures is SPR planning to protect sea animals?

### 1.3 Benthic Ecology

1.3.1 The North Sea food chain is dependent on Sandeels, shellfish and other small marine creatures which inhabit and breed in its shallower waters.

1.3.2 The decline of the Kittiwake has been debated in Parliament: the Lords long ago examined the role of super trawlers in the decline of the benthic ecology in this regard. The problem has not been solved.<sup>8</sup> It is established that much of the deterioration in the health of Kittiwake colonies is attributed to the declining stocks of Sandeels in the North Sea, on which it feeds.<sup>9</sup> We will use the Kittiwake as a good example of the effect of the proposed development on the North Sea ecology and food chain.

1.3.4 Little firm evidence has been collected on the comprehensive distribution of Sandeels and the dispersal of their young. Fortunately, there exists a formal study of known locations of Sandeel fisheries, which was created with the help of captains of fishing trawlers (Fig 1). Many more minor breeding grounds are suggested from the trawler captains' experience.<sup>10</sup> From the charts, there appears to be a correlation between the distribution of Sandeel fisheries and the shallow areas of the North Sea (Page 8, Fig 1, Bathymetry from Admiralty charts). Of course, EAN1 and EA2 are planned to sit atop shallows (Page 8, Fig 2, SPR's own charts).

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<sup>5</sup> UK Statutory Instruments 2017 No. 1013 *The Conservation of Offshore Marine Habitats and Species Regulations 2017*

<sup>6</sup> <https://www.bbc.co.uk/news/uk-england-suffolk-40072646> (Harbour porpoise found washed-up on Suffolk beach)

<sup>7</sup> <https://hub.jncc.gov.uk/assets/2e60a9a0-4366-4971-9327-2bc409e09784> JNC, 'Guidance on noise management in harbour porpoise, SACs 2020'

<sup>8</sup> Hansard, *House of Lords*, November 1, 1994 'Sand eels and drift net fishing'

<sup>9</sup> Matthew J. Carroll et al, 'Kittiwake breeding success in the southern North Sea correlates with prior sandeel fishing mortality' *Aquatic Conservation*, Wiley, 2017

<sup>10</sup> Henrik Jensen et al, 'Inferring the location and scale of mixing between habitat areas of lesser sandeel through information from the fishery', *ICES Journal of Marine Science*, Volume 68, Issue 1, January 2011, Pages 43–51

Fig.1

Map of sandeel fisheries; distribution in blue with the darker shades being the richest pickings

Bathymetry of the North Sea

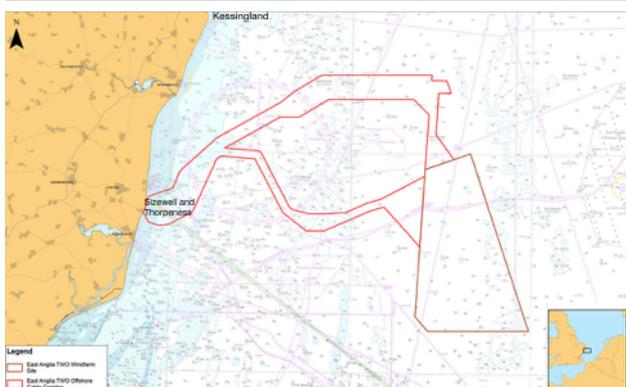
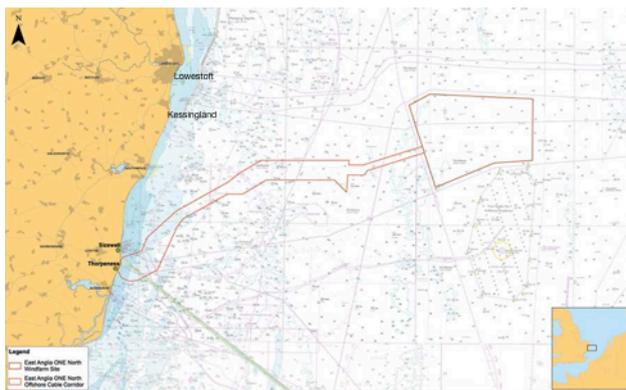
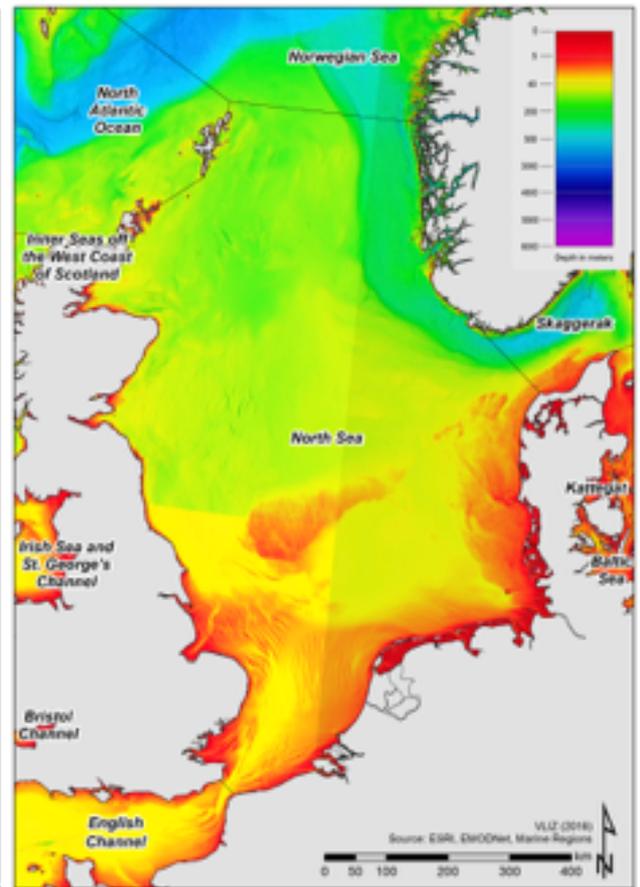


Fig. 2 SPR's chart of EA2 (above) and EAN1 (below)



1.3.5 Meagre research has been carried out to track the foraging of Kittiwake populations. One study tracked birds by GPS from the colonies in Filey and Flamborough in Yorkshire. They fly as far as Dogger Bank to forage for their chicks – a round trip of around 200km. This means that the feeding grounds of Yorkshire's Kittiwakes overlap with an industrial fishing zone for Sandeels, as well as with a proposed wind farm site. It is the shallowness of Dogger Bank that makes it an attractive location for sea-bed fixed turbines.<sup>11</sup>

1.3.6 We do not yet know where Suffolk's Kittiwakes forage, yet we can be fairly certain that the location of the Sandeels on which they depend will be in shallow waters. Unfortunately, EA1N and EA2 also select for shallower sea beds, and, as they are geographically close to the Suffolk Kittiwakes' breeding sites, they are likely to sit within, atop, or, indeed, between the Kittiwakes' foraging routes and foraging zones. In fact, the full array of windfarms proposed, or under construction, will create something like a wall along coastal waters against the free passage of sea birds in migration and to their feeding grounds, and cause invisible harm on the sea bed.

Wind farms therefore constitute a threat to red list coastal species because of:

- a) the acknowledged danger from the blades of the turbines
- b) their continuing, cumulative construction all along and close to the coast, forming a barrier to accessing feeding grounds
- c) their methods of construction which are harmful to sea animals
- d) their methods of construction which are harmful to the benthic ecology

1.3.7 Floating wind farms, which cause less disruption to the sea bed, are considered more versatile in that they can be sited even in deep water, and manufacturing costs are falling with economies of production scale<sup>12</sup>. The technology

- carries fewer risks for sea mammals
- avoids damage to the vital benthic ecology
- removes a key threat of starvation from the sea bird and sea animal populations

Can we ask SPR (and, indeed, all subsequent windfarm applicants) to switch to a less ecologically damaging micro-siting for both turbine and windfarm?

## 1.4 Littoral

1.4.1 The project will stretch from the Alde Estuary to Lowestoft, and make landfall for cables to the north of Thorpeness. This whole coast is eroding and at risk from

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<sup>11</sup> RSPB, Bolton *et al.*, 'Kittiwake breeding success in the southern North Sea correlates with prior sandeel fishing mortality' *Aquatic Conservation: Marine and Freshwater Ecosystems*, Wiley, June 2017

<sup>12</sup> Avery Thompson, 'The first floating windfarm is ridiculously efficient', *Popular Mechanics*, 2018, March 6th



storms and sea level rise. The cliffs at Thorpeness are friable – the latest recorded death they caused by collapse was of a dog walker on the beach in 2017.<sup>13</sup>

How will drilling through the cliffs not contribute to the rapid erosion here, and what measures can be taken to protect any exposed cabling in the event of collapse?

1.4.2 The cliffs are home to many protected birds, like Yellowhammer and Sand Martin. The headland formed by the Ness is where seasonal bird counts are made and migrations recorded by the county recorders.<sup>14</sup>

1.4.3 The littoral is part of the SAC and SPA.

How will SPR mitigate the disruption to the littoral from road traffic, air traffic, noise, light and pollution so that the environment remains favourable to the threatened species that abound here? What evidence can you provide that your proposed mitigation works?

Aquifers in this region are very close to the surface. What provision has the applicant made to locate and protect any submarine aquifer outlets in the landfall drilling area?

## 2. Terrestrial

### 2.1 B-lines and IIA

2.1.1 The Invertebrate Conservation Trust (Buglife), under the umbrella of Natural England, is working to restore connectivity to the fragmented habitat for invertebrates on which soil, pollination, and, consequently, 'higher' animals depend, including humans. The cable plans bisect one of the established 'B-lines' along the coast, then bisects another along its length, which connects the coast to the inland clay soils. This whole area has also recently been designated IIA (Important Invertebrate Area).

2.1.2 Formally recorded, endangered invertebrates in the cabling's path include the Lunar Yellow-Underwing Moth, the Norfolk Hawker, the Tree Bumble Bee, Large Red-Tailed Bumblebee, Clouded Yellow, Grayling, Glow Worm, Wall, Essex Skipper, Garden Carpet, Cinnabar, and Silver-Studded Blue.<sup>15</sup>

2.1.3 The risk posed by SPR's plans to the restoration of viable, connected, diverse populations is grave.

2.1.4 Chapter 22, Onshore Ecology, of SPR's Environmental Statement states that there is 'no evidence of suitable habitat to support significant populations of invertebrates' and that these species will not be considered further.<sup>16</sup> This is plainly wrong.

Will SPR urgently consult the Invertebrate Conservation Trust (Buglife) for information and help on this important site?

<sup>13</sup> *East Anglian Daily Times*, 'Disintegrating sea defences spark safety fears', 23 May 2019

<sup>14</sup> Suffolk Naturalists, *op. cit.*

<sup>15</sup> National Biodiversity Database

<sup>16</sup> APP-070-Chapter 22 5.3.8, para155

## 2.2 Coastal and cliff

2.2.1 Thorpeness cliffs record 508 species observed within 500 metres, including endangered bird species such as Swift, Skylark, Sandmartin (which nest in the cliffs), Cetti's Warbler, Swallow, Crossbill, Nightingale, Turtle Dove, Barn Owl, Lapwing, Fieldfare, Redshank and Thrush.

2.2.2 The Ness headland is used by Suffolk Naturalists to perform its seasonal counts of bird populations and migrations, and we have already mentioned the internationally important populations of sea birds there.<sup>17</sup>

What evidence-based mitigation strategies does SPR propose to protect these species which breed or feed here?

## 2.3 Hedgerows and Woodlands

2.3.1. The cable path drives straight through a European Union Special Protection Area (SPA). The Sandlings SSSI is at risk from the trenching and pollution from noise, light and fumes. This is shocking enough, but wildlife and special ecology is not confined to reserves and relies on interconnectivity to survive and thrive (Mallinson, Annex).

2.3.2 Moving westwards from the sea, SPR proposes to remove around 11km of hedgerow, most of which appears on maps published in the 1800s. In Aldringham, SPR will grub up section CS19-CS20 of Hedgerow 20 beside PROW path E-106/065/0, and Hedgerow 21 alongside E-260/007/0 Fitches Wood, Aldringham.

2.3.3 SPR will fell areas of mature, broadleaf woodland and protected parkland on both sides of the River Hundred, which it will cut in two.

2.3.4 The wooded area on the banks of the river to the east of Aldeburgh Road (B1122) is not at all recorded clearly in the proposal. Trees in this woodland are upwards of 150 years old and contain some older specimens in decay, which provide hollows for bees, birds and bats, and refuge for declining invertebrates like the Stag Beetle, and hibernation areas. The river bank is home to several struggling species of invertebrate, including the Glow Worm.

2.3.4 The plans will then fell several more acres — of protected parkland trees, by Ridsend (Aldringham Court Residential and Nursing Home), and of its woodland, to the west of the B1122 — on which 45 species of lichen, including *lecanora expallens*, have been recorded.<sup>18</sup> Lichens, of course, are dependent on clean air, which will be eliminated by SPR's plans. Alas, the full extent of environmental shock at the pinch point is not clear from what we read, but we can make educated guesses. The cable corridor is supposed to be reduced to 16.1 metres, but the additional 10+m haul road is planned to emerge onto the B1122 within metres of the garden pond of Aldringham Court, according to SPR's outline management plan.<sup>19</sup>

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<sup>17</sup> Suffolk Naturalists, *op. cit.*

<sup>18</sup> Source: BLS Lichen database

<sup>19</sup> APP-077, Q. 1.10.6



This is guaranteed to despoil the last years of the residents' lives with noise and pollution and the inability to go outside. If SPR had not quartered the width of the cable trench at this point the haul road would have had to go through the elderly residents' bedrooms.

2.3.5 Trenching on westwards, Aldringham Wood (Fitches Wood) is an old bluebell wood, now partly grazed, which still supports breeding Nightingales, Turtle Doves, Hedgehogs and Lesser Stag Beetles (not recorded by SPR). The ancient hedgerow, which borders Fitches Lane, and links Aldringham with Knodishall and the village school which serves both villages, runs the length of the wood and beyond. This ancient lane and the ancient hedgerow, itself a rich habitat and sustenance zone for the wildlife of the area, will be extinguished and its connectivity for humans and wildlife removed for good. Around 0.9 hectares of the Aldringham Wood will be felled, to accommodate the cable corridor (64 metres), plus haul road, which, according to plans, should be around 10 metres wide.

2.3.6 The 74 metre wide cable corridor then turns onto agricultural land, still skirting the wood's edge, so that it will pollute, with noise and noxious gasses, the children in the village primary school over the hedge. It heads west towards Friston, thereby wrecking the important bat corridor used by the recorded Barbastelle, Brown Long-Eared Bat, Lesser Horseshoe Bat and Pipistrelle<sup>20</sup> from the B1122 to Billeaford Hall, and affecting the hunting grounds of the Barn Owl<sup>21</sup>.

2.3.7 The southern end of the agricultural prairie alongside Fitches Lane has been given over to pollinator strips and there is some restoration of hedges in progress, incipiently extending the favourable environment for hedgerow creatures as well as removing pesticide treatments on the arable field. Several pairs of Skylark, Woodlark, and Hare now breed there. The pollinator strips also provide supplies of Yellow-Necked Mice for raptors, which include Barn Owl, Tawny, Little Owl, Buzzard, Hobby, Kestrel and Harrier.<sup>22</sup> The number of species recorded in this slightly more westward 1km radius than that at the river is 1581, from the edge of the fields to Billeaford Hall and Aldringham Woods.<sup>23</sup> The northern end contains the remains of a pond which is clearly visible on satellite images and has not been investigated (TM442225 60344). Will SPR promise to investigate if it intends to trench it away?

2.3.8 From Aldringham the 84m wide cable corridor continues westward, removing more hedgerow between Knodishall and Friston. SPR suggests that Grove Wood, some 4km away, can become a mitigation habitat. Grove Wood is already a Local Wildlife Site and Ancient Woodland. However, this year the Forestry Commission granted Felling Licences, which has enabled tree removal and coppicing. Grove Wood can no longer be adequate mitigation habitat, if it ever was.

2.3.9 The function of agricultural land includes being dug up, and agricultural methods can quickly restore it to modern agricultural use. However, ancient biome of woodland and hedgerow cannot be restored.<sup>24</sup> Even translocating the soil is damaging, and we can see that, in the current case of HS2, it is left to untrained

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<sup>20</sup> National Biodiversity Database

<sup>21</sup> *ibid.*

<sup>22</sup> Author's observations

<sup>23</sup> National Biodiversity Database

<sup>24</sup> HM Govt. Forestry Commission, 'Keepers of Time', *Crown Publications*, 2019



digger operatives.<sup>25</sup> We have no evidence that SPR will employ skilled operatives here, or elsewhere, as we shall see.

2.3.10 “Just over half a hectare of one wood might not sound much but every inch of soil in an ancient woodland is precious. When you consider ancient woodland is irreplaceable, accounts for just 2.4% of land cover in the UK, and is probably the richest habitat we have, this will be devastating for the myriad of species that rely on it for survival. We are in the midst of a climate and nature emergency, with Government saying it is committed to being the first to leave the environment in a better state than they found it.” Luci Ryan, Woodland Trust, September 2020.

2.3.11 SPR claims it will replant, though it admits it cannot replant trees on top of the cables. It suggest a 16 metre strip of heathland will mitigate visually and environmentally for the loss of Aldringham Wood, and that it will take only 5 years to achieve this. Perhaps in a less dry area of the country, shrubs might establish themselves well in 5 years. Here, that is unlikely without intensive support. In any case, heathland is no replacement for woodland.

**Where** does SPR plan to restore the lost woodland, and **how** will it mitigate for the 20-30 year gap before the trees mature, and the 10 year gap before the hedgerow becomes dense enough to support some needy species? Does SPR have enough land to do what it claims to intend to do?

## 2.4 Bats

2.4.1 Bats are in crisis, of both habitat and sustenance. The doomed woodlands have taken at least 150 years to achieve their current state. Their trees have hollows, and grooves suitable for bats, and standing older trees have cavities for birds, like owls, and insects, like wild bees. Their undergrowth and hedging are rich sources of insect nutrition.

2.4.2 Core Sustenance Zones are areas around breeding animals, where the habitat affects the resilience of the colony. The zone is different for each species but ranges from 1km to 6km, for bats.<sup>26</sup> This shows that development work can impact breeding animals in terms of foraging and commuting and suggests the 50 metre buffer zone adopted by SPR for bats (and the 100 or 200m zone for breeding birds) is insufficient.

2.4.3 Bats are increasingly noted towards the western end of the route, with roosts within Grove Wood, and on the substation site in Friston (this is probably because SPR concentrated on the substation site). SPR's Environmental Statement 6.2.22.7 (APP-280) describes at least 6 bat-roosting sites in the substations site, plus with hedgerows and parcels of land forming commuting and foraging routes. Most of this will be removed. The sightings of bats in this area include the rare *Barbastelle*.<sup>27</sup>

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<sup>25</sup> Craig & Buckley, 'Responses of woodland geophytes to disturbance caused by translocation', *Plant Ecology*, 214, 1091-1103 (2013)

<sup>26</sup> Information from the Bat Conservation Trust, 'Core Sustenance Zones and Habitats of Importance'

<sup>27</sup> National Biodiversity Database



2.4.4 Again, the construction and operation of the substations will interfere with the core sustenance zone of these bats. Tree loss, culvert and bridge alterations, will adversely affect roosting opportunities, and the culling of hedges and loss of vegetation will deplete the insect population on which bats rely.

2.4.5 Artificial lighting used for security in construction and maintenance creates barriers between roosting sites and foraging areas. Lighting tends to delay the emergence of bats from roosts. This shortens the time for foraging and therefore affects the health of pregnant females in particular and the bat population in general.

2.4.6 SPR's bat survey has been a calamity, because it suffered an equipment failure and 26% of the results are missing. Despite identifying a Lesser Horseshoe Bat not far from Billeaford Hall and close to the cable route, SPR has declined to investigate further (only one other sighting in the last 100 years has happened in Suffolk<sup>28</sup>). Yet it admits that there is "the potential for significant impacts during construction without mitigation"<sup>29</sup>

Will SPR urgently consult the Bat Conservation Trust on the dangers to this important bat population?

## 2.5. Reptiles

2.5.1 SPR identified several areas of suitable reptile habitat, however they have not carried out any reptile surveys, as they say in paragraph 152 that the areas are "considered to be of an inappropriate size to support large populations."<sup>30</sup> However, they also admit that they did not carry out an assessment of the habitat by the river, because they were unsure of access permission. Their conclusions are not based on evidence, therefore.

2.5.2 The area is known to support Slow Worm, Adder, Grass Snake, Green Lizard and Common Lizard.

2.5.3 SPR plans to leave it to individual operatives to adopt a "Precautionary Method of Working".<sup>31</sup> This means that untrained workers, many of whom are unfamiliar with reptiles, and may find them frightening, are expected to not harm the creatures. This is completely irresponsible. An account of operatives killing Slow Worms by crushing them with a tractor made ITV national news about a month ago.<sup>32</sup>

2.5.3 SPR urgently needs to develop a robust protocol for identifying and protecting these at-risk species, and a management structure that will implement it.

## 2.6 Badgers

2.6.1 SPR has identified 5 occupied Badger setts, 4 of which are on the substation site at Friston and will be removed. SPR says, however, that it will somehow avoid

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<sup>28</sup> Suffolk Wildlife Trust

<sup>29</sup> Chapter 22, Onshore Ecology, (APP-070), para 218

<sup>30</sup> *ibid.*, para 152

<sup>31</sup> *ibid.*, para 130

<sup>32</sup> <https://www.itv.com/news/westcountry/2020-09-27/slow-worms-killed-on-bath-development-site>

disturbing badger setts, or Badgers. The ‘substation’ population is significant and viable, with latrine, pathways, snuffle holes, and a disused sett. SPR suggests artificial setts will be sufficient to translocate them, along with the same “Precautionary Methods of Working” to which it has consigned the reptiles: in other words, the Badgers will be in the hands — or under the lethal shovels — of SPR’s construction subcontractors. There is no management mechanism for applying any precautions that SPR may, or may not, eventually come up with.<sup>33</sup>

2.6.2 Elsewhere SPR appears to have forgotten, even, that it suggested artificial setts and says badgers will be moved out prior to construction. The consequence will be that the Badgers will be culled or left without habitat.<sup>34</sup>

Does SPR feel this is a credible, humane or legal plan for dealing with a protected species? What management structure can SPR guarantee for dealing with finds that it has not foreseen?

## 2.7 The River Hundred

2.7.1 The River Hundred is now a slow-moving, narrow water course, although its flood plain, and the Bronze Age burial mounds situated high on the ridged edges of this, show that it was once a navigable river with its estuary somewhere south east of Thorpeness Mere, where there was, until Tudor times, a port. Until this year the River Hundred in Aldringham was designated SLA.

2.7.2 SPR’s trenching plans will bisect River Hundred as close as 1000m north of the lush, wetland meadows that it irrigates in its valley, where horses, cattle and sheep graze, and orchids grow. A little distance downstream, beyond Bird’s Farm and River Hundred (House), the river enters the SSSI and SPA wetlands and fen, sending another branch alongside the Sandlings. Much of these areas are managed by RSPB North Warren. They are immediately south and east of the proposed bisection. I can find no mention of RSPB North Warren in the surveys. I am at a loss to know why such an omission should exist at this stage. North Warren holds nationally important populations of Marsh Harrier, Bittern, Lapwing and Nightingale, and its wetlands and fen host many migrating winter species which are affected by the delicate balance of water quality in the wetland.

2.7.3 Despite its narrow aspect, the River Hundred is able to support Kingfishers, Otters, Grass Snakes, and other hunting aquatic species as well as Water Voles, very close to, or at the bisection point. An absence of **records** of fish, crustaceans and European Eels (another endangered species) does not mean that fish, crustaceans and eels are absent: the predators would not survive without them.

SPR has confirmed that an assessment of migratory fish and river connectivity was not undertaken. It has now said that it will commit to pre-construction surveys on fish and eels.<sup>35</sup> Will it also commit to a proper survey of the river’s dependent and protected life, including Otter and Water Vole?

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<sup>33</sup> APP-070 para 209

<sup>34</sup> Outline Landscape and Ecological Management, APP-584, para 5.9ff

<sup>35</sup> 1.7.15 WFD

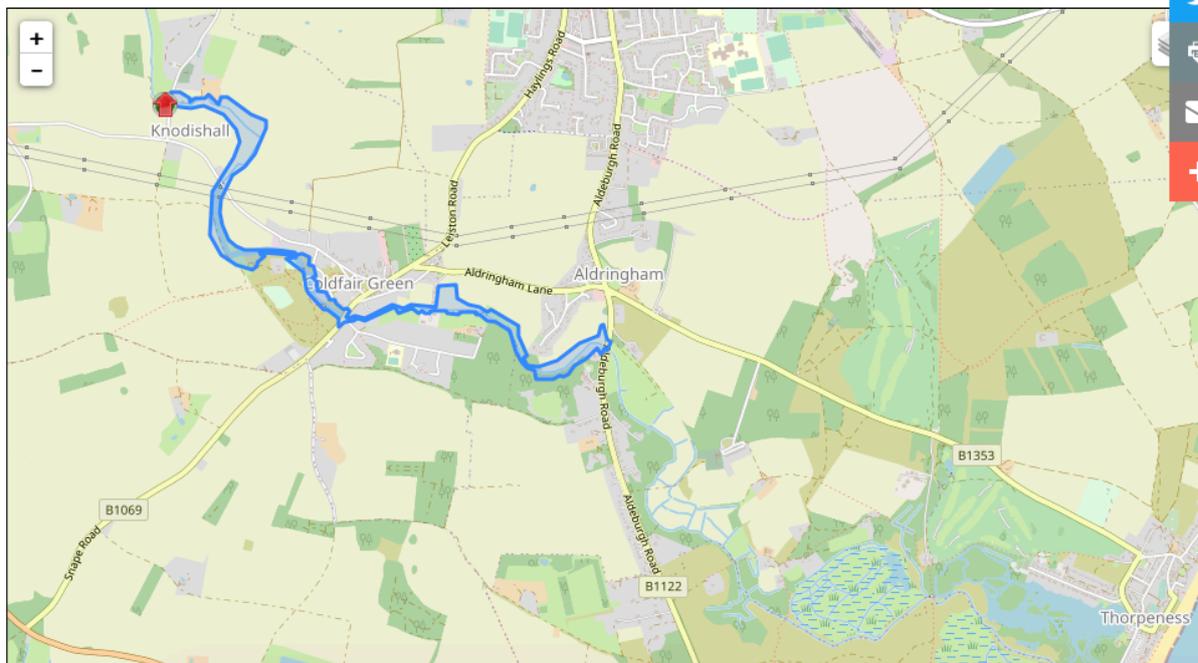
2.7.4 The River Hundred sits inside a typical wetland from the pinch point southwards and eastwards. Wetlands are the barrier between land and water, and provide an exceptionally rich environment since they remain moist and humid at all times. A wetland biome is richer than any other biome. The 872 species recorded at the pinch point is typical of this, despite the proximity of the B1122. Wetlands typically absorb rainfall, and release it to the river as needed, thus helping to control flooding. The River Hundred has flooded rarely in the past 40 years into the wetland area, though upstream still carries flooding risks.

2.7.5 Wetlands ecosystems are very sensitive to disturbance from outside influence, particularly by human development and environmental damage.<sup>36</sup>

What measures will SPR take to protect dwellings and property from flooding owing to the disconnection of the river with its wetland?

The area bounded in blue on the map shows the area covered by flood alerts and warnings for The Thorpeness Hundred River from Knodishall to Aldringham.

Icons on the map show nearby level monitoring stations. They are not necessarily related to this particular flood warning area.



Source, River Levels UK 2020

2.7.7 The trenching proposes to suspend the river for 70m — or perhaps it may be 90m. It will also cut through the incipient wetlands at the pinch point. The geology of this area means that the water table rises very high, as do the crag-based aquifers. The trenching is unlikely not to disturb them and the risk of environmental impact is great, if not inevitable. Creatures will not be able to pass up or down stream: the trenching will require a temporary bridge or culvert for the haul road, as well as temporary dams, flumes and pumps to minimise upstream impoundment and maintain flows downstream, all with the attendant risk of flooding and surface water pollution.

<sup>36</sup> Paul Keddy, *Wetland ecology, principles and conservation*, CUP, 2010

2.7.8 Only SPR's conclusion (without having accessed the river bank) that the river holds little of interest makes this plan acceptable. Life in the river is not scarce – rather, the surveys were inadequate. A full exploration of the connectivity of the river with its downstream dependent ecology is urgently necessary.

2.7.9 SPR's assessment states that spills from its activity will be unlikely, and suggests, in any case, spills and pollution would be low impact, being absorbed back into the ecosystem. Unfortunately, most studies agree that poisoning from agricultural run-off and industrial pollution are extremely damaging to sensitive wetlands. SPR's desk survey points out that the Hundred's water quality used not to be optimal (though it is improving) because of agricultural pollution, but does not allow that its own project will add inevitable industrial pollution, and disturbance to the water table and aquifers, on a scale the SSSI and Reserve has not seen before.

## 2.8 Nightingales, Turtle Doves, Nightjars, Polecat: red list, amber list, priority species in the path of drilling

2.8.1 Cutting in half the Sandlings SSSI invites local extinction for its red-listed inhabitants, and weakens neighbouring areas into mosaics rather than healthily connected populations, SSSI or no. If the project lasts several years, or becomes only the first of many cumulative projects, the outlook is grim.

2.8.2 At least seven red-listed avian species exist along the cable route and are listed in zoologist Saul Mallinson's Annex to this paper; outside the route, the wetlands offer many more, albeit outside the SSSI.

2.8.3 SPR has been asked to show its plans to provide equivalent biodiversity for Nightingale and Turtle Dove since its suggestions might be interpreted as the birds finding new habitat, somehow, within the SPA/SSSI. Providing equivalent biodiversity, where damage has been done by cabling, is slow since it relies on planting and growth post-construction, therefore it is not a viable solution for the struggling species that the SSSI exists to protect.

Can we be assured that SPR's revisions can be shared with independent experts as soon as they offer them?

2.8.4 SPR has offered pre-construction surveys to confirm absence of breeding Woodlark and Turtle Dove. This can only be seen as conservation if alternative habitat with core sustenance zones has already been established. Otherwise it is not conservation, but destruction.

We know that species like Woodlark and Turtle Dove are clinging on along the cable route. How does SPR propose to achieve these translocated, sustenance zones **before** commencing work?

2.8.5 Such huge and prolonged projects increase fragmentation of populations, raising the risk of extinction, and degrade biodiversity. This process is explored in the Annex by Saul Mallinson.



## 2.9 Noise and Light

2.9.1 Many of the populations described, and a few left out, are dependent on night skies to thrive: Dung Beetles navigate by the Milky Way; moths, Glow Worms and Stag Beetles find each other in darkness; owls and bats require dark skies to be able to hunt; Nightingales and Nightjars choose darkness to locate their mates; bats find their way with sonar.

2.9.2 The cable corridor will cut through a landscape presently lit only by domestic lighting, and shine security spotlights for miles around. This means that, even when the noisy machines are switched off, the landscape will have turned killer for some of our most threatened and beloved species.

## 2.10 Cumulative impact

2.10.1 Although SPR recognises that ecological impact in the area will be magnified by other projects here, they take account only of Sizewell C's likely concurrence. We all know, however, that there are more to come, including the Nautilus and Eurolink Interconnector projects, Galloper and Greater Gabbard extensions, National Grid SCD1 and SCD2. These projects will repeat and likely duplicate over many years the effects of EAN1 and EA2 on the marine and terrestrial environment. What's more, SPR says, quite simply, that it will decommission at the end of the project's life in the same way that it constructed. In other words, we need to multiply all the projects by two!

## 2.11 Confirm that species remain absent ?

2.11.1 This phrase has been often repeated throughout this proposal. SPR's surveys have too often concluded that animals requiring special provision are absent from the areas where they are normally found by other surveys and are known to thrive by those of us who live here.<sup>37</sup> "Confirm absence" has been used to deal with the problem of the Otter and Water Vole in the River Hundred, as well as the Nightjar, Nightingale, Turtle Dove, reptiles and various endangered bats along the cable corridor. Yet these creatures exist, even if overlooked in a hasty, desk-bound or incomprehensive survey. And those migratory species, like the Nightingale, that may be absent in certain seasons, will return to their seasonal homes and expect them to still be there.

2.11.2 Removing habitat during the population's absence will ensure it does not return. It is, of course, illegal to remove endangered and protected creatures without expert guidance.

2.11.3 Leaving identification, handling and re-siting to untrained subcontractors is absolutely unacceptable.

SPR should re-do their surveys with the help of local experts, and plan proper management of their workforce accordingly.

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<sup>37</sup> SPR op.cit., para 143



### 3 Harm caused by Atmospheric degradation

3.1.1 SPR's creation of busy, new haul roads and materials depots in close proximity to Coldfair Green Primary School and Aldringham Court, will pollute with noise, noxious airborne particles from tyre and brake linings, combustion products, and noxious gasses. These poisonous substances are group 1 carcinogens, are known to cause lung damage, and are linked to declining mental health, particularly in the young and the old.<sup>38</sup> SPR's own guesstimates proposes an increase of 49% HGV traffic on the A1094, which affects Snape Primary School, but an even greater increase of 109% on the haul road that passes Coldfair Green School and Aldringham Court — as no road exists there now, that is an underestimate.<sup>39</sup> The greenhouse gases generated by heavy plant are also unacceptable.

Has the applicant considered that the children of Coldfair Green School are at risk from airborne carcinogens and other harmful substances directly as a result of this project, since the haul road passes so close to their playground and classrooms? What SPR do to protect our children?

Has the applicant considered that the elderly inhabitants of Aldringham Court are also especially vulnerable to airborne carcinogens and other harmful substances, since the haul road junction is within metres of the building? What will SPR do to protect our grandparents?

Has SPR considered that even small increases in traffic pollution is linked with depression and low mental performance in children and the elderly?<sup>40</sup>

How will SPR mitigate for these grave health problems, which can be legitimately laid at their door?

3.2 It is now established that Honeybees, an invertebrate which generates more income for the UK than the Royal Family, are seriously injured by traffic pollution. There are currently around 92 managed colonies (around 4,000,000 bees),<sup>41</sup> servicing many crops and orchards, in this immediate area.<sup>42</sup>

Will the applicants compensate local beekeepers for colony loss or pollution-related disease in their colonies, for contamination of their honey and wax products?

How will the applicants compensate local farmers and market gardeners for the degradation of their crops of fruit and vegetables from pollution and poor pollination?

3.3 It ought to go without saying that all creatures suffer in the same way as humans do from harmful particulate and gas poisoning.

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<sup>38</sup> 'The air that we breathe', Royal College of Physicians, 2017

<sup>39</sup> EA1N PEI, Chapter 26, Traffic and Transport.pdf 6.1.26 Chapter 26, p56

<sup>40</sup> Bakulis et al., 'Mental health consequences of urban air pollution', *Social Psychiatry and Psychiatric Epidemiology*, 2020

<sup>41</sup> Source, National Bee Unit, Bee Base

<sup>42</sup> e.g. Geetha, G. et al, 'A field-based quantitative analysis of sublethal effects of air pollution on pollinators', PNAS August 25, 2020 117 (34) 20653-20661



How does SPR balance this knowledge of active harm with protected areas that abound here, and that are internationally important?

#### 4 Conclusions

4.1 The inaccurate and incomplete surveys of the ecologies impacted by this proposal do little to inspire confidence in SPR's overall design. Is SPR brushing important facts under the carpet? Declaring that a nationally important zone for invertebrates is an area that cannot support invertebrates is one error. Missing the presence of an RSPB reserve is another. Finding no evidence of reptiles or rare birds where they have been recorded is yet another.

4.2 Much of the dismissal of legitimate concerns as to the impact on environmentally sensitive and rare locations is based on flawed data. The rest of the study is unsafe, in consequence.

4.3 SPR's reluctance to reduce its heavy environmental footprint at sea or on land suggests an exploitative development from start to finish, in contradiction to the aims of 'clean energy'.

4.4 The SAC, SPA, SSSI, and adjacent environmentally sensitive areas — including ancient hedgerows, woodland and wetlands — are at serious risk from this inadequate planning and absence of management. Areas which have been selected and protected to combat fragmentation of important habitats for wildlife and support biodiversity will be rendered patchwork, and will not recover for decades, if ever (Annex). The risk of multiple extinctions has been brought closer.

4.5 The National Planning Policy Framework states that, "plans for renewable energy should ensure that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts." SPR has not achieved this.

4.6 The harm to the most vulnerable in the area cannot be dismissed. Pollution for 12 hours a day, sometimes at weekends, in close proximity to the populations most at risk, is unacceptable.

4.7 In consequence EA1N and EA2 projects cannot meet the National Infrastructure Commission's Design Principles for National Infrastructure (February 2020) in respect of Climate, Places, and People. This applies offshore, onshore and in all three phases of construction, operation and decommissioning.

4.8 What should not be forgotten is that SPR's projects are only the first of many planned for this area, with the same substation area targeted, and equally destructive environmental inroads through what ought to be, in law, safely preserved ecologies, for the environment, for the sake of our children's health, and for our communities in general.

4.6 Development should be halted until a fuller, accurate set of surveys can be achieved and a more complete picture drawn of all at stake, from which safer solutions can be found.

*Dr Gillian Horrocks, Sea Hills, Aldeburgh, IP15 5PL, October 2020*

## One Cable in a Thousand Cuts

*S. Mallinson – 09/09/2020*

There is little natural England left, with only 14.5% of the land surface not farmland or Urban Areas [Easton, 2017] – within this natural land the abundance and distribution of the UK's wild species has been in decline since the 1970s. Meanwhile thousands of hectares of farmland, woodland and wetlands are developed for urban expansion to serve the rise in urban living of 8% between 1970 and 2018 [Hayhow, et al. 2019]. This is within a nation where wildlife populations have already been greatly reduced by centuries of development and pollution.

As a result, 40% of UK vertebrate animals are now considered in serious risk of extinction [Hayhow, et al 2019]. An overall trend in both terrestrial and freshwater species showed a decline by 13% between 1970 and 2018. In response 31 species of bird were added to the Birds of Conservation Concern Red List between 1996 and 2015.

Meanwhile, the UK remains responsible to 1% of the world's annual emissions of Carbon Dioxide equivalent, and 5% of the total historical emissions – more than the whole of Africa and half of South America combined [Boden, Marland & Andres, 2009]. To attempt to offset this the UK has pledged to be Net Zero in emissions by 2050, and a big part of that includes extensive development of offshore windfarms [“UK becomes first major economy...”, 2019].

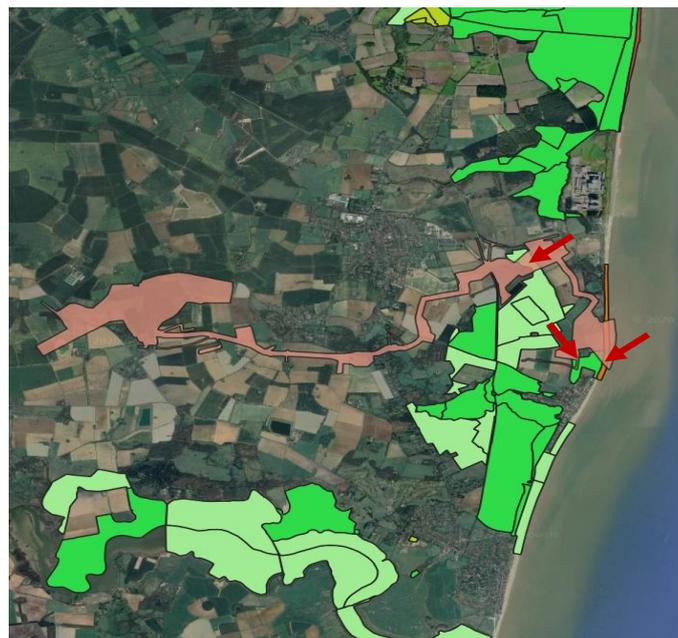


Figure 1. SSSI's (light green recovering, dark green optimal, orange unfavourable declining) are divided by the East Anglia ONE North and TWO cable (red). Arrows are affected SSSI's. SSSI data [Natural England], Cable [Scottish Power Renewables], Ariel Imagery [Google]

## Annex, Saul Mallinson

Sitting in the middle of this climate change and the biodiversity crisis is the East Anglia One North & East Anglia Two windfarms, being developed by Scottish Power Renewables [Scottish Power Renewables, n.d.] to tackle the UK's climate responsibility. However, these schemes are also threatening to damage on the UK's protected areas.

In order to connect their windfarms to the national grid they are putting a substation cables through three Sites of Special Scientific Interest (SSSI), these being “*a conservation designation which protects areas of land considered to be of special interest by virtue of their plants, animals or geological features*” [Rotherham, 2014]. These SSSIs come in a range of conditions from favourable to declining to destroyed, all depending on how well the features of the habitat are being conserved.

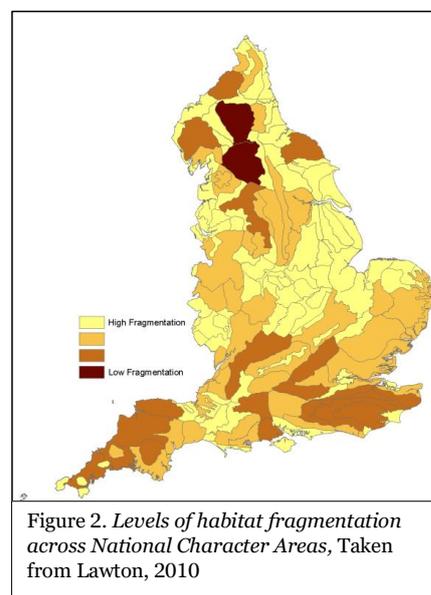
In the case of East Anglia ONE North & TWO's cable path, shown in Figure 1, it makes landfall through an unfavourable declining habitat, then through a favourable habitat and finally straight through a European Union Special Protection Area (SPA) recovering habitat called The Sandlings [Natural England, n.d.].

All three SSSIs are part of a larger mosaic of SSSIs found along the Suffolk coastline, as shown in Figure 1, which will be fragmented by the development and will take up to 7 years to recover [Pizzolla, 2019], assuming the project runs on schedule and no additional development by other companies follows the first cable.

This fragmentation is the breaking up and separation of protected areas into islands which become more isolated as there is less migration. This is a subtle but serious problem with protected areas which can cause permanent local extinctions [Lawton, 2010]. This is because most populations of animals are a metapopulation, a series of small groups (subpopulations) connected to each other by migration paths. Subpopulations are unstable and can be temporarily wiped out but are then replenished by migrations from other subpopulations so the metapopulation as a whole is resistant to extinction.

However, if these connections are cut and severed, e.g. by long construction site cutting the East Anglia SSSIs in half (see Figure 1), then declines and extinctions may follow, even within the habitats that are not damaged. Factors like inbreeding depression, make each generation weaker and weaker within isolation, making it harder and harder to sustain the local population until ultimately, they go extinct [Lawton, 2010]. Fragmentation is already a major issue with protected areas like SSSIs since it is not a goal of their designation. Suffolk is already one of England's more fragmented counties as shown in figure 2.

Aside from the direct damage and fragmentation, the years of construction work may also damage the surrounding SSSIs indirectly as most of the causes of the unfavourable conditions preventing or slowing the recovery of SSSIs is due to off-site factors [Lawton, 2010].



## Annex, Saul Mallinson

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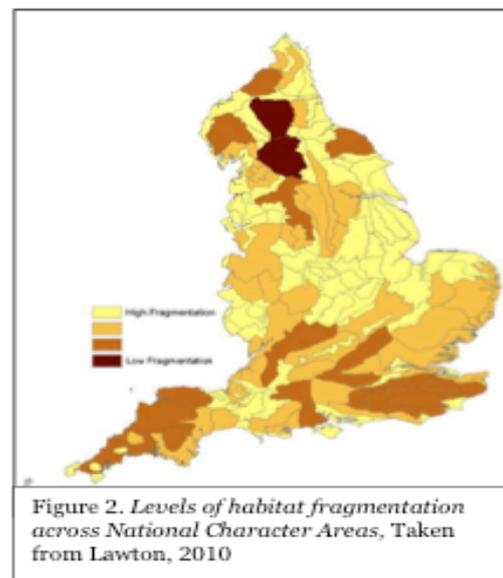
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## Annex, Saul Mallinson

In terms of species, the Suffolk Biodiversity Information Service, SBIS reports that within the sanderlings area there are: 4 UK native reptiles, all Priority Species under the UK Post-2010

Biodiversity Framework: 2 mammals, hedgehog & polecat, also Priority Species; grayling, a Priority Species butterfly along with 4 UK Amber listed & 5 UK Red listed bird species all shown in Figure 3A.

Additionally, I have personally observed 2 more red-listed species in that habitat, linnet and nightingale, which with yellowhammer and turtledove makes 4 red-listed species which are dependent on hedgerows and scrub and whose populations are declining because of their loss [RSPB, n.d.]. On top of this, SBIS have reported 15 more red-listed and 15 amber listed birds, as shown in Figure 3B, all of which have populations that could be affected by this scheme.

The UK started its heritage of protected natural areas two centuries ago [Hayhow, et al. 2019] and we have a long history of caring for the natural world. The issue is that this has been reduced to fragments scattered around our country. Let us make a stand to do whatever it takes to leave them untouched, because we have traded enough of it already.

The risk of allowing this scheme to continue is to add one more cut to the thousands which have eroded the natural world away.

### Suffolk Energy Action Solutions (SEAS)

The SEAS Campaign was founded in August 2019. Its aim is to put forward alternative solutions for a national offshore transmission infrastructure – focusing on reducing environmental damage while providing cheaper wind power and reduced disruption to the local community and tourism.

More info at <https://www.suffolkenergyactionsolutions.co.uk/>

### About the Author

I am a Zoology graduate, just about to start a Masters in London while working to map the seaweed communities off the Sussex coast. I know Suffolk as a second home, and my inspiration for Zoology was very much born from watching the Suffolk wildlife.

I care deeply for the natural world and I find its steady degradation distressing, so when I learned of the construction of a cable where I saw my first turtle dove I couldn't let it lie and contacted SEAS asking to help.

This report is my current personal opinion, based on my own understanding of ecology and the references below.

### Acknowledgements

My thanks to Suffolk Biodiversity Information Service for providing me with the data on local species, and to those friends who assisted me in references and editing.



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**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

**PINS Ref: EN020078**

**Written Representation on  
THORPENESS CLIFFS and  
CORALLINE CRAG**

**by**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

**Unique Ref. No. EA2: 2002 4496**



[info@suffolkenergyactionsolutions.co.uk](mailto:info@suffolkenergyactionsolutions.co.uk)

<https://www.suffolkenergyactionsolutions.co.uk/>

## **Thorpeness, Cliffs and Coralline Crag Submission**

### **1. Summary**

1.1 As a seaside village situated just south of Sizewell, Thorpeness, like Aldeburgh, relies heavily on tourism as its primary income source. The Applicant plans to use the coastline at Thorpe Ness, immediately north of Thorpeness and just south of Sizewell, (Appendix 1) as a landfall site where the offshore export cables make contact with land and connect to the onshore cables that lead, via cable trench, to the Friston Substations. The Applicant's proposals, as laid out in Appendix 4.6 Coastal Processes and Landfall Site Selection, EA2 Chapter 18 Ground Conditions and Contamination, and Development of our Plans Update, fall short in the following ways:

1.1.1 Impact on Residents, Tourists and Sizewell Projects

1.1.2 Coralline Crag Risks

1.1.3 Lack of Diligence and Insufficient Response to EDF's Concerns

1.2 The most recent evidence made available by the Applicant (Development of our Plans<sup>1</sup>) was published in August 2019. As a result, the Applicant appears not to have publicly taken into account EDF's comments the EA1N and EA2 DCO (published in January 2020<sup>2</sup>) regarding emergency planning and the potential damage to the Coralline Crag. As the EDF Energy Nuclear Generation Ltd's Written Submission states, "it is likely that construction of EA1N and EA2 would coincide not only with the operation of SZB but also the construction phase of SZC". It is, therefore, the view of SEAS that the Applicant has demonstrated an insufficient consideration of the cumulative impact of the EA1N and EA2 proposals and as such it cannot be accepted that the negative impacts of the plans are outweighed by any benefits.

### **2. Impact on Residents, Tourists and Sizewell Projects**

2.1 Like Aldeburgh, the seaside village of Thorpeness relies heavily on tourism to support the local economy. The town's population increases from around 400 in the winter to over 1,600 in the summer holiday season<sup>3</sup>, a holidaying surplus made up mostly of families and eco-tourists.<sup>4</sup>

2.2 In the Development of Our Plans (DOP) document the Applicant appears to take into consideration the need for Thorpeness to be as unaffected as possible by the

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<sup>1</sup> [https://www.scottishpowerrenewables.com/userfiles/file/EA2\\_EA1N\\_Development\\_of\\_our\\_Plans\\_-\\_Phase\\_2\\_Update\\_Aug\\_2019.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EA2_EA1N_Development_of_our_Plans_-_Phase_2_Update_Aug_2019.pdf)

<sup>2</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-one-north-offshore-windfarm/?ipcsection=relreps&relrep=38747>

<sup>3</sup> <https://en.wikipedia.org/wiki/Thorpeness>

<sup>4</sup> <https://www.thesuffolkcoast.co.uk/shares/24092019183416-Economic-Impact-of-Tourism---East-Suffolk-Report-2018.pdf>



works carried out at the landfall site; the duration of the “construction programme at the Landfall (Thorpeness) [has been reduced] from 20 months to 12 months.”<sup>5</sup>

- 2.3 What is unclear however is how eight months of construction at a site as important as the landfall zone can be removed with no explanation and therefore prompts the question of why 20 months was indicated in previous iterations of the consultation phases.
- 2.4 Additionally, while a reduced duration of construction is preferable, no report seems to indicate how an entire year’s worth of potential tourism decline (as the area will undoubtedly be more unattractive due to construction noise, vehicles and activity) will be mitigated.
- 2.5 A decline in tourist footfall, whether it be day-trippers or holiday-home owners, would have a major knock-on effect on the local economy and the Applicant has not demonstrated how that negative impact would be compensated for.
- 2.6 While the question of livelihoods may not be of chief importance in terms of the Applicant’s impact assessments, the lives of the individuals in EDF’s Emergency Planning Zone should be.
- 2.7 The DOP document reveals that the Applicant no longer plans to use the B1353 to access the landfall site.<sup>6</sup> However, this means that use of the Sizewell Gap Road will likely be increased – although it is impossible to be sure as the DOP only notes that the Applicant will no longer use the B1353 and gives no detail on the alternative route now being proposed.
- 2.8 In their Written Representation from January 2020, EDF Energy Nuclear Generation Ltd (NGL) makes the following very important request:
- 2.8.1 *“Sizewell Gap Road and SZB Sizewell Gap Road is the access road to SZB nuclear power station for staff and forms the principal emergency access route for emergency services and for mobilisation of assets from the Emergency Response Centre at the railhead in Leiston. Any development making use of Sizewell Gap Road needs therefore to demonstrate that it will not compromise the safe operation of current and future nuclear power generation at Sizewell. This will require careful investigation and NGL approval of the detailed design and implementation of the SPR proposals once these become available. We will therefore need a Protective Provision in this respect. Emergency Planning As operator of SZB nuclear power station NGL has responsibilities for emergency planning under the Nuclear Site Licence conditions attached to SZB. NGL has to be sure that any development within the emergency planning zone can be accommodated within the off-site emergency plan. Part of the EA1 North and EA2 onshore proposals fall within the Sizewell Emergency Planning Zone, within which the needs of staff, visitors and residents must be addressed from an emergency planning point of view. NGL has discussed this matter with SPR and is happy to continue to share the expertise of its emergency planning team. Operational Impact on Sizewell B Station NGL needs at all times to be able to*

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<sup>5</sup> [https://www.scottishpowerrenewables.com/pages/developing\\_our\\_plans.aspx](https://www.scottishpowerrenewables.com/pages/developing_our_plans.aspx) (Construction Timings)

<sup>6</sup> [https://www.scottishpowerrenewables.com/userfiles/file/EA2\\_EA1N\\_Development\\_of\\_our\\_Plans\\_-\\_Phase\\_2\\_Update\\_Aug\\_2019.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EA2_EA1N_Development_of_our_Plans_-_Phase_2_Update_Aug_2019.pdf) (p22)

*demonstrate ongoing compliance with the provisions of the Nuclear Site Licence for SZB. It is of crucial importance that SPR has regard to this requirement in their promotion of EA1 North and EA2 through the DCO process.”*

- 2.9 That EDF NGL should feel the need, at this late stage in the process, to remind the Applicant of its obligations with regards to the safety of individuals involved in the Sizewell projects bespeaks an approach that is primarily focussed on the Applicant’s own proposals and which considers cumulative impact second and only when prompted.

### 3. Coralline Crag Risks

- 3.1 At times, EA2 Chapter 4: Site Selection Assessment of Alternatives is unclear with regards to the issue of the viability of Horizontal Directional Drilling (HDD). HDD is a minimal impact trenchless method of installing underground cables in a relatively shallow arc or radius along a prescribed underground path using a surface-launched drilling rig<sup>7</sup>. As such, HDD is accepted to be preferred to trenching which has a more damaging impact on the surrounding area.
- 3.2 Even with HDD being the primary method for cable delivery at the landfall site, the nature of the Coralline Crag is problematic, as the Applicant notes. The Coralline Crag Formation is a series of marine deposits characterised by bryozoan and mollusc debris and whose onshore occurrence is restricted almost entirely to the area around Aldeburgh and Thorpeness. The Applicant acknowledges that it is an *“important geological formation”* (4.7.4.2.2 Refinements to the Approach to Landfall, section 73).
- 3.3 This formation is a very significant geological feature of the Suffolk coast and needs protection as
- 3.3.1 The cliffs formed by it are fragile and at risk of collapse if disturbed
  - 3.3.2 The Applicant has stated in its documentation that *“this offshore exposure of rock underpins coastal processes along this section of the coastline which are critical to the water cooling processes for Sizewell B”* (4.7.4.2.2 Refinements to the Approach to Landfall, section 73).
- 3.4 The Applicant suggests that the cliffs in question will be avoided by the HDD by for installing the offshore export cable is to HDD from the onshore landfall location to the south of the Coralline Crag which appears to only refer to the exposed Coralline Crag offshore.
- 3.5 As Robin Sanders, retired consultant geologist and geotechnical engineer, points out, the Applicant’s HDD suggestion outlined above ignores the fact that the Coralline Crag extends well south and east of its surface/subsea exposure.<sup>8</sup>
- 3.5.1 With respect to offshore cabling works *“the preferred routeing option would be to the south of the exposed Coralline Crag”* (4.7.4.2.2 Refinements to the Approach to Landfall, section 75), but then state elsewhere *“this may also*

<sup>7</sup> [https://en.wikipedia.org/wiki/Directional\\_boring](https://en.wikipedia.org/wiki/Directional_boring)

<sup>8</sup> <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>



- include HDD under a small section of the southern extent of the Coralline Crag*". (4.7.4.2.2 Identification of offshore Cable Corridor Landfall Routeing Options, section 89).
- 3.5.2 It appears that the Applicant assumes that Coralline Crag is only present where it is exposed which is a fallacy. It may well lie under a thin cover of sand, but it has not undertaken studies to examine this.
- 3.6 In addition to uncertainty around whether the Coralline Crag will be exposed to HDD or not, the language used leaves the plans far too open to interpretation and are not transparent enough.
- 3.7 This kind of ambiguity is seen again with regards to mitigation promises that justify the landfall site choice and the use of HDD:
- 3.7.1 *"There is potential to avoid amenity impacts associated with access to, and walks along, the beach through the use of HDD"* (4.8.3 Onshore Landfall Refined Area of Search, section 92).
- 3.8 'Potential to avoid impacts' fails to provide sufficient explanation of how this 'potential' will be reached.
- 3.9 In their Written Submission, EDF NGL express the following concerns:
- 3.9.1 *"The SPR cable corridor includes within it the majority of the Coralline Crag formation (calcareous sand rock outcrops). In relation to the continued safe operation of SZB, NGL are particularly concerned that the protection afforded to the Sizewell shore by the Coralline Crag between Sizewell and Thorpeness should not be compromised. SPR have been made aware by NGL of the need to avoid potential disturbance to the Coralline Crag and associated seabed morphologies when considering actual cable routes, cable laying methodologies and subsequent maintenance requirements. Protective Provisions should be included in the SPR DCO to ensure that, after SPR have carried out their detailed pre-construction surveys to determine the southern extent of the Coralline Crag formation, this is achieved in practice."*
- 3.10 To date, the Applicant has not provided satisfactory evidence to EDF NGL that the shoreline cliffs and offshore Coralline Crag, between Sizewell and Thorpeness, will be appropriately protected.
- 3.11 The Coralline Crag extends beyond the near shore exposed section shown on Figure 6.1 of Appendix 4.6 to Volume 3 of the Environmental Statement and EDF surveys for Sizewell C in Book 6 Volume 2 Chapter 23 Marine Historic Environment Appendices 23A to 23C of the Sizewell C DCO documentation indicate the sand cover is low. The Applicant has not undertaken studies to examine this aspect and whether its trenching will impact on the Coralline Crag in this area. Thus, the conclusion can be drawn that the Applicant has not performed sufficient diligence in its assessment of the geological and seabed features that its landfall and marine construction will affect.

#### **4. Lack of Diligence and Insufficient Response to EDF's Concerns**



- 4.1 Another cause for concern is the Applicant's over-reliance on desk-based assessment (DBA). The study to investigate construction methodologies that avoid impact on the Coralline Crag was not only based on evidence provided by EDF (and thus, imply a lack of data-collection rigour on the part of the Applicant) but was also drawn up exclusively off-site.<sup>9</sup> DBAs are not enough to demonstrate a genuine, diligent approach to the project and assessment of its impacts.
- 4.2 There appear to be no Physical Surveys on coastal erosion carried out by the Applicant and the data relied upon is often out of date.
- 4.3 Examples of the evidence used in DBAs for Appendix 4.6 (Coastal Processes and Landfall Site Selection) include:
- 4.3.1 *Lees, B.J and Heathershaw, A.D. 1981. Sizewell Dunwich Banks Field Study Topic. Report 5: Offshore sediment movement and its relation to observed tidal current and wave data. IOS Report No. 123.*
- 4.3.2 *Pye, K. P and Blott, S. 2005. Coastal Processes and Morphological Evolution of the Minsmere Reserve and Surrounding Area, Suffolk. Report prepared for RSPB (East Anglia Office). February 2005. External Research report ER511.*
- 4.3.3 *Royal HaskoningDHV, 2010. Suffolk Shoreline Management Plan 2 (SMP2). Suffolk Coastal District Council, Waveney District Council and Environment Agency.*
- 4.4 The most recent surveys cited are a decade out of date. With a landscape that changes on a weekly basis, referring to a study conducted in 1981 to inform a desk-based assessment could be considered ignorant of the reality of the area.
- 4.5 Despite requests from East Suffolk Council for the developer to undertake a coastal erosion risk assessment for the potential cable landing frontage to ensure that the cable landing works are not affected by foreseeable erosion over the planned operational life, no such assessment seems to have materialised.
- 4.6 A lack of in-person analysis might explain other inconsistencies. The Applicant describes the shoreline in the Thorpeness area in the following terms:
- 4.6.1 *"...beyond the shoreline position of the ness, the backshore berm decreases rapidly in width and the cliff is steep and **slowly eroding** (author's emphasis)."*<sup>10</sup>
- 4.7 This conclusion is at odds with the findings of Karen Thomas, head of Coastal Partnership East, who says "Suffolk has some of Europe's fastest eroding coastline along with Lincolnshire."<sup>11</sup>
- 4.8 EDF's research may not be wholly accurate and so the Applicant could be basing its findings on equivocal claims. The landfall site has been deemed appropriate because of EDF's data but a report<sup>12</sup> by Nick Scarr of the Nuclear Consulting Group suggests otherwise. The following extract is from an article published in The Times newspaper
- 4.8.1 *"Sizewell C is in a "dangerous location". Or so says Nick Scarr from the Nuclear Consulting Group, a collection of academics and experts. The consulting engineer has examined the plans from France's EDF and CGN to*

<sup>9</sup> Ibid, 4.7.4.2.2 Refinements to the Approach to Landfall, section 74

<sup>10</sup> 6.3.4.6 EA2 ES Appendix 4.6 Coastal Processes and Landfall Site Selection, p7-8

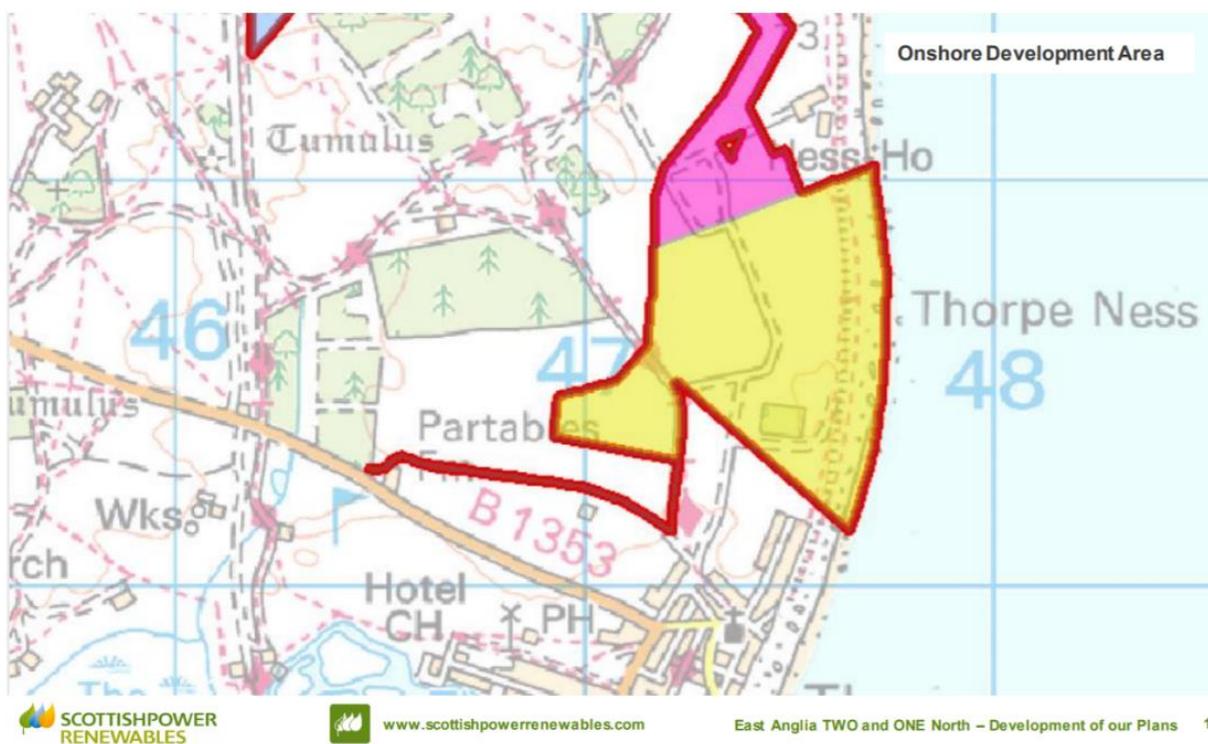
<sup>11</sup> <https://www.eadt.co.uk/news/suffolk-coast-eroding-quickly-1-6271258>

<sup>12</sup> <https://www.nuclearconsult.com/wp/wp-content/uploads/2020/04/Sizewell-C-%E2%80%93-The-environment-coastal-morphology-and-climate-change-a-2020-perspective-5.pdf>

*build the 3,200MW nuke on the Suffolk coast from the perspective of coastal erosion and climate change. And, assuming he's right, his paper is alarming — unless you're relaxed about the risk of the plant being encircled by sea. Mr Scarr takes issue with EDF claims that it will be effectively protected by the offshore Sizewell-Dunwich bank and a coralline crag, so creating a "natural wave break."<sup>13</sup>*

4.9 If it can be considered that Sizewell C's proposed site is 'dangerous' and the Applicant is basing its conclusions on EDF's findings, how can the Applicant's plans be taken at face-value? At best it seems that conflicting assessments of suitability point to an urgent need for further investigation.

## Appendix 1 – Landfall and onshore development site, to be under construction for 12 months



Researched by Glynis Robertson

Compiled by Georgina King

<sup>13</sup> <https://www.thetimes.co.uk/article/8187240a-aa82-11ea-ade7962e28cd764?shareToken=c2ea06b147f6a6f1fb39e1e2abd0ffd2>



We are in no way geophysicists or engineer specialists. The evidence and content have been collated and formatted to the best of our abilities, and we make no claim to be specialists in this field.



**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

**PINS Ref: EN020078**

**Written Representation on  
AIR QUALITY and TRAFFIC**

**by**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

**Unique Ref. No. EA2: 2002 4496**



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**[Preface: I, the author, am in no way an air quality or traffic expert. The evidence and content below have been collated and formatted to the best of my abilities, but I make no claim to be an expert in this field]**

## **Air Quality, Traffic and Transport Submission**

### **1. Summary**

- 1.1 Scottish Power Renewables (hereinafter the Applicant) proposes to make use of the A1094 until Blackheath Corner (B1069 junction) for the movement of their construction vehicles including HGVs and AILs (Abnormal Indivisible Loads) to access the substation site in Friston. Twelve to fifteen years of construction work will alter the essential rural character of this region permanently, not temporarily, making it a semi-industrial zone and causing a significant threat to local health in the process.
- 1.2 It is important to note that the Applicant's plans and findings cannot be considered in isolation as they do not take into account the cumulative upheaval and industrialising impact of the following energy projects: Nautilus, Eurolink, Greater Gabbard Windfarm Extension, Galloper Windfarm Extension, SCD1, SCD2, and the relocation of Sizewell B, the decommissioning of Sizewell A and the upgrading of the overhead lines and pylons.
- 1.3 The added volume of traffic along the A1094, the exclusive arterial road for all traffic accessing Aldeburgh and other villages along the road, will cause the most significant issues in the following three main areas:
  - 1.3.1 Modifications to the inadequate infrastructure of the chosen road,
  - 1.3.2 Delays in emergency service response times,
  - 1.3.3 Unacceptable impact on air quality.
- 1.4 Due to the endemically high levels of tropospheric ozone in the district, the Applicant's proposals present a huge threat to the neurological health of the aging population and to the cardiovascular welfare of children. This is truly a matter of life and death and as such, no conceivable benefits of the chosen site at Friston can outweigh the adverse impacts on the health of the district's population.

### **2. Inadequate infrastructure of A1094**

- 2.1 The A1094 is the main arterial road for all traffic heading towards Aldeburgh from the A12 and has an annual average daily traffic flow of 8,082 vehicles<sup>1</sup>.

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<sup>1</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001378-6.1.26%20EAIN%20Environmental%20Statement%20Chapter%2026%20Traffic%20and%20Transport.pdf> (Table 26.23, p56)



Comprised in that figure is all the emergency service, agricultural, school and commuter vehicles that rely on the road for access to the A12. Of course, the number of cyclists – whose presence is a constant reality and potential hazard for road users, tractor and car drivers alike – is not included in that figure.

(Appendices 4 and 5)

2.2 Up until Blackheath corner the A1094 is a zone distributor route<sup>2</sup>. This means it is a road within a zone serving as a route directly to a location or as a route to local access routes. It is, therefore, already a saturated HGV and lorry route before you accommodate any increase, purely as a result of it being the only A road leading to and from the A12.

2.3 The A12 junction at Benhall is considered an accident risk and is protected by a 50 miles per hour speed limit and static speed camera<sup>3</sup>. On 10<sup>th</sup> August 2020 fire crews had to free a person from a car after a crash on the A12<sup>4</sup>.

2.4 The A12 is identified in the Applicant's Traffic and Transport proposals as being physically unsuitable for the kind of increase in industrial traffic, including HGVs and AILs, and in a number of areas compulsory purchase of land on either side of the road will be needed in order to fundamentally adjust the nature of the road<sup>5</sup>. The document also highlights what these "temporary modifications" would look like:

*"Table 26.2 identifies the location of temporary highway alterations and provides an indication of what these alterations could comprises of."*<sup>6</sup> (Copied verbatim from Chapter 26, p7)

2.5 The applicant considers the issue of Marlesford Bridge (A12), (located next to the Marlesford Mill antiques shop on the A12 between the Wickham Market Bypass and Little Glemham) noting that "potential structural alterations" to the existing bridge would be needed to facilitate movements of AILs (Abnormal Indivisible Loads) over the bridge<sup>7</sup>. It does not however cover the issue of either the Victorian railway bridge between Friday Street and Snape Watering or the bridge in Snape Watering itself, nor does it provide detail of how the Applicant plans to compulsorily purchase the air either side of the bridge for widening purposes or if it plans to reconstruct the whole structure and in doing so cause major disruption to both road and rail traffic alike. Suffolk County Council are currently experiencing an inspection backlog and it has been recorded that around a third of structures across the County may be in need of maintenance and could be considered unsafe and potentially unsuitable to accommodate the forecast additional traffic.<sup>8</sup>

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<sup>2</sup> <https://www.suffolk.gov.uk/assets/Roads-and-transport/lorry-management/Lorry-Route-Map-Amended-MAY-17.pdf>

<sup>3</sup> [https://en.wikipedia.org/wiki/A1094\\_road](https://en.wikipedia.org/wiki/A1094_road)

<sup>4</sup> <https://www.eadt.co.uk/news/friday-street-junction-two-vehicle-crash-1-6786020>

<sup>5</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001378-6.1.26%20EAIN%20Environmental%20Statement%20Chapter%2026%20Traffic%20and%20Transport.pdf> (p6)

<sup>6</sup> Ibid., p7

<sup>7</sup> Ibid., p7

<sup>8</sup> Amann, S. (2019) 'SPR Substation and Cable Route Friston', *Stage One Transport Review*, p6

- 2.6 Great Glemham Parish council responded to the Applicant's proposals by saying that because of bad infrastructure from a lack of investment, the A12 is "not fit for purpose".<sup>9</sup> Saxmundham Parish Council said that the combination of an access route using the A12 and the A1094 will be "hell on earth".<sup>10</sup>
- 2.7 The Applicant estimates that with their additional vehicle movements along the A1094 there will be an increase of 49% in the daily movements along the road<sup>11</sup>. When calculated in conjunction with EDF's projections for Sizewell C's construction vehicle traffic (1.5 times daily figures for HGV movements, in other words a 50% increase) this takes the daily figure of vehicle movements from 420 to 835. This signifies a 99% increase as a conservative estimate as it does not take into account EDF's other vehicles<sup>12</sup>. "At peak construction," in the words of Richard Cooper, the lead for Marlesford on Sizewell C issues, "the cumulative impact is likely to be an extra vehicle every 30 seconds using the A12 through Marlesford – it will have severe impacts on our everyday use of the main road."<sup>13</sup>
- 2.8 This means that, according to the Guidelines for Environmental Assessment of Road Traffic (GEART) threshold qualifications on which the Applicant is basing its traffic impact, the increase goes from being 'slight' to 'significant'. If the Applicant's proposals are intended to be taken in isolation, it suggests that the possibility of other energy infrastructure projects taking place in the area are not taken into account and therefore the data SPR is working from is inaccurate and based on a scenario in which only their application is successful.
- 2.9 However, a review carried out by Steve Amann of Journey Transport Planning in July 2019 reports that the GEART methodology on which SPR rely in their Traffic and Transport review are considered to be:
- 2.9.1 "Somewhat dated and have been superseded by more up to date environmental analysis process which are embodied in the Transport Analysis Guidance tools development by the Department of Transport"

And to:

- 2.9.2. "Take a very broad approach to identifying the environmental impact of traffic and as such is likely to lead to the discounting of potentially significant impacts at an early stage of the process"<sup>14</sup>
- 2.10. Amann's report finds the use of an appraisal methodology such as GEART that discounts the significance of development impacts where traffic increases of below 30% when considered in terms of the effects of severance and pedestrian and cycle amenity is inappropriate as it fails to acknowledge the recognised consequences of road traffic on sensitive environmental receptors and also the

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<sup>9</sup> <https://www.eastsuffolk.gov.uk/assets/Planning/Sizewell/Community-Engagement/Stage-4-Ufford-Park/03-In-relation-to-your-town-and-parish-what-do-you-think-of-the-transport-strategies-now-being-presented-rail-led-integrated-road-led.pdf>

<sup>10</sup> Ibid.

<sup>11</sup> Ibid., p56

<sup>12</sup> [https://www.edfenergy.com/sites/default/files/edf-szc4-sumdoc\\_digital\\_compressed.pdf](https://www.edfenergy.com/sites/default/files/edf-szc4-sumdoc_digital_compressed.pdf) (p9)

<sup>13</sup> <https://www.eadt.co.uk/news/marlesford-little-glemham-sizewell-c-bypass-bid-1-6819393>

<sup>14</sup> Amann, S. (2019) 'SPR Substation and Cable Route Friston', *Stage One Transport Review*, p4

need to support sustainable travel modes such as walking and cycling. Environmental conditions are dynamic in nature and human activity has been shown to sometimes become only evident many years later.

- 2.11. “In consideration of the foregoing,” Amann’s review says, “it is considered that the GEART methodology is not an appropriate tool for defining the significance of impacts at this stage as it is likely to result in significant impacts being discounted at the very start of the process. It is also considered that the GEART methodology is no longer aligned with the aims and objectives of the National Planning Policy Framework as it applies to sustainable development and as such is not considered to form a suitable basis for a robust environmental impact assessment.”<sup>15</sup>
- 2.12. Thus, even though the Applicant’s forecasted increase of all vehicle movements on the B1069 from the A1094 to south of Knodishall / Coldfair Green is calculated to be an increase of 109% according to the GEART methodology – evidently above the ‘significant’ threshold – this major increase may still underestimate the adverse environmental effects.
- 2.13. This increase in construction traffic clogging the local road systems (which will be considerably greater when overlapped with other energy projects<sup>16</sup>), along with the impact of the industrialisation of the area will alter the fundamental rural nature of the district to the extent that it will have a devastating effect on the tourism industry upon which so much local business depends. Coastal Suffolk will cease to be attractive to the tourists that usually keep it financially afloat. That said, it is not just the livelihoods but the lives of the people who live in the area that are at risk.

### 3. Delays for Emergency Services

- 3.1 Concerns have been raised surrounding the increased response time of emergency services due to extra traffic along the A12/A1094 from the multiple energy infrastructure projects that plan to use this road until 2035. A Police Constable (who wishes to remain anonymous) currently employed by Suffolk Constabulary was quoted to have said in September 2020 that reaching emergencies ‘is bad enough already’ because of the volume of traffic already on the roads.
- 3.2 The Applicant dedicates a short section to consider delays in the Traffic and Transport document, noting that at hazardous junctions such as the A12/A1094 and the A1094/B1069, the addition of just the EA1N traffic, ignoring the cumulative impact of EDF’s and others’ construction traffic<sup>17</sup> would mean “the junction would be operating close to capacity with potentially significant changes

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<sup>15</sup> Ibid., p4

<sup>16</sup> Nautilus, Eurolink, Greater Gabbard Windfarm Extension, Galloper Windfarm Extension, SCD1, SCD2, Relocation of Sizewell B

<sup>17</sup> Ibid.

in delays and therefore the magnitude of change is assessed as high<sup>18</sup>. The magnitude of change of additional and concurrent traffic for other projects can therefore only be assessed as extremely high. The question of saturated junctions is not merely one of delayed commuters and school buses but one of life and death.

- 3.3 Emergency services in the area already fail to meet the NHS target response time introduced in 2017 (from ambulance departure to arrival) of 8 minutes.<sup>19</sup> On average, it takes more than 25 minutes for paramedics to respond to the most serious emergencies in the Aldeburgh, Leiston, Saxmundham, Halesworth, Stradbroke and Eye areas. The slowest times recorded are for Aldeburgh, the end destination of the A1094, which has an average response of 29.46 minutes.<sup>20</sup> Increase in traffic volume will only make this worse.
- 3.4 Tim Beech, a local retired PC, is quoted to have “concerns about the impact on response times both for the village of Snape but also other communities which are accessed along the A12/ A1094/ B1069. Anyone living here knows from the frequency of the sirens the regular nature of the emergency calls”.
- 3.5 Detective Chief Superintendent David Cutler of Suffolk Constabulary refers in a written submission regarding the Sizewell C Project to the “substantial traffic changes, which SC (Suffolk Constabulary) will need to help manage to protect road safety and the functioning of the transport network. This includes a requirement for SC to escort significant volumes of abnormal indivisible loads (AILs) safely and timeously to facilitate the efficient construction of SZC. Other construction traffic impacts and proposed road infrastructure works are also likely to result in changes in use of the transport network road safety and increased emergency response times.”<sup>21</sup>
- 3.6 Simply put, there will be substantial changes in emergency and civil contingency planning, preparedness, and response requirements. All the above needs placing in the context of multiple infrastructure projects increasing traffic volume along the Suffolk roads. The highway infrastructure along the A1094 and the tributary roads it feeds cannot withstand the increase in traffic flows – in some senses in terms of physical limitations – and the lives of the local population should not have to be at an increased risk because emergency services cannot reach patients in time.
- 3.7 When it comes to emergency services, no delay is ‘indiscernible’ or ‘negligible’.<sup>22</sup> (Chapter 26, Traffic and Transport, p74-5)

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<sup>18</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001378-6.1.26%20EAIN%20Environmental%20Statement%20Chapter%2026%20Traffic%20and%20Transport.pdf> (p74-5)

<sup>19</sup> <https://www.england.nhs.uk/wp-content/uploads/2017/07/new-ambulance-standards-easy-read.pdf> (p3)

<sup>20</sup> <https://www.eadt.co.uk/news/ambulance-response-time-figures-rank-aldeburgh-saxmundham-leiston-and-halesworth-among-worst-ten-postcodes-l-4840830#:~:text=On%20average%2C%20it%20took%20more,average%20response%20of%2029.46%20minutes.>

<sup>21</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/?ipcsection=relreps&relrep=41282>

<sup>22</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001378-6.1.26%20EAIN%20Environmental%20Statement%20Chapter%2026%20Traffic%20and%20Transport.pdf> (p74-5)

## 4. Air Quality and Pollution

- 4.1 More than 600 deaths across Suffolk and north Essex have been attributed to poor air quality.<sup>23</sup> Penny Woods, chief executive of The British Lung Foundation, has said air pollution was linked to “over 1,000 deaths across Suffolk and Essex alone”. According to the Department for Environment, Food and Rural Affairs (Defra) the Eastern region is among 38 of the UK’s 43 air quality zones which are currently breaching EU limits.<sup>24</sup> The region has a life-threatening problem with air quality as it currently stands.
- 4.2 People most at risk from breathing air containing methane, nitrogen oxides, and other gases emitted from traffic and industry, include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.<sup>25</sup> The outdoor-working industry is substantial in Suffolk as the county relies heavily on its agricultural output, specifically the rearing of livestock.<sup>26</sup>
- 4.3 Alongside active, outdoor workers accounting for a large proportion of the Suffolk population, the Office for National Statistics reported that in April 2020 the demographic makeup of East Suffolk was above average age by comparison to other UK zones. The data shows that 27% of the population of East Suffolk is 65+ and that the most common age in the district was 72.<sup>27</sup> In other words, those at high risk of pulmonary damage are overrepresented in the district.
- 4.4 The people who live in the district suffer from the highest concentration of tropospheric ozone in the UK. ‘Tropospheric’ is the ozone that accumulates at ground level and is a greenhouse gas and air pollutant. Its appearance is prompted by the combination of a range of pollutants including nitrogen oxides (NO<sub>x</sub>) from vehicle and industry emissions, carbon monoxide (CO), methane (CH<sub>4</sub>), and organic compounds (VOCs) emitted by vehicles, solvents and industry. Road traffic is the primary producer of tropospheric ozone precursors.<sup>28</sup> Instead of the landscape leading to lower levels of air pollution, “which is to be expected in an area which is largely rural in nature”<sup>29</sup>, the production of tropospheric ozone is actually exacerbated by sunny weather and rural landscapes.<sup>30</sup> According to King’s College London, south-eastern England has

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<sup>23</sup> <https://www.eadt.co.uk/news/hundreds-dying-because-of-air-pollution-in-suffolk-and-essex-1-4539239>

<sup>24</sup> Ibid.

<sup>25</sup> <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#:~:text=Breathing%20ozone%20can%20trigger%20a.leading%20to%20increased%20medical%20care%20.>

<sup>26</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/658091/defra-stats-foodfarm-landuselivestock-june-results-aonb-series-09nov17.xls](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/658091/defra-stats-foodfarm-landuselivestock-june-results-aonb-series-09nov17.xls)

<sup>27</sup> <https://www.ons.gov.uk/file?uri=%2fpeoplepopulationandcommunity%2fpopulationandmigration%2fpopulationestimates%2fdatasets%2fpopulationestimatesforukenglandandwalescotlandandnorthernireland%2fmid2019april2020localauthoritydistrictcodes/ukmidyearestimates20192020ladcodes.xls>

<sup>28</sup> <https://www.environment.brussels/state-environment/summary-report-2011-2012/air/emissions-ozone-precursors-nox-vocs-co-and-ch4> (p30)

<sup>29</sup> [https://www.scottishpowerrenewables.com/userfiles/file/EAIN\\_PEI\\_Chapter\\_19\\_Air\\_Quality.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EAIN_PEI_Chapter_19_Air_Quality.pdf)

<sup>30</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4996129/#R31>

the highest concentration of ozone in the UK, with rural areas faring the worst, because other pollutants prevalent in more urban areas tend to “mop up” ground level ozone<sup>31</sup>

- 4.5 Ground-level ozone is not only a threat to lung and cardiovascular health. Evidence revealed in a report published in 2018 points to an association of airborne pollutant exposure with respiratory, cardiovascular, and neurological pathology. In other words, breathing in tropospheric ozone can lead to accelerated cognitive decline.<sup>32</sup> This is, of course, very dangerous considering the average age bracket of those living in Suffolk.
- 4.6 Data from Sibton, DEFRA’s only monitoring station in east Suffolk (6 miles from the A12/A1094 junction), reveal that ozone pollution levels here have already exceeded the UK government’s target maximum (100  $\mu\text{g}\text{m}^{-3}$  maximum 8-hour mean) on 37 occasions year to date (Jan - 23 Sept, 2020), including for an extended 10 day period in August. This is despite a general reduction in UK and European air pollution as a result of reduced economic and social activity due to the coronavirus pandemic<sup>33</sup>.
- 4.7 As the UK air quality objectives state a maximum of 10 times per year, this rate represents a 370% increase on the maximum level of acceptable pollution<sup>34</sup>. In a ‘normal’ year these figures could be expected to be much higher. Measurements on 1/8/20 were 195  $\mu\text{g}\text{m}^{-3}$  – nearly twice the defined threshold set out in the UK air quality objectives (Appendix 1). The highest recording for ozone pollution in 2020 so far (January to mid-September) which was taken at Sibton (6 miles from the A1094 / A12 junction) was also the highest recording of O<sub>3</sub> pollution in the whole of the UK<sup>35</sup> (Appendix 2).
- 4.8 A European Environment Agency report states that HGVs are a major factor in air pollution in Europe, as most run on diesel which causes more air pollution per kilometre than other fuels such as petrol. According to the EEA, HGVs are responsible for 40-50% of nitrogen oxide (NOx) pollution from road transport in EEA member countries<sup>36</sup>. In 2017 60% of diesel use for road transport in the UK came from industry.<sup>37</sup> More than 99 per cent of lorries currently run on diesel because of its fuel efficiency.<sup>38</sup> According to the World Health Organisation (WHO), diesel exhaust is a Group 1 carcinogen and diesel machines account for 12% of nitrogen dioxide (NOx) emissions and 15% of fine particles from land-based sources<sup>39</sup>.
- 4.9 What we are seeing is that HGVs and industry emissions are the main contributors to tropospheric ozone precursors. Diesel particulate matter (DPM), sometimes also called diesel exhaust particles (DEP), is the particulate component of diesel exhaust, which includes

<sup>31</sup> <https://www.eadt.co.uk/news/hundreds-dying-because-of-air-pollution-in-suffolk-and-essex-1-4539239>

<sup>32</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5755393/>

<sup>33</sup> DEFRA daily AQB bulletin (<https://uk-air.defra.gov.uk/subscribe>)

<sup>34</sup> [https://uk-air.defra.gov.uk/assets/documents/Air\\_Quality\\_Objectives\\_Update.pdf](https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf)

<sup>35</sup> 1/8 am 195  $\mu\text{g}\text{m}^{-3}$  (High level 8), DEFRA daily AQB bulletin (<https://uk-air.defra.gov.uk/subscribe>)

<sup>36</sup> [file:///C:/Users/geeps/Downloads/EEA-Report\\_9-2013\\_Air-quality\\_in\\_Europe.pdf](file:///C:/Users/geeps/Downloads/EEA-Report_9-2013_Air-quality_in_Europe.pdf)

<sup>37</sup> <https://www.ons.gov.uk/economy/environmentalaccounts/articles/roadtransportandairremissions/2019-09-16>

<sup>38</sup> <https://www.ft.com/content/910be246-6058-11e9-a27a-fdd51850994c>

<sup>39</sup> [https://www.iarc.fr/wp-content/uploads/2018/07/pr213\\_E.pdf](https://www.iarc.fr/wp-content/uploads/2018/07/pr213_E.pdf)

diesel soot and aerosols such as ash particulates, metallic abrasion particles, sulphates, and silicates.<sup>40</sup>

- 5.10 While the Applicant's air quality report refers to the production of NO<sub>2</sub> derived from construction traffic (Table 19.5)<sup>41</sup> and admits that construction traffic emissions "have the potential to impact upon local air quality at sensitive receptors situated adjacent to the routes utilised by construction vehicles"<sup>42</sup>, the levels of emissions produced are not referenced with regards to their fundamental nature as tropospheric ozone precursors. It is worth noting that the word 'tropospheric' that characterises the major air pollution issue in the district does not appear even once in the Air Quality report.
- 5.11 The DPM that will be produced by construction vehicles along the A1094 will have serious consequences for the lungs of the children who live alongside and use the road. Snape primary school is located 1km off the A1094 while Coldfair Primary School, Leiston Primary School, Alde Valley Academy, and Saxmundham Free School are all within 3 miles of the A1094. In Snape village, the church junction (A1094/B1069) serves as a stop for at least four schools in the area; Ipswich High School, Woodbridge School, Leiston Alde Valley School, and Saxmundham Free School.
- 5.12 Breathing in soot from diesel vehicles damages the lungs as much as smoking a pack of cigarettes a day for fifteen years. The black carbon given off in diesel fumes has been observed causing changes to the blood vessels around the lungs<sup>43</sup>. The approval of the Applicant's plans in addition to the other energy projects would mean potentially 15 years of children breathing in toxic, carcinogenic, lung-damaging particulate matter every morning and every afternoon as they wait for school buses. It is impossible to conceive of the impact on children from the diesel HGV movements along the A1094 as 'negligible'. (Chapter 19, Air Quality, p39-41)
- 5.13 In section 27.6.1.2.1 of the Applicant's Human Health report, health impacts of worsened air quality are considered.<sup>44</sup> The document quantifies the impact on population groups according to proximity and/or sensitivity (as defined in section 27.3.1.2). This assessment fails, however, to consider the children who wait at the school bus stop on the A1094 (Appendix 6) who should, by the logic of the above methodology, be considered a group that fall into both the 'proximity' and 'sensitivity' brackets. This risk to health does not even consider the collision risk associated with school children crossing the A1094 in the lorry path. The adverse impact on the health of children is a form of collateral damage that cannot be tolerated for the sake of substations that need not be built in Friston.
- 5.14 Because of the spread of tropospheric ozone in the district, the choice of specific roads becomes secondary. Any other road used in the network surrounding and leading to Friston, regardless of its suitability in logistical or

<sup>40</sup> [https://en.wikipedia.org/wiki/Diesel\\_exhaust#Health\\_concerns](https://en.wikipedia.org/wiki/Diesel_exhaust#Health_concerns)

<sup>41</sup> [https://www.scottishpowerrenewables.com/userfiles/file/EAIN\\_PEI\\_Chapter\\_19\\_Air\\_Quality.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EAIN_PEI_Chapter_19_Air_Quality.pdf)

<sup>42</sup> Ibid., p31

<sup>43</sup> <https://www.thelondoneconomic.com/lifestyle/health/diesel-exhausts-damage-the-lungs-as-much-as-smoking-a-pack-of-cigarettes-a-day-for-fifteen-years/07/06/#:~:text=Breathing%20in%20soot%20from%20diesel,lungs%20for%20the%20first%20time.>

<sup>44</sup> [https://www.scottishpowerrenewables.com/userfiles/file/EAIN\\_PEI\\_Chapter\\_27\\_Human\\_Health.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EAIN_PEI_Chapter_27_Human_Health.pdf) (p65)

structural terms, will contribute to the appalling levels of tropospheric ozone. The problem is not simply that the A12 / A1094 options are physically not fit for purpose, but that the entire air zone of East Suffolk is inadmissible.

5.15 The Suffolk Coastal First Local Plan (SCDC 2018) contains planning policy and site allocations used to determine planning applications in the district until 2036.<sup>45</sup> In section SCLP9.1: Low Carbon and Renewable Energy, the following requirements are set out:

5.15.1 *“Low Carbon and Renewable Energy Council will support low carbon and renewable energy developments where they are within an area identified as suitable for renewable or low carbon energy or satisfy the following criteria: [...] d) Are complementary of the existing environment without causing any significant adverse impacts, particularly relating to the residential amenity...and air quality, unless those impacts can be appropriately mitigated.”*<sup>46</sup>

5.16 Based on the heightened level of tropospheric ozone due to the increased production of precursors derived from industry and diesel vehicles, it is fair to conclude that the choice of site, i.e. Friston, is not commensurate with the criteria set out in the Low Carbon and Renewable Energy section of the Suffolk Coastal Local Plan, on the basis that the Applicant has not broached the issue of tropospheric ozone and therefore has not explained how “these impacts can be appropriately mitigated”.

5.17 The adverse impact on air quality alone, and by extension on the health of both ends of the local demographic scale, vastly outweigh the benefits of the choice of Friston as the site for the Applicant’s substations. It is vitally important that the health of the children in the district is not sacrificed in the name of green energy.

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<sup>45</sup><https://suffolkcoastallocalplan.inconsult.uk/consult.ti/localplanfinaldraft2019/viewCompoundDoc?docid=10604948&partid=10610868#10610868>

<sup>46</sup> Ibid.



## Appendix 1

Eastern					
SITE	8 Hourly Mean <u>Ozone</u> ( $\mu\text{g m}^{-3}$ )	Hourly Mean <u>Nitrogen dioxide</u> ( $\mu\text{g m}^{-3}$ )	max 15min mean <u>Sulphur dioxide</u> ( $\mu\text{g m}^{-3}$ )	24Hour mean <u>PM<sub>2.5</sub> Particles</u> ( $\mu\text{g m}^{-3}$ )	24Hour mean <u>PM<sub>10</sub> Particles</u> ( $\mu\text{g m}^{-3}$ )
<a href="#">Borehamwood Meadow Park</a>	N/M	34 (Low 1)	N/M	N/M	N/M
<a href="#">Cambridge Roadside</a>	N/M	44 (Low 1)	N/M	N/M	N/M
<a href="#">Luton A505 Roadside</a>	N/M	43 (Low 1)	N/M	N/M	N/M
<a href="#">Norwich Lakenfields</a>	182 (High 7)	28 (Low 1)	N/M	12 (Low 2)	25 (Low 2)
<a href="#">Sandy Roadside</a>	N/M	30 (Low 1)	N/M	23 (Low 2)	37 (Low 3)
<a href="#">Sibton</a>	195 (High 8)	N/M	N/M	N/M	N/M
<a href="#">Southend-on-Sea</a>	141 (Moderate 6)	34 (Low 1)	N/M	14 (Low 2)	28 (Low 2)
<a href="#">St Osyth</a>	186 (High 7)	23 (Low 1)	N/M	N/M	N/M
<a href="#">Stanford-le-Hope Roadside</a>	N/M	55 (Low 1)	N/M	20 (Low 2)	37 (Low 3)
<a href="#">Thurrock</a>	127 (Moderate 5)	32 (Low 1)	3 (Low 1)	N/M	34 (Low 3)
<a href="#">Weybourne</a>	183 (High 7)	N/M	N/M	N/M	N/M
<a href="#">Wicken Fen</a>	161 (High 7)	14 (Low 1)	5 (Low 1)	N/M	N/M

24 hour period up to 8am Sat 1st Aug 2020



## Appendix 2

Eastern					
SITE	8 Hourly Mean <u>Ozone</u> ( $\mu\text{gm}^{-3}$ )	Hourly Mean <u>Nitrogen dioxide</u> ( $\mu\text{gm}^{-3}$ )	max 15min mean <u>Sulphur dioxide</u> ( $\mu\text{gm}^{-3}$ )	24Hour mean <u>PM<sub>2.5</sub> Particles</u> ( $\mu\text{gm}^{-3}$ )	24Hour mean <u>PM<sub>10</sub> Particles</u> ( $\mu\text{gm}^{-3}$ )
<a href="#">Borehamwood Meadow Park</a>	N/M	16 (Low 1)	N/M	N/M	N/M
<a href="#">Cambridge Roadside</a>	N/M	35 (Low 1)	N/M	N/M	N/M
<a href="#">Luton A505 Roadside</a>	N/M	23 (Low 1)	N/M	N/M	N/M
<a href="#">Norwich Lakenfields</a>	182 (High 7)	28 (Low 1)	N/M	12 (Low 2)	25 (Low 2)
<a href="#">Sandy Roadside</a>	N/M	30 (Low 1)	N/M	23 (Low 2)	37 (Low 3)
<a href="#">Sibton</a>	195 (High 8)	N/M	N/M	N/M	N/M
<a href="#">Southend-on-Sea</a>	141 (Moderate 6)	31 (Low 1)	N/M	14 (Low 2)	28 (Low 2)
<a href="#">St Osyth</a>	186 (High 7)	19 (Low 1)	N/M	N/M	N/M
<a href="#">Stanford-le-Hope Roadside</a>	N/M	19 (Low 1)	N/M	20 (Low 2)	37 (Low 3)
<a href="#">Thurrock</a>	127 (Moderate 5)	26 (Low 1)	2 (Low 1)	N/M	34 (Low 3)
<a href="#">Weybourne</a>	183 (High 7)	N/M	N/M	N/M	N/M
<a href="#">Wicken Fen</a>	161 (High 7)	9 (Low 1)	5 (Low 1)	N/M	N/M

24hr period up to 4pm Sat 1<sup>st</sup> Aug 2020



## Appendix 3 – Air quality levels key

Air Pollution Banding	Value	Accompanying health messages for at-risk individuals*	Accompanying health messages for the general population
<u>Low</u>	<u>1-3</u>	<b>Enjoy</b> your usual outdoor activities.	<b>Enjoy</b> your usual outdoor activities.
<u>Moderate</u>	<u>4-6</u>	Adults and children with lung problems, and adults with heart problems, <b>who experience symptoms</b> , should <b>consider reducing</b> strenuous physical activity, particularly outdoors.	<b>Enjoy</b> your usual outdoor activities.
<u>High</u>	<u>7-9</u>	Adults and children with lung problems, and adults with heart problems, should <b>reduce</b> strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Older people should also <b>reduce</b> physical exertion.	Anyone experiencing discomfort such as sore eyes, cough or sore throat should <b>consider reducing</b> activity, particularly outdoors.
<u>Very High</u>	<u>10</u>	Adults and children with lung problems, adults with heart problems, and older people, should <b>avoid</b> strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often.	<b>Reduce</b> physical exertion, particularly outdoors, especially if you experience symptoms such as cough or sore throat.

**Appendix 4 – Average traffic makeup during month of September.  
The A1094 has six farm entrances between the A12 junction and**



**the B1069 junction.**



## Appendix 5



**Appendix 6 – School bus stop and car park, used by at least four schools twice a day during term-time. Many children cross the A1094 at this busy junction.**



**Georgina King**



**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

**PINS Ref: EN020078**

**WRITTEN REPRESENTATION**

**by**

**Aldeburgh Business Association**

**4.4(a) TOURISM & ECONOMIC  
DECLINE**

**via**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

**Unique Ref. No. EA2: 2002 4496**



**[info@suffolkenergyactionsolutions.co.uk](mailto:info@suffolkenergyactionsolutions.co.uk)**

**<https://www.suffolkenergyactionsolutions.co.uk/>**

# ALDEBURGH BUSINESS ASSOCIATION RESPONSE TO SCOTTISH POWER RENEWABLES EAST ANGLIA ONE NORTH AND EAST ANGLIA TWO PROJECTS

## Contents

1. Summary
2. Introduction
3. Tarnishing the AONB 'brand'
4. Challenges to SPR's Chapter 30, Tourism, Recreation and SocioEconomics Environmental Statement Volume 15
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6. Challenges to SPR's Chapter 30, Tourism, Recreation and SocioEconomics Environmental Statement Volume 15
7. Conclusion
8. Case Studies
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## 1. Summary

- 1.1 Aldeburgh Business Association (ABA) represents SMEs (mainly family owned) in Aldeburgh, Snape, Thorpeness and the surrounding area.
- 1.2 Members are in favour of renewable energy but believe that there should be a national, coordinated transmission infrastructure.
- 1.3 The current plans for multiple construction and cabling projects will damage the beauty and tranquillity of the AONB, deterring visitors who will also share their disappointments on social media.
- 1.4 As small businesses ABA members will be unable to withstand the economic impact of visitors going elsewhere.
- 1.5 The SPR report<sup>5</sup> has not taken into account the demographic of the visitors to the area who are largely from the ABC1 income group<sup>1</sup>, many of them from London, whose spend would be very different from the construction workers who would not be here on holiday. This change in demographic would have a terminal impact on the high-quality restaurants, clothes shops, hotels and cultural outlets in Aldeburgh and the surrounding area.
- 1.6 There are multiple assumptions in SPR's Chapter 30, Tourism, Recreation and SocioEconomics Environmental Statement Volume 15<sup>5</sup> which are challenged in this submission.

## 2. Introduction

- 2.1 Aldeburgh Business Association represents SMEs in Aldeburgh, Snape, Thorpeness and the surrounding area. It has over 80 active, paid up members. A vote was taken in March 2019 and September 2020 regarding representation of their views during the initial consultation and hearings relating to EA1N and EA2.
- 2.2 It was agreed that renewable energy was of importance in the effort to drive down climate change emissions but that ScottishPower Renewable's (SPR) intentions were not sufficiently thought through and that The Department for Business, Energy and Industrial Strategy (BEIS) should devise a national, coordinated offshore transmission infrastructure, such as the ones used by other North Sea countries, rather than relying on developers who are working on an uncoordinated basis.
- 2.3 This would avoid the industrialisation of precious landscapes and the threat to local businesses. The vote to oppose current intentions was unanimous.
- 2.4 Although the ABA was always concerned about SPR's intentions it has only recently become aware of the full extent of the proposed works.
- 2.5 On 07.07.18 at Thorpeness Country Club SPR representatives at a SPR information event assured the ABA representative (the author of this submission) that the works would be completed within a year and that only 100 construction staff would be necessary. Over time it has become clear that this was misleading, and it is only recently that members have become fully aware that SPR is just the first of a series of energy projects destined for this AONB with a potential timescale of 12-15 years.
- 2.6 Aldeburgh and Thorpeness are very traditional seaside towns attracting families, bird watchers and walkers. Snape is the home of the world-famous Snape Maltings concert hall.
- 2.7 Attracted by the tranquillity of the area there are estimated to be 4,167,368 trips (day & staying) per annum to the area which generated £210 million for the local economy<sup>1</sup>. In the majority of these visitors are ABC1s who enjoy the high end, largely family owned independent businesses and cultural venues (shops, cafés, restaurants, galleries and arts venues) which have bucked the trend in struggling coastal towns or corporate High Streets (see case studies at the end of this submission).
- 2.8 This delicate and successful network would be destroyed by the long-term disruptive nature of the planned energy projects. The full extent of the proposed works would change the character of the area totally and the unique businesses that make Aldeburgh, Thorpeness and Snape special would be gone forever.

## 3. Tarnishing the AONB 'Brand'

- 3.1 The East Suffolk Tourism strategy of 2017<sup>2</sup> stated that visitors are attracted to the area by the character, culture, food, clean beaches and spectacular coastline, the outstanding countryside and wildlife of the area.
- 3.2 The Energy Coast<sup>1</sup> report of September 2019 found that 72% of visitors came to the area to experience its nature and in 84% of respondents it would be the

main reason for visiting in the future. Much support for these reports can be found on independent online guides, and the following are only two of many examples:

- 3.3 *“Within easy reach of both London and the Midlands, Suffolk is the smallest and gentlest of the East Anglian counties. Its biggest draw is perhaps its coast, which is home to two of Britain’s most alluring seaside resorts – Aldeburgh and Southwold – with the Minsmere RSPB Reserve and ancient settlement of Dunwich at the centre of some glorious stretches of marsh, heath and woodland.”* (Telegraph online<sup>3</sup>)
- 3.4 *“This year, it’s time to visit Suffolk, the undiscovered corner of England you’ve probably already imagined in your travel fantasies....*
- 3.5 *It’s also the place to find miles of pristine, white sand beaches, tiny fishing villages where you can pick your supper from the day’s catch, lively food, art and music scenes with two of the best music festivals in the world, great art galleries everywhere you look and wonderful shopping.”*

(Trip Savvy.com<sup>4</sup>)

- 3.6 Most ABA members and their staff depend on tourism. During multiple construction projects the loss of natural landscapes, tranquillity, nature and the region’s unique charms are the factors most likely to deter visitors from the Suffolk Coast.
- 3.7 With high volumes of traffic/HGVs using Aldeburgh/ Snape and Thorpeness roads members agree that the high-end tourism that the town depends on would be put off by lengthy delays and would go elsewhere in future. Visitors are likely to use social media to tell their friends that the tranquillity they come for has been disturbed, the Energy Coast report<sup>1</sup> found that: *“Three-quarters of Suffolk Coast visitors share their experience with others, highlighting the vast potential of negative and particularly positive news that can be spread about the area.”*

#### **4. Challenges to SPR’s Chapter 30<sup>5</sup>, Tourism, Recreation and SocioEconomics Environmental Statement Volume 1**

- 4.1 30.3.2 point 15 states *“It should be noted that the majority of tourism and recreation receptors are located beyond this buffer (construction) zone. Within the buffer zone there is a low density of receptors that could potentially be affected.”*
- 4.2 The business association believes that construction traffic, construction personnel and closure of roads will impact on the whole area, particularly for the ‘tourism and recreation receptors’ which require a car journey, for example from Aldeburgh to Leiston Abbey or Minsmere.
- 4.3 The ABA is particularly concerned about the plan to dig a cable trench across B1122 between Fitches Lane and Aldringham Court and alarmed that, if EA2 and EA1N are not built concurrently, there is a risk the road would be dug up again a year or more later to bury cables for the second windfarm.
- 4.4 Closing this road will have a significant impact on visitors’ ability to travel between the key ‘tourism receptors’ including Aldeburgh, Thorpeness, Leiston Abbey, Minsmere, Dunwich and Southwold.

- 4.5 Given the importance of walking and enjoying the environment to visitors it is alarming to business owners that there are 38 PRoWs (public rights of way) *“that may be affected by the proposed East Anglia ONE North project as they are within or adjacent to the onshore development area. Additionally, the Suffolk Coastal Path runs adjacent to the development area, however the use of Horizontal Directional Drilling (HDD) at the landfall will result in it not being impacted.”* (Table 30.37<sup>5</sup>).
- 4.6 The ABA is interested in how one conducts HDD for such a big project adjacent to a Coastal Path without it being impacted?
- 4.7 With reference to the onshore cable route the SPR reports states (Table 30.68) *“Significant, localised and temporary effects on the character of the AONB within a localised area between Thorpeness, Sizewell and Leiston.”* and *“The visual effects are also assessed as being significant on views experienced by walkers over short sections of the Suffolk Coastal Path, the Sandlings Walk and the Suffolk Coastal Cycle Route where these recreational routes cross the onshore cable route.”* These are key routes for cyclists and walkers going from Aldeburgh and Thorpeness to the NT Coastguard Cottages, RSPB Minsmere, Dunwich, Walberswick and Southwold.
- 4.8 Table 30.71 states *“Recreational assets such as PRoWs, beaches and common land have a low sensitivity to change because this can be managed through appropriate construction management.”* This makes little sense; construction is noisy and dirty, involving heavy machinery, dust, construction staff and their transport, ‘construction management’ will not prevent damage to the experience of the visitor who is in the area to enjoy nature.
- 4.9 More contradictory language is used in the same table: *“Tourism assets are considered to have medium sensitivity to change. Either because they are small businesses that are vulnerable to change or because they are medium size businesses that are more resilient but have greater interconnection with other regional tourism businesses.”*
- 4.10 This is wrong; small businesses do matter and even the larger businesses, such as hotels, will not survive the 12-15 years construction period of the cumulative proposed energy projects.
- 4.11 Table 30.2 says that onshore construction work will take three years but the ABA has learnt that SPR’s plans are the first of many<sup>7</sup> which will lead to repeated disruption for 12-15 years. No local business dependent on tourism will survive this. ABA members’ anxieties are mirrored by the ETG (Expert Topic Group) on page 107: *“There was also concern raised at the ETG about an overall impression of industrialisation that would detract from the image of the Suffolk Coast and Heaths AONB. Stakeholders are concerned that this would lead to a reduction in the number of tourists.”* The members of the ETG are not alone.
- 4.12 Several assumptions are made regarding road use. Cycling is already popular in the area, many visitors bring their bicycles but, in line with other parts of the country, the numbers have increased this year due to Covid 19.
- 4.13 The report states in table 30.67 that the B1069 from the junction of the A1094 to the south of Knodishall is *“of low value sensitivity noting there is minimal frontage development, and no footways along the road, suggesting limited pedestrian demand”*.

- 4.14 This is already a busy road, but the report seems to be stating that the absence of cycle paths and pavements means that it is reasonable for it to be busier? Cyclists would not agree. Once in the village of Knodishall there are a large number of houses on the road (with quite a lot of 'frontage development') and a pavement, there is also a busy primary school and a number of businesses, including a garage, a convenience store (whose customers park on the road), a pub, a bus stop and a popular farm shop, all within 150 yards of each other.
- 4.15 Furthermore, the junction of the A1094 and B1069 has notoriously poor visibility. The character and roads of the area are totally unsuited to the traffic necessary for multiple construction projects.

## 5. The Importance of Visitors to the Local Economy

- 5.1 The majority of businesses in Aldeburgh, Thorpeness and Snape are traditional, local SMEs without deep pockets. Many of them are family owned and have been in the area for decades, they have been severely tested by the demands of COVID-19 but responded with vigour to the upturn in tourism numbers once restrictions were eased.
- 5.2 The drop in visitor numbers in response to lengthy road delays and construction work over a number of years would make many economically unviable. The Energy Coast<sup>1</sup> report states: "*...it doesn't require much of a downturn in visitors or spend to severely impact local businesses and the viability of the local visitor economy.*" The same report found that of business respondents 58% expected annual turnover to decrease during the 9-12-year period of construction of Sizewell C and the SPR onshore infrastructure projects.
- 5.3 The same report found that of the businesses that foresee a loss in turnover, a majority expect their revenue to fall by at least 20% per annum with 23% of businesses anticipating annual decreases of more than 50%. At this point local businesses had no idea how much construction work was being planned, if they had their responses would have been even more negative.

## 6. Challenges to SPR's Chapter 30, Tourism, Recreation and SocioEconomics Environmental Statement Volume 15

- 6.1 In its own report SPR<sup>5</sup> states that "*There are 30 self-catering cottages, six other holiday accommodations and 10 visitor attractions located within a 1km radius of the onshore development area. All of these are considered to be low to medium value...as none are nationally important.*"
- 6.2 SPR is being naive or disingenuous if it thinks that only the businesses within 1km of the construction site would be affected; there are a number of internationally significant tourist destinations very close by, for example, RSPB Minsmere with 90,000 visits a year and Snape Maltings, which sold 86,429 tickets last year. The impact of HGVs, noise, dirt, closed roads, construction staff and their vehicles will be felt throughout the area for many years.

- 6.3 The report<sup>5</sup> at 30.6.1.4.1 point 224 states: “*Trip Advisor shows that the number of reviews for top rated tourist assets and attractions in Suffolk range from several hundred to over a thousand. Only Thorpeness Golf Course and the Dolphin Inn receive several hundred reviews. This suggests that these assets have a regional importance so may be resilient to a small change in visitor numbers.*” Meanwhile, point 225: “*All other accommodation, assets and visitor attractions receive from 100 to 200 reviews. This suggests that they are smaller businesses with fewer customers and would therefore be more vulnerable to a change in visitor numbers. However, due to their smaller size they provide less interconnection with other tourism businesses.*” This is wrong again; The Dolphin Inn and Thorpeness Golf Course would not survive the significant drop in visitor numbers and the tone of ‘smaller businesses don’t matter’ is insulting to the SMEs which account for three fifths of the employment and around half of turnover in the UK private sector<sup>8</sup>.
- 6.4 In table 30.45 the SPR report<sup>5</sup> argues that “*Non-residential onshore workers would spend money in the local economy which would lead to further employment in the accommodation industry*” and “*Long-term employment opportunities sustained by the proposed East Anglia ONE North project for people in the local and regional study area.*” What the SPR report<sup>5</sup> has failed to recognise or address in any way is the demographic of the visitors to the area who are largely from the ABC1 income group<sup>1</sup>, many of them from London, whose spend would be very different from the construction workers who would not be here on holiday.
- 6.5 This change in demographic would have a terminal impact on the high-quality restaurants, clothes shops, hotels, holiday lets and cultural outlets in Aldeburgh and the surrounding area.

## **7. Conclusion**

- 7.1 The SPR report<sup>5</sup> states at 30.5.3.3 point 146: “*Tourism stakeholders who represent tourism businesses often believe that the presence of wind turbines would deter visitors.*” This is not the case for ABA members who are not unduly concerned about the look of wind turbines in the distance, it is the uncoordinated, poorly thought through building of the substations and interconnectors and the impact that will have on the destination brand and economy that is the problem.
- 7.2 The SPR report recognises some of this in table 30.45 “*Construction of the proposed East Anglia ONE North project may temporarily disturb people while they enjoy recreational activities.*” This is an understatement, many years of multiple construction projects would not have a temporary effect, the damage to the towns and businesses within the AONB would be fatal.
- 7.3 In The Times<sup>6</sup> 29.10.20 Janice Turner, a columnist and lover of Aldeburgh and the surrounding area sums up the situation we are facing: “*..instead of one hub, each competing energy company plans its own massive substation in unspoiled countryside. A cable trench as wide as a motorway will be drilled under fragile cliffs, disrupting bird sanctuaries, throwing farmland into a*

*decade of excavation. Such stupid vandalism. How can clean energy be so dirty?"*

- 7.4 The SPR report<sup>5</sup> attempts to paint its construction plans as a minor, short term inconvenience, but they are at the head of a queue that want to unnecessarily industrialise an area precious to its residents, businesses, visitors and wildlife. We ask the Inspectors to reject these plans in order to force SPR and National Grid to adopt a more coordinated and less damaging route, as other North Sea Countries have done.
- 7.5 Allowing SPR and National Grid to trample on the delicate and successful network of businesses and communities in this area will reduce Aldeburgh to just another struggling coastal town with an empty High Street and no hope of recovery.

## **8. Case Studies threatened by SPR's plans**

- 8.1 **The Dolphin Inn** in Thorpeness is a very popular 'pub' with rooms. Throughout the year it draws in day visitors and holidaymakers but it is particularly busy during the summer months, this summer they served 25,000 main courses between 4th July and the end of September.
- 8.1.1 The owner believes that 85/90% customers were visitors. The village already has a parking problem and access via the narrow B1353 from Aldringham is already hazardous for the many cyclists that use it as part of the circular route that includes Aldeburgh.
- 8.1.2 Any increase in traffic from service and workers vehicles on that road and in the village would be unmanageable and dangerous. After only a few weeks of disruption visitors would deem Thorpeness 'spoiled' and not rebook, putting The Dolphin Inn, The Golf Club, The Country Club and the two cafés at risk.
- 8.2 **The Aldeburgh Bookshop** is an independent bookshop on the High Street, it has been in business for seventy years, the last twenty years under the current ownership of John and Mary James.
- 8.2.1 They stock a large range of new books on all subjects including a wide selection of local books and a fully-stocked children's department. The site of the current bookshop has always had a literary connection and the bookshop runs a very successful literary festival in March every year, this attracts well known speakers and visitors from all over the world.
- 8.2.2 When asked what the proposed disruption of SPR works would do to the business the owners replied: "*We are very dependent on footfall —locals and visitors — for our business and we fear for ourselves and for the health of Aldeburgh High Street in general if roads accessing Aldeburgh become congested. Any disruption on the A12 and the A1094 has an immediate impact on the amount of visitors and therefore our turnover. Visitors who come value the independent shops in the High Street, the glorious coast for walking and birdwatching.*"
- 8.3 Established by Edward Butcher in 1884, **O&C Butcher** has been a part of Aldeburgh High Street for 130 years. A very successful family run business

which also runs Fleur, further down the High Street, the shops are central to the retail offer in the town.

- 8.3.1 The business undertook a customer survey at O&C Butcher in 2014 which received 118 responses, of these, 27% of customers said they were permanent local residents and 73% of customers were visitors to the town (including second home owners).
- 8.3.2 Many of those visitors come to the area for the reasons cited in the East Suffolk Tourism Strategy<sup>2</sup>, if they fail to visit the area the business would be unsustainable.

## 9. References

<sup>1</sup>The Energy Coast report of September 2019: The Energy Coast, National Coastal Tourism Academy, Suffolk Coast and Heaths AONB.

<https://www.thesuffolkcoast.co.uk/shares/The-Energy-Coast-BVA-BDRC-Final-Report-2019.pdf>

<https://www.thesuffolkcoast.co.uk/shares/The-Energy-Coast-BVA-BDRC-Executive-Summary-2019.pdf>

<https://www.thesuffolkcoast.co.uk/shares/The-Energy-Coast-Snapshot-Findings.pdf>

<sup>2</sup>The East Suffolk Tourism strategy of 2017:

<https://www.eastsuffolk.gov.uk/assets/Visitors/East-Suffolk-Tourism-Strategy.pdf>

<sup>3</sup> Telegraph on line <https://www.telegraph.co.uk/travel/destinations/europe/united-kingdom/england/east-anglia/suffolk/articles/an-expert-travel-guide-to-suffolk/>

<sup>4</sup>Trip Savvy <https://www.tripsavvy.com/great-reasons-to-visit-suffolk-1662385>

<sup>5</sup>Chapter 30, Tourism, Recreation and SocioEconomics Environmental Statement Volume 1

<https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010077/EN010077-001535-6.1.30%20EA1N%20Environmental%20Statement%20Chapter%2030%20Tourism,%20Recreation%20and%20Socio-Economics.pdf>

<sup>6</sup> The Times Newspaper Janice Turner Notebook 29.10.20

<sup>7</sup> SEAS Appendix One, Future Planned Energy Projects

<sup>8</sup> Federation of Small Business <https://www.fsb.org.uk/uk-small-business-statistics.html>

Written by Sarah Whitelock, Aldeburgh Business Association



*Yes, to Offshore Wind Energy,  
Let's Do It Right*

Environmental Audit Committee Inquiry  
Offshore Wind

Submission from  
SUFFOLK ENERGY ACTION SOLUTIONS

15 May 2020



SUFFOLK  
ENERGY ACTION  
SOLUTIONS

## INTRODUCTORY SCOPE

This submission focuses on two questions raised by the EAC:

1. How well is the UK industry managing the environmental and social impacts of offshore wind installations, particularly on coastal communities with transmission-cable landing sites? (*EAC's question 5*)
2. How well is Government policy supporting innovation in transmission technology to improve the efficiency of electricity transmission? (*EAC's question 6*)

## EXECUTIVE SUMMARY

Our campaign is called **SEAS** (Suffolk Energy Action Solutions) because our goal is to help the UK Government make the most of the opportunity to establish this country as the world leader in offshore wind power transmission infrastructure in terms of environmental protection and cost efficiencies.

We believe that this is the time for a step change in thinking and the time to devise a well-conceived national strategy for offshore wind power transmission infrastructure.

It is not as complicated as some suggest.

We have created a volunteer team with different skills - zoologists, wind energy engineers, entrepreneurs, farmers, environmentalists, alternative energy pioneers and tourism leaders. We are totally supportive of the shift towards energy renewables and we believe that the UK government should be focusing more on developing an umbrella strategy for offshore transmission infrastructure around the coast of East Anglia in order to optimise the principal environmental, social and economic outcomes.

We have been working with specialists across Norfolk and Suffolk, and even though our detailed submission concentrates on coastal Suffolk because that is where we live, we have joined together with Norfolk residents and councillors to explore the opportunity for the East Anglia region to be considered as one single area for the optimisation of offshore transmission infrastructure. If we were to be invited to make a presentation to the EAC, we would of course bring a team of both Norfolk and Suffolk specialists to show the plans that we have drawn up indicating an offshore modular grid around the coast of East Anglia.

The UK government has expressed its goal to become world class in its generation of energy renewables. This aim cannot be achieved if the DELIVERY SYSTEM undermines those principal outcomes.

Green energy is no longer green if the delivery system destroys unspoilt, fragile countryside, desecrates medieval villages and ravages rare habitats.

A better alternative is available. We can express this as follows:

A. Move the plans for new incremental onshore “transmission-cable landing sites” to a holistic offshore modular grid with only two MEGA HUB substation and interconnectors sites located on already industrialised brownfield sites closer to the key urban destinations for this power, one near the Thames estuary and the other near King’s Lynn.

B. Use the latest technology to construct a sea corridor for this wind power to be pooled and taken to the Grid avoiding environmental catastrophe.

C. Devise a business model whereby each power company pays a levy to use the corridor, having set up offshore substations, artificial islands, hub platforms and whatever makes most sense to keep the wind power away from fragile coasts of East Anglia. This collective system will be more cost-efficient because it avoids huge mitigation costs, time delays through judicial reviews (mitigation is not

always available) and negative PR for all parties concerned. The tax payer is willing to pay a small premium for having green energy delivered in this way. The legislation needs to be updated in order to enable this holistic strategy to be implemented. This requires political will, quite simply. The COVID-19 crisis has demonstrated that the UK Government and other institutions can move quickly where there is a pressing need.

D. Establish a realistic but fast track timetable for this holistic project. Our engineer specialists have researched what is being done in other North Sea countries including Belgium, Germany, Holland, Denmark and Norway. This delivery system can be set up in just four years, not ten years as is often quoted by ScottishPower and others. What's more, it will cost no more than £5 billion. The power companies will pay for part of these initial costs and the tax payer will pay for another part.

E. Within UK universities, energy companies and institutions, we have access to some of the leading researchers and engineers in this field. We recommend that a cross-department task force is set up with representatives from DEFRA, BEIS, National Grid and Ofgem working alongside relevant specialists within an agreed timetable and set of objectives to deliver this holistic strategy.

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SUFFOLK  
ENERGY ACTION  
SOLUTIONS

## THE CAMPAIGN

SEAS (Suffolk Energy Action Solutions) was founded in August 2019 by Fiona Gilmore as a grassroots campaign to make the community aware of the impending onslaught of Energy projects that will descend upon the area in the next 10 to 15 years.

**SEAS is in favour of offshore wind energy farms.**

**SEAS is against the current proposed plans for the delivery of that wind power.**

SEAS mission is to make the Government aware of the completely uncoordinated plans for up to 12 Energy Projects built in one small area of East Suffolk, the inevitable economic and environmental harm they will do, causing untold hardship for its inhabitants, economy and environment.

SEAS believe that the UK Government needs urgently:

- to call for an immediate moratorium to review all Offshore Wind Farm Development Consent Orders (DCOs),
- to call for a cross-departmental inquiry into the adverse impacts of onshore substations, and
- to create a national strategy for offshore transmission infrastructure, which incorporates offshore solutions, such as an Offshore RingMain

# THE 12 ENERGY PROJECTS

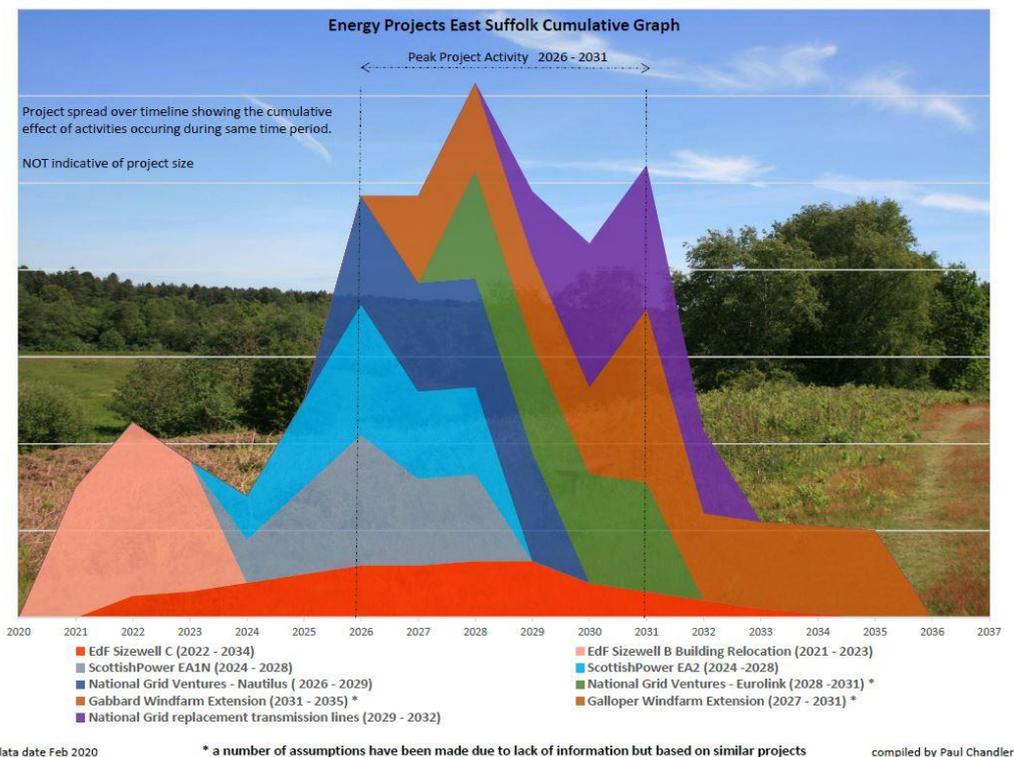
## HERITAGE COAST v ENERGY COAST

East Coast Suffolk has always been called the “Heritage Coast”. Now it is being renamed the “Energy Coast” due to an onslaught of unsustainable energy projects. This is their status:

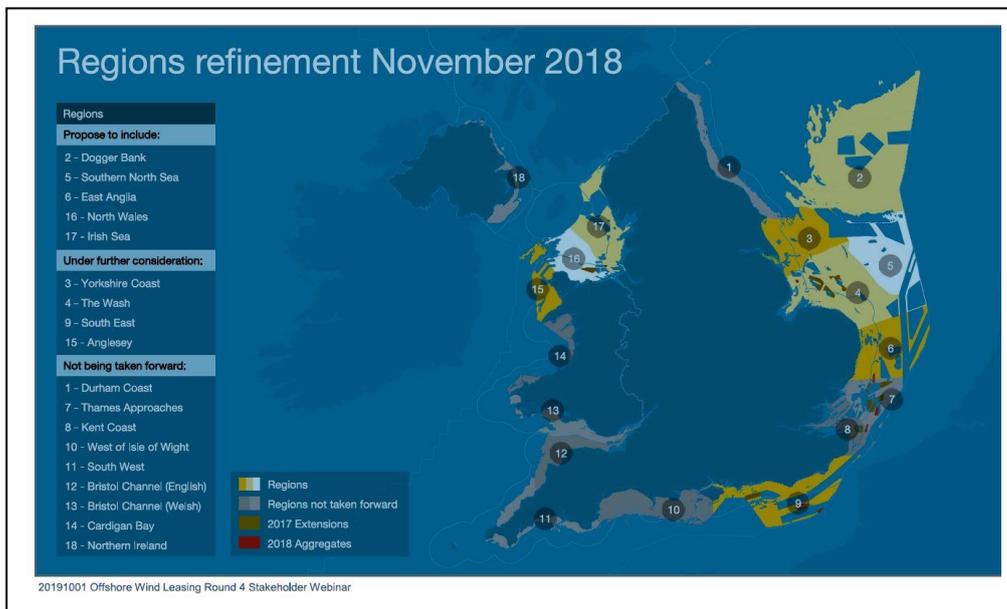
1. Scottish Power Renewables (SPR) EA1 – Wind Farm and Onshore transmission infrastructure completed and now Online
2. Scottish Power Renewables (SPR) EA3 – Wind Farm and Onshore transmission infrastructure completed – yet to go Online
3. Sizewell B – Judicial Review on District Council planning decision  
<https://www.bbc.co.uk/news/uk-england-suffolk-50940974>
4. EA1N – SPR DCO Application submitted and going into the Examination period  
<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-two-offshore-windfarm/?ipcsection=docs>
5. EA2 – SPR DCO Application submitted and going into the Examination period  
<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-two-offshore-windfarm/?ipcsection=docs>
6. Sizewell C – preparing for DCO application at end of March 2020  
<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/sizewell-c-new-nuclear-power-station/?ipcsection=docs>
7. National Grid Nautilus – Sounding out local Parish Councils, Town Councils other stakeholders and compiling environmental studies.  
<https://www.nationalgrid.com/document/125601/download>
8. National Grid Eurolink – no information as yet, but will follow the footsteps of Nautilus.
9. Greater Gabbard Extension – written to Stakeholders  
<https://sse.com/newsandviews/allarticles/2019/08/greater-gabbard-extension-successful-in-habitat-regulations-assessment-process/>
10. Galloper Extension - no information as yet, but will follow in the footsteps of Greater Gabbards
11. SCD1 Sizewell Kent interconnector - National Grid – this appears to have been sanctioned without it going through the DCO process.
12. SCD2 Sizewell Kent interconnector – National Grid say this will quickly follow on from SCD1

# THE CUMULATIVE EFFECT

Offshore wind projects cannot (as currently they are) be looked at in isolation. There is a cumulative impact from the numerous, consecutively occurring, energy projects on and around the Suffolk coast. Any proposals need to take into account the known 12 Energy Projects. Whilst all projects are considered in isolation by the planning inspectorate, local communities and environments are left vulnerable to the cumulative effects.



The Crown Estates, round 4 leasing of more North Sea bed will cause a further tsunami of windfarms and associated onshore development. Where will they land?



## THE IMMEDIATE THREAT: SPR WINDFARMS

### EAST ANGLIA ONE NORTH and EAST ANGLIA TWO

ScottishPower Renewables' (an indirect subsidiary of Spanish multinational electric utility company, Iberdrola SA) has submitted two applications to the Planning Inspectorate for two separate development consent orders (DCO) for the construction and operation of the East Anglia ONE North (EA1N) and East Anglia TWO (EA2) Offshore Windfarms. They were submitted to the Planning Inspectorate in tandem. Development consent for EA1N and EA2 is required to the extent that the development is or forms part of a Nationally Significant Infrastructure Project (NSIP). As NSIPs, the Projects fall within the remit of the Secretary of State. If these two projects are approved, they open the flood gates for a raft of other energy projects, industrialising and concreting over currently upspoilt countryside in Coastal Suffolk.

It is unprecedented to have two DCOs assessed in tandem and to date this has caused immense confusion not just for the community but for the Planning Inspectorate, which has to duplicate all its inspection processes.

The proposed location for the offshore windfarms is in the southern North Sea, approximately 36 km and 32.6km respectively from the Suffolk coast at its nearest point and would occupy an area of up to 208 /218 km<sup>2</sup>. The landfall connection for both works will be located through the fragile cliffs north of Thorpeness, and the onshore substation and overhead line realignment works will be located in the vicinity of Grove Wood, Friston.

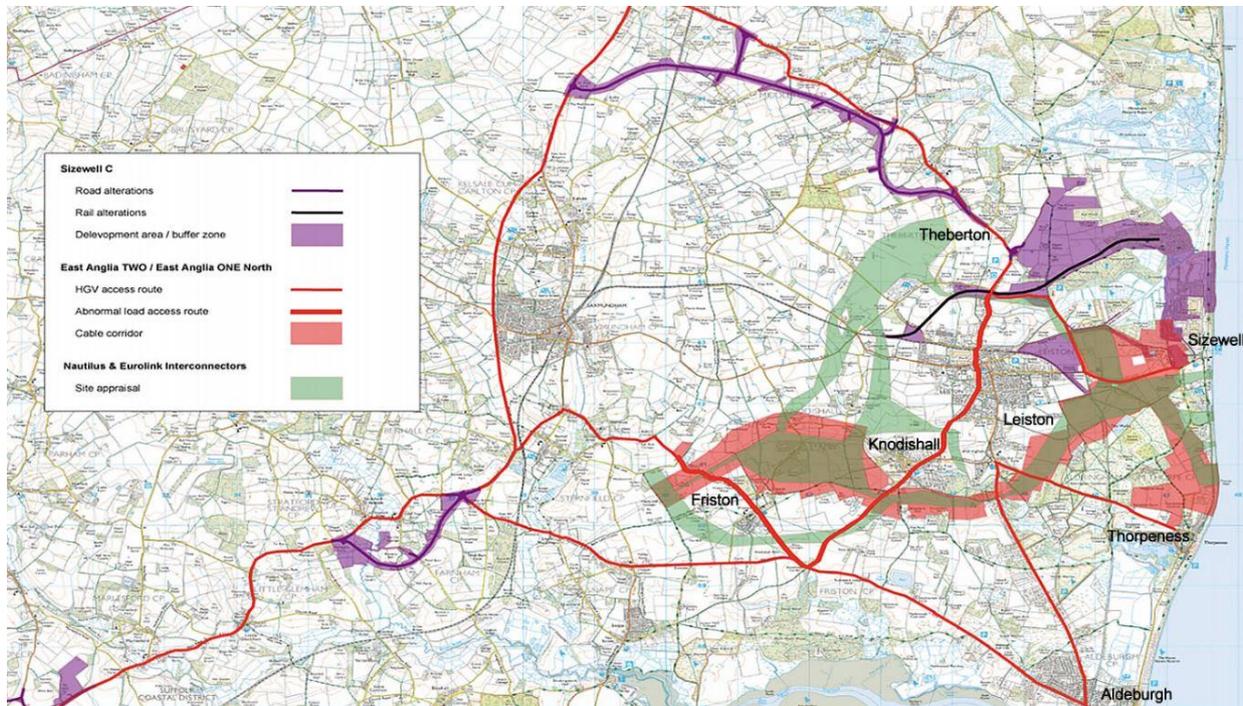
The Development Consent Order would, amongst other things, authorise:

1. Up to 67 offshore wind turbines and their foundations for EA1N and 75 for EA2;
2. One offshore meteorological mast and its foundations for each project;
3. Subsea cables for each project connecting the wind turbines and the offshore platforms;

4. Up to one offshore construction, operation and maintenance platform and its foundations for both Projects;
5. Up to four offshore electrical platforms and their foundations for both Projects;
6. A network for each project's subsea platform link cables;
7. Up to two offshore subsea export cables to transmit electricity from the offshore electrical platforms to landfall located north of Thorpeness in Suffolk for each project;
8. Two sets of landfall connection works north of Thorpeness;
9. Two sets of Onshore cables commencing at landfall and running to the onshore substation in the vicinity of Grove Wood, Friston;
10. A new EA1N onshore substation in the vicinity of Grove Wood, Friston and a second for EA2;
11. Overhead line realignment works in proximity to Grove Wood, Friston including permanent realignment of a short section of the northern and southern overhead line circuits including the reconstruction and/or relocation of up to two pylons and construction of up to one additional pylon in order to realign the northern overhead lines and the reconstruction and/or relocation of up to one pylon in order to realign the northern overhead lines and the reconstruction and/or relocation of up to one pylon in order to realign the southern overhead lines;
12. Temporary diversion of the northern and southern overhead line circuits;
13. Temporary construction of up to three permanent cable sealing end compounds (one of which may include circuit breakers) and underground connectors;
14. A new National Grid Substation covering an area of 30 acres approximately 18m high; and
15. Each National Grid Interconnector will also require a 24m high convertor building locate 5km distance from the National Grid Substation.
16. Associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of East Anglia One North and East Anglia Two.

## THE PLACES AFFECTED

Ten communities will be hemmed in by the construction of haul roads, cable routes, substations, connectors and interconnectors for up to 15 years and probably more as shown in the map below.



**THORPENESS** – A residential and tourist destination with hospitality outlets affected by Landfall.

**SIZEWELL** – A residential and leisure destination affected by the cable corridor and compounds.

**ALDRINGHAM** – A residential area affected by the cable corridor crossing the B1122 and the River One Hundred

**LEISTON** – the main town that will be impacted from the massive influx of temporary workers (the adverse social impact from the construction of Sizewell B is well documented.)

**THEBERTON** – Residential area & Farmland affected by Sizewell C Haul Road.

**KNODISHALL** – Residential area & Farmland and a pinch point for HGV traffic.

**FRISTON** – Substations and Interconnectors – the industrialisation of a medieval village

**SAXMUNDHAM** – Residential and main grocery shopping area.

**ALDEBURGH** – The main tourist town with consequential impact on retail, hospitality and leisure activities.

**SNAP and Snape MALTINGS** - these are accessed predominantly from the A1094, the main HGV access road from the A12.

Other villages and towns from Ipswich to Lowestoft will be adversely affected by the heavy traffic and congestion caused by the increased load of HGVs and other commercial vehicles required to bring about the proposed onshore infrastructure projects. These include the popular seaside destinations of Southwold and Walberswick and the local market towns of Woodbridge and Wickham Market.

## THE ISSUES

There are a number of issues that need to be considered fully within the remit of a formal review. These are the salient issues with amplifying comments:

### 1. SITE SELECTION AND ALTERNATIVES

- It is unclear why a coastal area rich in wildlife and exceedingly rare habitats was chosen over brownfield sites more suited to industrialisation. Alternatives, such as ORM or Island Hubs also appear to have been overlooked in the Application.

- National Grid has not answered many of the community's questions and appear to have been absent during the consultation and the application process

- Ofgem, as a consumer cost regulator, has failed since the area chosen will cost more in cabling and mitigation each time new infrastructure is built, than an ORM or brownfield site would cost - costs of which will go on the public user's bill.

2. **THE CUMULATIVE EFFECT** on local communities and environment of up to 12 energy projects occurring consecutively over 12 to 15 years has not been fully taken into account: See above for maps and graphs.

### 3. LANDFALL

- Unsuitability of Landfall site due to fragility of Thorpeness Coralline Cliffs, shifting tidal shoreline, coastal erosion, and climate change.

- The Landfall site will affect the England Coast Path and the first National Trail in Suffolk which is anticipated to bring economic benefits.

### 4. ENVIRONMENT

- 11Km of cable trenches 50m wide destroying environmentally sensitive areas of AONB, SSSI, SPA, including The Sandlings and Fens heaths:
- UK has 20% of the World's lowland heathland which is internationally recognised as a 'rare habitat'. It should be protected not dug up to release more carbon emissions.

## **5. WILDLIFE**

- Threat to wildlife. It is not possible to mitigate damage to habitat of protected or endangered wildlife such as bats, badgers, barn owls, nightingales, red deer and many species of migrating birds that live along the line of the intended cable route. For non-volant species, the destruction and modification of wildlife habitats, eg ground disturbance, is highest (Lovich & Ennen, 2013): soil compaction from heavy machinery can collapse burrows and crush small wildlife. There is no empirical research into how to mitigate any of these impacts on wildlife during construction
- Cabling will sever the Suffolk Coast and Heaths AONB and therefore the wildlife corridor, in turn causing problems to migrating species.

## **6. FARMLAND, WOODS, HEDGEROW**

- Loss of 83 acres of Grade 2 and 3 agricultural land at a time where the UK should be more self-sufficient.
- Loss of woodland and hedgerows with inadequate mitigation. If not replanted with mature trees/hedgerows it can take a further 10 years (on top of the construction years) for them to mature and hide 18metre high infrastructures.
- The Woodland Trust are concerned about Grove Wood, which is designated as 'ancient' on Natural England Ancient Woodland Inventory.

## **7. ROADS**

- The local road network is unsuitable for the high traffic levels of construction HGVs, associated service vehicles and workforce vehicles. The increased traffic on roads will endanger cyclists, walkers and residents.
- There will be inevitable delays of Emergency Services and should there be a Nuclear incident the evacuation routes would be severely hampered, both endangering lives.

- Impact on tourism, The DMO survey says traffic congestion and related issues would deter tourists from coming to the area.

## **8. PUBLIC RIGHT OF WAY (PRoW)**

- The Application fails to address the impact on the amenity value of the 26 PRoWs that will be permanently or temporarily closed.

- There is a lack of detail on PRoW closures leading to disruption of the network, thereby leaving local walkers with very limited or no access at all.

- The Landfall site will affect the England Coast Path and the first National Trail in Suffolk which is anticipated to bring economic benefits to the region

## **9. TOURISM**

- SPR's media continually promote the job opportunities, this might be the case in Lowestoft with offshore jobs, but there are NO BENEFITS to the local community. There will be no additional local jobs, and the loss of tourism will impact Aldeburgh, Thorpeness, Snape Maltings and the surrounding villages.

## **10. LOSS OF JOBS**

-The recent DMO survey states that the energy projects "could impact the local visitor economy by up to £40m per year" and has not been addressed in SPR's application.

- Typically, small businesses operate on tight margins and these businesses may no survive.

## **11, LAND USE**

These figures are an estimation of ScottishPower Renewables EA1N and EA2's impact on the land use of the area. They are derived from SPR document: EA2 Land Use Cumulative Impact Assessment with the Proposed East Anglia ONE North Project - Source: Preliminary Environmental Information for East Anglia TWO Offshore Windfarm, Appendix 21.1 Volume 3 Document Reference – EA2-DEVWF-ENV-REP-IBR-000816\_001

[https://www.scottishpowerrenewables.com/userfiles/file/EA2\\_PEI\\_Chapter\\_21\\_Appendix\\_21-1-CIA.pdf](https://www.scottishpowerrenewables.com/userfiles/file/EA2_PEI_Chapter_21_Appendix_21-1-CIA.pdf)

sq metres	acres	Ha	Cable Corridor
635,000.00	156.91	63.5	Cable Route
205,000.00	50.66	20.5	Cable Route CCS's
82,000.00	20.26	8.2	Temp. Roads
<b>922,000.00</b>	<b>227.83</b>	<b>92.2</b>	<b>TOTAL</b>
			<b>Substation Complex at Friston</b>
51,000.00	12.60	5.1	CCS x 3
72,000.00	17.79	7.2	Permanent footprint for 2 SS
12,000.00	2.97	1.2	Access Road
79,000.00	19.52	7.9	NG Substation CCS
45,000.00	11.12	4.5	NG Permanent footprint*
<b>640,002.60</b>	<b>64.00</b>	<b>64.0</b>	<b>TOTAL</b>

\*Unclear whether this is included in NG Substations CCS

From these proposals, we can deduce that 118 Ha of agricultural, woodland and recreational land is to be appropriated during construction and at least 20 Ha removed permanently.

This would be for one project only. For six Wind Farm transmission infrastructure projects, please multiply by 5 to be on the safe side.

## 12. POLLUTION

- Light pollution from substations, compounds and construction areas with 24hr security lights will result Suffolk's famous dark skies lost.
- Noise pollution from traffic, construction and the substations constant noise (for its operational life span will destroy Suffolk's famous peace and tranquillity.
- Air pollution from traffic and trenches dug through Suffolk's light sandy soil (which already blows and billows every summer), causing visibility hazard and health issues.

## THE OPPORTUNITY FOR A NEW SOLUTION

### A NATIONAL STRATEGY FOR OFFSHORE TRANSMISSION:

The UK is a World leader in offshore wind power. However, undermined by the absence of a national strategy to connect that power to the grid system.

[The Crown Estate](#) and [Crown Estate Scotland](#) maps projecting the offshore wind leasing potential of the UK's sea beds are a matter for concern. Within 50 years the UK could be surrounded by hundreds of windfarms. The present offshore 'point to point' transmission system would carve up precious land at an alarming rate destroying the land required for people to live, work and play in. New technologies have to be found.

A recent industry [report from SSE](#) stated that the present 'point to point' offshore transmission grid connection system is not sustainable and offshore solutions should be put in place. This is not a new idea. Reports stating this were published for review by Ofgem, National Grid and Government in 2008, 2011 and 2015. National Grid's input to the 2008 report titled: "[UK Offshore Energy Strategic Environmental Assessment](#)" was prophetic: Para 193. ***"Indeed, if coordinated development does not occur and projects are considered on a piecemeal basis, the overall network design and substation extension requirements are certain to lead to a sub-optimal solution with significant increase in the impact on the onshore network."***

The UK should collaborate closely with other North Sea countries on the development of a meshed North Sea grid which would see our common goals to develop more renewable energy achieved more efficiently. The European Commission report on hybrid offshore wind projects found the potential of a 10% saving.

The North Sea Wind Power Hub ([NSWPH](#)) have made massive technological advances within the last two years and have invited UK and Norway to join them in the development of offshore energy islands

Here is an opportunity for the UK Government, National Grid, Ofgem and Developers to continue to be world leaders and trial an offshore transmission energy island. Legislation appears to be the bottle neck. This should not be so, during WWI and WWII legislation was swiftly put into place to help the nation fight the war. Today new legislation has been passed to counteract CoVID-19 and enable Nightingale hospitals to be set up in a matter of weeks. It is therefore within the power of this majority Government to bring in new legislation expeditiously.

We propose, as a matter of urgency, that the necessary legislation is put in place to allow the pooling of wind power from diverse developers into a main arterial corridor (a modular grid or ORM) bringing the power to a single Mega Hub closer to the Thames Estuary with a landfall on an already industrialised site, a brownfield site, thereby negating the need for incremental onshore substations around the East Anglian coast. According to our research of other North Sea countries and their plans, the construction of offshore modular grids with offshore substation platforms can take as little as four years to implement. Currently, the principal excuses for not going ahead with these more innovative solutions are the lengthy process (“it will take ten years”) and cost. We challenge both assertions as being incorrect. The collective corridor approach proposed by SEAS is faster than a prolonged judicial review and cheaper than the currently proposed outdated approach of onshore incremental substations. The cost efficiencies gained by the pooling of wind power and by the convergence into one single Mega Hub are quantifiable.

We propose the formation of a new task force or committee, with representatives from the various relevant institutions: the National Grid, Ofgem, wind power engineers, academics specialising in step change technology, DEFRA, BEIS, developers with a focused brief, to set out the trajectory to establish an offshore solution transmission infrastructure within five years, and with a business model

requiring a levy to be placed on each participating developer together with a small premium for paying customers.

This is a win-win-win concept. The environment benefits, the economy benefits and the wind power industry benefits from a more efficient and sustainable collective approach. The evolving optimisation of our renewable energy delivery system requires a national strategy, not the current adhococracy.

## CONTACTS

For more information please contact:

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Web: [www.suffolkenergyactionsolutions.co.uk](http://www.suffolkenergyactionsolutions.co.uk)



Related Suffolk campaign groups:

Web: <http://sases.org.uk/>

Web: <https://www.saveoursandlings.org.uk/>

Related Norfolk campaign group:

Facebook: Necton Substations Action Group



**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

**PINS Ref: EN020078**

**WRITTEN REPRESENTATION**  
**4.4(b) - TOURISM AND**  
**ECONOMIC DECLINE**

**by**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

**Unique Ref. No. EA2: 2002 4496**



**[info@suffolkenergyactionsolutions.co.uk](mailto:info@suffolkenergyactionsolutions.co.uk)**

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## 4.4(b) - TOURISM AND ECONOMIC DECLINE

### 1. Summary

- 1.1 Various Tourism surveys and reports have been completed over the last few years which disprove ScottishPower Renewables desk-based assessments in Chapter 30, Tourism, Recreation and Socioeconomics Environmental Statement Volume 15.<sup>1</sup>
- 1.2 Here we detail an Update Analysis of Local Businesses Working Substantially in the Tourism Market and a re-evaluation of the findings of the Suffolk Coastal Report<sup>2</sup> in light of the Revelations of SPR & National Grid up to October 2020.

### 2. Update Analysis of Local Businesses Working Substantially in the Tourism Market and a re-evaluation of the findings of the Suffolk Coastal Report in light of the Revelations of SPR & National Grid up to October 2020.

2.1 We spoke to the following businesses and organisations. They are some of the largest tourism employers in the area:

- 2.1.1 David Scott - CEO The Hotel Folk Group
- 2.1.2 The Brudenell Hotel    Bar Rest                    Aldeburgh            44 Rooms
- 2.1.3 The White Lion Hotel    Bar & Rest                    Aldeburgh            38 Rooms
- 2.1.4 The Dolphin Inn            Bar & Rest                    Thorpeness            3 Rooms
- 2.1.5 The Golf Club & Hotel    Bar & Rest                    Thorpeness            36 Rooms
- 2.1.6 The Country Club            Events Bar                    Thorpeness            16 Rooms
- 2.1.7 The Parrot & Punchbowl Bar & Rest                    Aldringham
- 2.1.8 The Crown & Castle    Bar & Rest                    Orford                    10 Rooms
- 2.1.9 The Swan Hotel & Spa Bar Rest Health                    Lavenham            45 Rooms

2.2 We also spoke to the following business owners:

- 2.2.1 **Michael Pritt Owner,**  
The Wentworth Hotel    Bar Rest                    Aldeburgh            35 Rooms
- 2.2.2 **Alex Burnside – Partner,**  
The Plough & Sail            Bar & Rest                    Snape

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<sup>1</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001535-6.1.30%20EA1N%20Environmental%20Statement%20Chapter%2030%20Tourism,%20Recreation%20and%20Socio-Economics.pdf>

<sup>2</sup> <https://www.thesuffolkcoast.co.uk/tourism-research-and-reports>



The Golden Key                      Rooms Bar & Rest    Snape                      3 Rooms  
 The Regatta Restaurant           Rest                      Aldeburgh.

2.2.3 **Harry Young CEO – Snape Maltings**

The Benjamin Britten Concert Hall  
 The Snape Maltings  
 The Concert Hall Café                      Bar & Rest

2.2.4 **Keir Wyatt - Secretary**

Saxmundham, Aldeburgh & Leiston Rotary Club (Business Club)

2.2.5 **David Wybar – Secretary**

The Aldeburgh Golf Club                      Bar & Rest

2.3I would note that according to all these companies apart from Snape Maltings, Scottish Power Renewables have not consulted, spoken or contacted any of these large employers and businesses in this area about their plans nor made any attempt to mitigate, resolve or calm their concerns. Snape Maltings said that an initial meeting was held, but once SPR became aware that the Maltings was opposed to their plans, follow up meetings did not occur.

**3. The Background.**

3.1 The assertion from SPR that the Friston substations would have minimal effect on tourism in the Aldeburgh/Leiston Saxmundham Area. ***“...No significant tourism and recreation impacts were predicted as a result of the proposed East Anglia 2 project. Tourism and recreation receptors would experience minimal visual impacts and only temporary physical obstruction, noise and traffic impacts.”***

3.2 The Suffolk Coast DMO Report written in 2019 has already shown that the impact of just Sizewell C and 2 x Friston Substations would be a reduction in Tourism spend of between £23-40 Million.

3.3 The Aldeburgh Town Council Report on the effect of SPR Projects on tourism in the town.

3.4 SPR’s demand to run 6-day week construction work on its site which will conflict with holiday changeover days.

**4. Tourist information East Suffolk**

4.1 Total day trips	10.3M
4.2 Total staying nights	2.6M
4.3 Average length of stay	3.9 nights
4.4 Totals spend	£474M
4.5 Total value of tourism	£605M
4.6 Tourism related jobs	12,871
4.7 Percentage of all jobs	13.4%

- 4.8 Economic Impact of Tourism Reports carried out a customer survey at O&C Butcher in 2014 which received 118 responses, of these, 27% of customers said they were permanent local residents and 73% of customers were visitors to the town.
- 4.9 Despite the tranquillity of the area there are estimated to be 4,167,368 trips (day & staying) per annum to the area which create a spend of £164million. \*\*

## **5. What brings visitors to East Suffolk?**

- 5.1 Fresh air.
- 5.2 Peace & quiet.
- 5.3 Unspoilt seaside.
- 5.4 Good food.
- 5.5 Good shopping.
- 5.6 Culture.
- 5.7 Crafts and food.
- 5.8 Pretty countryside.
- 5.9 Country lanes.
- 5.10 Cycling & walking
- 5.11 Pubs.
- 5.12 Architecture.
- 5.13 Birdwatching.
- 5.14 Photography & Painting.
- 5.15 Sailing.

## **6. Survey Assessment.**

- 6.1 All respondents are concerned that the SPR/National Grid projects will damage tourism and their businesses.
- 6.2 All respondents are concerned that the larger the combined projects are, the greater the damage.
- 6.3 The difficulties of Covid, whilst causing many other problems, has awakened an interest in 'staycations' and the British seaside.
- 6.4 Agreed factors that would affect tourism:
  - 6.4.1 Traffic jams and slow-moving traffic on main (A12/14) and local roads\*
  - 6.4.2 Loss of rural amenity.
  - 6.4.3 Loss of tranquillity.
  - 6.4.4 Concerns over dust and air quality.
  - 6.4.5 Concerns over noise.
  - 6.4.6 Loss of beach amenity.
  - 6.4.7 Loss of access for walking and cycling.
  - 6.4.8 Danger of increased traffic on small lanes and its effect on walkers and cyclists.
  - 6.4.9 Apparent destruction of countryside.
  - 6.4.10 Apparent mass industrialisation.

\*see below



Delivering to the Blackhillock substation Morayshire

- 6.5 There is a major concern that whilst the decline may initially be slow once visible construction starts, this will accelerate as repeat visitors are aware of the works, the changes to the journey-time, sense of arrival, ambience and tranquillity of the area, and are put off, causing them decide to go elsewhere.
- 6.6 Unfavourable reports of the changes on sites like TripAdvisor will further damage the reputation of the area and deter others. This will result in a further decline in visitor numbers and the demise of some retail and hospitality businesses Empty shops and reduced spending opportunities will destroy the appeal of places like Aldeburgh.
- 6.7 There is a major concern that the destruction of the tourist trade will be irreparable certainly in the short term and that any improvement will be slow and take several years after the last dumper truck and bulldozer have left. It is questionable how many tourism businesses will have survived.
- 6.8 Whilst the arrival of contractors will bring some business to the area. Experience from Sizewell workers shows there is a reluctance to spend like the visitors, they do not use the restaurants, bars and facilities and the income is reduced to barely more than room rate.
- 6.9 One person quoted EDF who at Hinkley Point claim to have given £100M to Tourism, Policing and Highways. But of that only £70K went to Tourism and that over three years. SPR have currently offered nothing.

## 7. Analysis.

- 7.1 The Aldeburgh Town Council (ATC)<sup>3</sup> report suggests that 1% drop in tourism equates to £5M loss in income. The Suffolk Coastal DMO suggests (2

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<sup>3</sup> <https://www.aldeburghtowncouncil.co.uk/wp-content/uploads/2019/03/Town-Council-Document-SPR-response-Last.pdf>

Substations plus Sizewell C) up to £40M drop in tourism income. The addition of extra eight substations, the extended construction period and the long-term effects of the disruption could arguably increase the percentage by more than 4% so that it pushes the likely loss to the upper level. This would suggest an overall drop in tourism income of more than 12% which exceeds the profit margin and therefore viability of most hospitality businesses.

7.2 The Hotel Folk alone have five hotels in an area which SPR/NG claimed there were only five. In fact, there are 19 hotels within seven miles of Friston as well as camp sites, B&Bs and guest houses.

7.3 If we take the figure of £40M/annum drop in tourism and a build programme of twelve years, the loss of business in East Suffolk is in excess of £480M add a further five years to rebuild confidence at say a loss of business of £20M/annum this increases to £580M. This does not allow for inflation, loss of taxes, loss of jobs, loss of businesses, and loss of investment or build overruns.

7.4 The 2019 DMO survey on Tourism only considered EAN2 & EA1 as SPR & National Grid (SPR/NG) were still concealing their true intentions to create a giant power hub.

7.5 The survey stimulus (see below) therefore massively underplayed the size of the SPR/NG scheme and thereby produced a milder reaction to it. Whilst the pictorial evidence of Hinckley Point showed the sort of chaos that would be created at Sizewell, there was no similar image hinting at the size, height, destruction and blight that SPR/NG would be bringing down on Friston. Even the word 'substation' reduces the perceived image (see photo) to the unaware, though increasing the number to an honest ten plus substations might have been more frightening!

## Stimulus

Respondents were showed seven stimuli:

<p>In the initial part of the survey, respondents were shown a map of the Suffolk Coast, and its location within the UK. This framed the rest of the survey.</p>	<p>Next, respondents were shown a text describing the attractions and attributes of the Suffolk Coast in order to assess the attractiveness of the region.</p>	<p>Respondents were shown a 46 second video which featured views of the Suffolk Coast, RSPB Minmere as well as the construction of EDF's Hinckley Point C plant. This helped to facilitate understanding of the scale of EDF's plans.</p>	<p>In the third segment of the survey, respondents were shown the graphic above in order to help them visualise the onshore cabling infrastructure for the proposed SPR project.</p>	<p>In the same segment, respondents were shown a map (not drawn to scale) highlighting the location of the proposed EDF Sizewell C and SPR's onshore cabling and wind farms.</p>	<p>Respondents were also shown a map sourced from EDF showcasing the location of the proposed Sizewell C development.</p>	<p>A map sourced from SPR was also shared highlighting the location of the onshore cabling and inland station for its proposed offshore wind farms.</p>



The public perception of a substation as explained by UK Power Networks<sup>4</sup>

7.6 This perceived substation explains why the reaction against the SPR/NG project was less than for Sizewell C and the survey though correct to the available information at the time is downplaying the real impact.

7.7 The largest substation in the UK is currently Blackhillock Substation<sup>5</sup> near the town of Keith in Morayshire. It is the size of just 24 football pitches (50 acres). Friston has ambitions to be at least four times larger making it the largest in Europe.



7.8 The Suffolk Coast Findings whilst correct to the information available at the time was unable to present the true ambitions of the planned SPR/NG scheme and as a result the 'survey stimulus' was prevented from showing the participants the real extent of the disruption and damage. It therefore underestimates the harm to tourism in the area and downplays the effect on local businesses. It also explains the discrepancy between the local business survey and the visitor survey.

<sup>4</sup> <https://www.ukpowernetworks.co.uk/internet/en/help-and-advice/need-help/what-is-an-electrical-substation.html>

<sup>5</sup> <https://www.ssen-transmission.co.uk/projects/blackhillock-substation/>

7.9 This would suggest that the combined energy projects planned for East Suffolk would be an even greater disaster for tourism in the area than The Suffolk Coast DMO had suggested and that contrary to SPR/NG's assertion that the impact would be minimal, it will destroy the viability of Aldeburgh and other local towns and villages and shatter the trade of all the businesses that are focused on tourism. The result will be the failure of many of these businesses, and the loss of many jobs.

## 8. Impact on Tourism Suffolk Coast & Heaths ANOB 2017 Report suggests:

8.1 Unprompted considerators	-22% Day Visitors
	-27% Stay Visitors
8.2 Worst scenario for tourism	- £40M/annum
8.3 Regionally represented market	-21% Day Visitors
	-22% Stay Visitors
8.4 Worst scenario for tourism	- £35M/annum

## 9. Suffolk Coastal Report

9.1 **Note:** The most disturbing information revealed from these conversations is the fact that no one from SPR or their agents have approached any of the main tourism businesses in the area to discuss concerns or mitigation and representations from these businesses have gone unanswered and unresolved. It appears that to their credit, EDF at Sizewell have made major efforts to talk to local businesses including inviting people on panels and on committees and in theory listened to their concerns.

## 10. Conclusion.

10.1 It is the view of SEAS that Scottish Power Renewables/National Grid have totally failed to properly research or present an honest and fair report on the effect of their plans on Tourism in East Suffolk. The Applicant instead reduces the serious issue down to two sentences.

10.2 ***"...No significant tourism and recreation impacts were predicted as a result of the proposed East Anglia 2 project. Tourism and recreation receptors would experience minimal visual impacts and only temporary physical obstruction, noise and traffic impacts."***

10.3 In failing to properly reveal their true ambitions for the Friston substation they inevitably mislead attempts by others to produce more honest and accurate assessments, resulting in the misrepresentation of the scheme to the public and the downplaying of the impact.

10.4 Based on the smallest scheme the Applicant is proposing, including the effect of Sizewell C, the Suffolk Coast findings suggest tourism income will be reduced by £23-40M.

10.5 The build programme is planned to last 12 years without overruns resulting in a loss to the East Suffolk economy of up to £480M. Factor in the much larger SPR/National Grid project and the effect would be at the top end of this or even more substantial.



- 10.6 When one finally adds the time required to rebuild the tourism economy if the changes have not permanently destroyed it and the loss would be around £600M.
- 10.7 SPR/National Grid are offering no new jobs, the stations are 'unmanned' but the Suffolk Coast findings suggest the loss of 600 in tourism alone.

Piers Sturridge





Offshore Wind Farms

**EAST ANGLIA ONE NORTH**

PINS Ref: EN010077

and

**EAST ANGLIA TWO**

PINS Ref: EN020078

**WRITTEN REPRESENTATION**

On

**4.49(c) TOURISM & ECONOMIC  
DECLINE**

via

**SEAS (Suffolk Energy Action Solutions)**

Unique Ref. No. EA1(N): 2002 4494

Unique Ref. No. EA2: 2002 4496



[info@suffolkenergyactionsolutions.co.uk](mailto:info@suffolkenergyactionsolutions.co.uk)

<https://www.suffolkenergyactionsolutions.co.uk/>



## 4.49(c) TOURISM & ECONOMIC DECLINE FROM A STARTUP BUSINESS MAN

Dear Sirs,

I am the founder of Fishers Gin in Aldeburgh and opened the town's first distillery in February 2020. Apart from producing gin, the distillery serves as a tourist attraction running two to three tours per day and provides a shop for visitors.

On arrival at the distillery visitors are shown a video I produced, featuring the Alde and Ore Estuary and surrounding land within Suffolk Coasts and Heaths AONB. The purpose of the video is not to tell people why I decided to make gin, but to show them why I chose to do so on the Suffolk Coast. It is an area that inspired me, drew me away from London and tempted me into taking a huge financial risk by opening a distillery and taking on four local employees. Apart from providing the majority of our profit, the hosting of tours and welcoming customers to the distillery is immensely enjoyable and makes me feel constantly lucky to live and work in this special part of the world. Every day I meet people seduced by the same charm of this coastline, its windswept shores, traditional farming communities and, in more recent times, the budding food and drink scene. Without tourism my business would not exist. I am completely reliant on visitors from outside East Suffolk.

I often wonder what makes this part of the world so appealing. With a lack of hills, valleys, and lakes it is tempting to think the landscape here could be quite bland. The industrial revolution led to a relative decline in East Anglia and the areas between Ipswich and Lowestoft relied on agriculture and fishing to make a living. Aldeburgh itself went from a major port to a mere fishing town once the River silted up but was popularised by Victorian tourists who found it quaint and the surroundings to be exceptionally beautiful. This trend continues today, and I firmly believe that tourism is driven by East Suffolk's position as a relatively unindustrialised part of the UK and that the landscape inspires countless food and drink producers like me.

Clearly East Suffolk has found a speciality, in an area in which it thrives and out-competes other parts of the UK: Tourism. The Suffolk Coasts AONB may be the jewel in its crown with three national nature reserves and numerous SSSIs. Food and drink producers and hospitality operators like me have spent years investing in businesses that play to this speciality and enhance the offering to visitors, whose expenditure allows us to make a living and employ staff. The idea of locating one of the largest substations in the UK at Friston, within the AONB is shocking and seems



ill thought. The damage on tourism will be both short- and long-term. In the short-term the construction work will make life a misery for tourists arriving by car or from the stations on the East Suffolk line. This alone will be enough to cut off businesses from the visitors they need to survive. In the long term the disastrous effect on the landscape will significantly reduce our competitive advantage as one of the most unspoilt regions of the UK.

The economic damage this substation will cause surely outweighs any advantages and seems all the more illogical when there are parts of the UK in which a substation of this nature would benefit the economy rather than desecrate it.

Yours Sincerely,

Andrew Heald  
Fishers Gin Distillery



**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

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**WRITTEN REPRESENTATION**

**SOCIAL ISSUES**

**by**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

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**[info@suffolkenergyactionsolutions.co.uk](mailto:info@suffolkenergyactionsolutions.co.uk)**

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## Social Issues

### 1. Summary

1.1 The construction of the substations at Friston will predictably have a significant social impact on the local community, which will be difficult or impossible to mitigate. Drawing on data and evidence from similar energy infrastructure projects (Sizewell B, Hinkley Point and Clapton-On-Sea), this section identifies common social impact trends that we anticipate our local communities will also experience. These include immediate and long-term, as well as direct and indirect, impacts. Predicted social impacts include:

- 1.1.1 Crime
- 1.1.2 Mental Health
- 1.1.3 Rent and house-price inflation

### 2. Relevant Case studies

2.1 The substations have not yet been approved or built. Therefore, it is impossible to fully anticipate the breadth and depth of its impact on Suffolk. However, by identifying common social impact trends from similar energy projects, we can make robust predictions on the types of impact that the substations could have on the local Suffolk community.

2.2 A key challenge in conducting this analysis was the lack of independent longitudinal impact data on these case studies. For example, of the limited impact studies that exist, the vast majority are either conducted or funded by the construction or energy companies responsible for these projects. Whilst these reports cannot be completely discounted, to counter the potential bias, this report draws on data from a variety of mediums including impact studies, news reports and surveys.

2.3 Sizewell B background:

2.3.1 Consent for Sizewell B power station was granted in 1987, following a lengthy public enquiry (1982 and 1985) and strong opposition from local groups and anti-nuclear campaigners. Construction began in 1988 and was completed in 1995.

2.3.2 It represented one of the biggest European infrastructure projects of its time.<sup>1</sup> The total cost of construction was over £2 billion and over 20,000 individual jobs were created during this timeframe. Peak employment was over 5,000, and the presence of a large in-migrant work-force was a “particularly sensitive issue” (Glasson and Chadwick, 1995).

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<sup>1</sup> Following a long public inquiry, permission was granted based on a number of conditions and recommendations relating to local labour recruitment and traffic matters. John Glasson (2005) Better monitoring for better impact management: the local socio-economic impacts of constructing Sizewell B nuclear power station, Impact Assessment and Project Appraisal, 23:3, 215-226, DOI: 10.3152/147154605781765535



- 2.3.3 The host locality was the local authority district of Suffolk Coastal. The nearest small town was Leiston, with a population of about 5100 at the time, two miles to the west of the coastal Sizewell B construction site. The larger settlements of Lowestoft and Ipswich were more distant, at about 20 miles north and south respectively of Sizewell B.
- 2.3.4 This case study is relevant because Sizewell B and the proposed substations are both major energy infrastructure projects located in the same Suffolk district, impacting the same Suffolk communities such as Leiston, Thorpeness, Aldringham, Knodishall, Theberton, Aldeburgh, Friston, Wickham Market, Stratford St. Andrew, Glemham, Carlton, Saxmundham and Yoxford. Since Sizewell B has been completed and is operational, we can learn about the immediate and long-term impact of the project on the local community.
- 2.4 Hinkley Point background:
- 2.4.1 Hinkley Point C nuclear power station was approved by EDF board and the UK government in 2016. Construction has begun and it is due to be completed by 2025.
- 2.4.2 The plant, which has a projected lifetime of 60 years, has an estimated construction cost of between £19.6 billion and £22.9 billion. Financing of the project is still to be finalised, but the construction costs will be paid for by the mainly state-owned EDF of France and state-owned CGN of China.<sup>2</sup> Hinkley Point C is predicted to create 25,000 job opportunities.<sup>3</sup>
- 2.4.3 Hinkley Point C is located in Somerset and is a major energy infrastructure project currently under construction. Like the Applicant's proposed substations, it is in a rural area of the UK.

### 3. Crime

- 3.1 We anticipate that construction of the substations could lead to increased levels of crime and other behavioural problems in the host locality. This prediction is based on the experience of other large-scale infrastructure projects.
- 3.2 During the construction of Sizewell B, there was a noticeable increase in crime. For example, the number of arrests in the Leiston, Saxmundham and Aldeburgh area tripled from 188 in 1987 (first year of construction) to 572 in 1990. This increase was disproportionate to the increase in local population size - no more than 25% - and increase in national crime - slightly less than 20% - during the same three-year period.<sup>4</sup>

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<sup>2</sup> "Hinkley Point: EDF raises cost estimate for nuclear plant". BBC News. BBC. 3 July 2017; "Cost of Hinkley Point nuclear plant climbs another £1.5bn to over £20bn, as project is again delayed". The Telegraph. 3 July 2017.

<sup>3</sup> Department of Business, Energy and Industrial Strategy, 'HINKLEY POINT C WIDER BENEFITS REALISATION PLAN'  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/725960/HPC\\_Benefits\\_Realisation\\_Plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725960/HPC_Benefits_Realisation_Plan.pdf)

<sup>4</sup> Suffolk Constabulary Information was supplied by the Suffolk Constabulary on arrest levels in the Leiston Police Division. The data allowed the identification of Sizewell B construction employees in the local arrests, with a distinction being made between locally recruited and in-migrant employees. It



### 3.3 Police data highlights three important trends:

- 3.3.1 Arrests were significantly higher among in-migrant Sizewell B workers, than local. In the case of the substation, this is particularly concerning as the vast majority of workers will be non-local.
- 3.3.2 There was a significant increase in arrests of non-Sizewell employees. This indicates that construction had an indirect impact on local crime levels “with local people being more likely to commit certain offences or be arrested as a result of the presence of a large construction project in the vicinity”.<sup>5</sup>
- 3.3.3 A large proportion of the crimes committed were related to drink driving, public order and drunkenness. (See Appendix 1 for trends in arrest in Leiston)

### 3.4 Antisocial behaviour:

3.5 Furthermore, we anticipate that a large influx of migrant workers, largely male between the age of 30-55, will lead to an immediate increase in certain antisocial behaviours; a trend often underplayed in impact assessments.<sup>6</sup>

This includes:

- 3.5.1 Fly parking: This has been a particular problem at Hinkley Point, causing major public concern and high levels of complaints in several locations.<sup>7</sup>
- 3.5.2 Gambling: Socially there have been reports of increases in gambling in Bridgewater since the start of construction on Hinkley Point. One source in a local betting shop told of some workers spending up to £3,000 a week and others “self-excluding” from the premises to stop developing a financially detrimental habit”.
- 3.5.3 Prostitution and human trafficking: There is a well-known correlation between an influx of non-local workers connected to large construction projects and an increase in prostitution.<sup>8</sup> This point is illustrated by Sizewell B and Hinkley Point. During the construction of Sizewell B, pop-up brothels were common in Leiston. There have also been reports of brothels being established close to the vast building site on Hinkley Point. C. Sgt Emma Slade, who has responsibility for policing prostitution in Avon and Somerset, said: “Vulnerable women are being enslaved and exploited for sex within pop-up brothels. They are isolated and suffer terrible abuse. Many of the women are recruited and trafficked on false promises of

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should be noted, however, that the number of arrests does not always accurately reflect the number of offences committed (because many offences go unreported and many arrests do not result in convictions); this should be borne in mind by the reader. *Ibid*

<sup>5</sup> John Glasson (2005) Better monitoring for better impact management: the local socio-economic impacts of constructing Sizewell B nuclear power station, Impact Assessment and Project Appraisal, 23:3, 215-226, DOI: 10.3152/147154605781765535

<sup>6</sup> John Glasson (2005) Better monitoring for better impact management: the local socio-economic impacts of constructing Sizewell B nuclear power station, Impact Assessment and Project Appraisal, 23:3, 215-226, DOI: 10.3152/147154605781765535

<sup>7</sup> HPC construction: impacts monitoring and auditing study, FINAL REPORT, IAU December 2019 Study on the impacts of the early stage construction of the Hinkley Point C (HPC) Nuclear Power Station Monitoring and Auditing Study: Final Report (<https://heartofswlep.co.uk/wp-content/uploads/2020/06/Glasson-Report-2019.pdf>)

<sup>8</sup> <https://www.newcivilengineer.com/latest/suffolk-authorities-fear-sizewell-c-construction-will-lead-to-rise-in-prostitution-and-drug-dealing-14-10-2020/>



legitimate work but find themselves in a very different circumstance.”<sup>9</sup> In addition, concern about an increase in prostitution is shared by Suffolk County Council, Suffolk Police and Suffolk Healthcare services, who highlighted this as a key risk associated with the construction of Sizewell C, stating that “It is likely that online prostitution and brothels in privately rented flats and houses will become a new local business throughout the construction period. This has happened in most similar developments internationally”.<sup>10</sup>

- 3.5.4 Substance abuse: Suffolk County Council, Suffolk Police and Suffolk Healthcare services have also raised concerns about substance abuse connected to the construction of Sizewell C. “In terms of demand and supply, County Lines drug dealing (the illicit transfer of drugs from one area to another) follows the money. Whilst currently county lines are more numerous in Ipswich and the West of Suffolk, especially towards Cambridgeshire, there is potential for a County Lines East to develop, given the likely high disposable income of the Sizewell workforce.” Reports indicate that drug and alcohol abuse were/have been a problem at both Sizewell B and Hinkley Point.<sup>11</sup> Based on the same logic, we reasonably anticipate that the construction of the substation/s will result in increased levels of substance abuse.

## 4. Mental Health

4.1 We anticipate that the substations will have an immediate, as well as long-term, negative impact on the wellbeing and mental health of the local community and the substation workforce.

4.2 Immediate decline in workers mental health:

4.2.1 There is a clear correlation between the construction industry, in particular non-local workers, and poor mental health, with suicide rates among the demographic being three times the national average for men.<sup>12</sup>

4.2.2 Contributing factors in an overwhelmingly male environment (more than 85% of construction workers are male) are bullying, homesickness, relationship breakdown, job insecurity, financial pressures, and isolation, which are sometimes compounded by drink, drugs and gambling.<sup>13</sup>

4.2.3 This point is clearly illustrated by Hinkley Point C, which has experienced an increase in:

- 4.2.3.1 suicide attempts this year,
- 4.2.3.2 the number of people off sick with stress,
- 4.2.3.3 anxiety and depression, and
- 4.2.3.4 workers suffering from mental distress.

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<sup>9</sup> <https://www.theguardian.com/society/2019/oct/17/police-warn-somerset-holiday-home-owners-over-pop-up-brothels>

<sup>10</sup> <https://www.newcivilengineer.com/latest/suffolk-authorities-fear-sizewell-c-construction-will-lead-to-rise-in-prostitution-and-drug-dealing-14-10-2020/>

<sup>11</sup> <https://eachother.org.uk/hinkley-point-c-mental-health-crisis/>;  
<https://www.bbc.co.uk/programmes/p04q62gf>

<sup>12</sup> <https://www.theguardian.com/uk-news/2019/aug/13/revealed-suicide-alarm-hinkley-point-c-construction-site>

<sup>13</sup> Ibid.



- 4.2.4 For example, in the first quarter of 2019 10 suicide attempts were made and since construction began at least two workers have taken their own lives.<sup>14</sup> “We are in a phase now with mental health where we were with safety 50 years ago,” said Davies, a construction veteran who is a champion of mental health first aid at the site. “The same number of people are going off, only now they are not going off with injuries. They are going off with stress.”<sup>15</sup>
- 4.2.5 The disproportionate impact on non-local workers is clearly highlighted by one Hinkley Point worker who states that “We have the normal breakdown in relationships, men crying because their wives won’t take them back, things like that, but people are away from their family and friends and might not be able to cope as well as they would at home where they could have a beer with a friend and talk”.<sup>16</sup>
- 4.2.6 Arguably, whilst EDF has sought to downplay the problem at Hinkley Point, the steps that management have taken to address the crisis through its on-site mental health programme, which includes bringing in the former boxer Frank Bruno to talk to contractors about his mental health condition and training 5% of the workforce to be mental health first aiders, is a clear sign of the extent of the problem.<sup>17</sup>
- 4.3 Impact of Rising local unemployment on local community’s mental health and wellbeing:
- 4.3.1 As noted in other sections, construction of the substations are predicted to negatively impact tourism and result in increased unemployment and reduced income for those connected to this sector.
- 4.3.2 Furthermore, in the long-term, whilst construction might bring some economic benefit in other sectors, this initial ‘boom’ will likely be followed by a ‘bust’ once the substations are completed, contributing to further economic decline and unemployment in this region.
- 4.3.3 This trend is clearly illustrated in the case of Sizewell B. A study funded Nuclear Electric’s (company responsible for construction), highlights a significant proportion (1/3) of local workforce employed in its construction remained unemployed for at least 12 months post completion.<sup>18</sup> Predictably, there was an unequal distribution effect, with those considered more vulnerable, “older people, and those with fewer skills” finding it harder to secure replacement employment.<sup>19</sup>
- 4.3.4 We anticipate that economic decline of the local area will impact the community’s mental health, resulting in increased cases of anxiety, depression and potentially suicide.
- 4.3.5 Research highlights that the main health impact of rising unemployment and economic downturns is on mental health (including the risk of

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> JOHN GLASSON and ANDREW CHADWICK, ‘Life after Sizewell B Post-redundancy experiences of locally recruited construction employees’. The Town Planning Review, Vol. 68, No. 3 (July 1997), pp. 325-345. <https://www.jstor.org/stable/27798252>

<sup>19</sup> JOHN GLASSON and ANDREW CHADWICK, ‘Life after Sizewell B Post-redundancy experiences of locally recruited construction employees’. The Town Planning Review, Vol. 68, No. 3 (July 1997), pp. 325-345. <https://www.jstor.org/stable/27798252>

- suicide).<sup>20</sup> Indeed, “people with no previous history of mental health problems may develop them as a consequence of having to cope with the ongoing stress of job insecurity, sudden and unexpected redundancy, and the impacts of loss of employment (financial, social and psychological)”.<sup>21</sup>
- 4.3.6 This results in increased levels of anxiety, depression and in some cases suicide; “UK data from 2008 to 2010 concluded that every 10% increase in unemployment among men was associated with a 1.4% increase in male suicide”.<sup>22</sup>
- 4.3.7 Importantly, the mental health implication of unemployment and poverty impact the wider family and community. For example, a systematic literature review found that young people aged 10 to 15 years with low socio-economic status had a 2.5 higher prevalence of anxiety or depressed mood than their peers with high socio-economic status.<sup>23</sup>

## 5. Rent and house-price inflation

- 5.1 We anticipate an influx in non-local workers will increase demand for local housing, resulting in rent/house price inflation. This will have a disproportionate impact on young adults trying to get on the property ladder or rent an affordable property, as they will have to compete with higher waged non-local workers.
- 5.2 This concern has been illustrated by Hinkley Point. Despite EDF’s attempts to address pressures on accommodation - by building an onsite campus and establishing a £7.5m housing fund for local people, workers and tourists - many workers still rented privately and their high salaries had pushed up prices from an average of around £350 per month for a one-bed property to £500 or more.
- 5.3 A recent online search found the cheapest one-bed flat in Bridgwater was £450 per month, while most cost between £600-700. This has resulted in local people, particularly the poorest and most vulnerable, being squeezed out of the accommodation market.<sup>24</sup>

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<sup>20</sup> Elliott, E. et al. (November 2010) Working Paper 134: The Impact of the Economic Downturn on Health in Wales: A Review and Case Study. University of Cardiff: Cardiff School of Social Sciences. Available at: <http://www.cardiff.ac.uk/socsi/research/publications/workingpapers/paper-134.html>.

<sup>21</sup> Elliott, I. (June 2016) Poverty and Mental Health: A review to inform the Joseph Rowntree Foundation’s Anti-Poverty Strategy. London: Mental Health Foundation.

<sup>22</sup> Nathan Hodson, ‘We should prepare for the mental health impact of mass unemployment’, British Medical Journal (<https://blogs.bmj.com/bmj/2020/09/25/nathan-hodson-we-should-prepare-for-the-mental-health-impact-of-mass-unemployment/>).

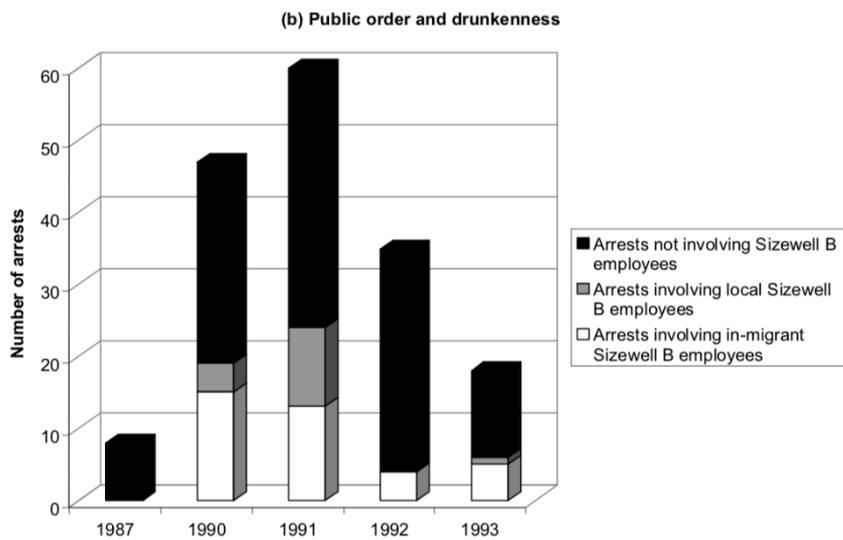
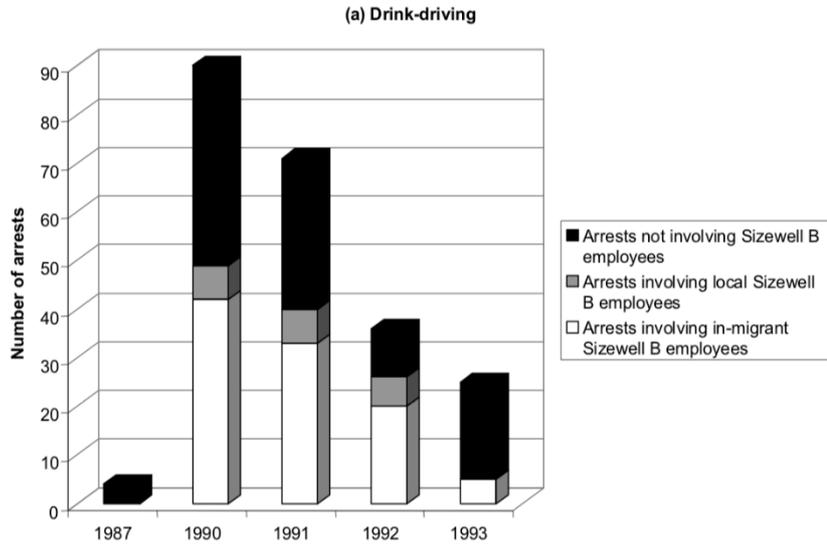
<sup>23</sup> Mark Lemstra, Cory Neudorf, Carl D’Arcy, Anton Kunst, Lynne M Warren, Norman R Bennett, ‘A systematic review of depressed mood and anxiety by SES in youth aged 10-15 years, *Can J Public Health*

. Mar-Apr 2008;99(2):125-9.

<sup>24</sup> <https://www.eadt.co.uk/business/hinkley-point-c-implications-for-sizewell-c-in-suffolk-1-6419441>



## Appendix 1 – Trends in arrest, for categories of offence, in the Leiston Division, 1987-1993, Glasson and Chadwick 1995



Prepared by Scarlet Sturridge



**Offshore Wind Farms**

**EAST ANGLIA ONE NORTH**

**PINS Ref: EN010077**

**and**

**EAST ANGLIA TWO**

**PINS Ref: EN020078**

**WRITTEN REPRESENTATION**

**ALTERNATIVE SITES / BEIS REVIEW**

**by**

**SEAS (Suffolk Energy Action Solutions)**

**Unique Ref. No. EA1(N): 2002 4494**

**Unique Ref. No. EA2: 2002 4496**



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## Alternative sites / BEIS Review

### Summary

1. The Applicant has adopted a flawed approach to onshore substation(s) site selection.
2. The Applicant has failed to consider alternative technology solutions with the consequential reappraisal of site options. New HVDC technology solutions enable greater flexibility in the choice of onshore infrastructure site.
3. Cumulative impact: the true scale of the National Grid Grand Plan for Friston has only been revealed by stealth over the last two years. It is intended to be the largest complex of its kind in the UK. Local communities were not aware of this scale.

What is the true role of National Grid in all this? We suggest that National Grid is the architect of the Grand Plan and should therefore be present at all Hearings and should answer questions relating to the site selection and technology solutions alongside ScottishPower.

4. The NSIP process is skewed in favour of the developer at the expense of the countryside, wildlife and local communities and their socio-economic well-being.
5. BEIS Review: we have requested that the BEIS findings due to be presented in December 2020 should inform the PINS Examination. The short to mid-term work stream should consider flexible integrated opportunities for projects including EA1N and EA2. We are a constructive solutions focused campaign and we have evidence that there is a better alternative solution.
6. In conclusion, the deleterious effects of these plans far outweigh the benefits. With one voice, the SEAS campaigners urge the Inspectorate to reject these ill-conceived plans and ask for a better alternative solution.

The amplification of these points is set out below:

### **1. Significant inadequacies in approach to onshore substation(s) site selection**

1.1 SEAC campaign (a complementary campaign group), has commissioned Trowers & Hamlins to demonstrate the flawed approach adopted by the Applicant. We quote herein the comprehensive and conclusive Trowers report, the extract relating to site selection.

1.1.1. The Applicant has adopted a flawed approach when selecting Friston as the preferred site for the onshore substation(s). The Applicant does not appear to have approached site selection in an objective and open-minded way, but has been driven



primarily by commercial and economic considerations. It is apparent that the location was decided first, and the attempts at justification for it came second, resulting in a number of inconsistencies in the methodology and approach to assessment.

1.1.2. Regulation 14(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572) (the EIA Regulations 2017) states that an ES must include 'a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the chosen option, taking into account the effects of the development on the environment.' Schedule 4(2) of the EIA Regulations 2017 elaborates on this and provides that the ES must include a description of the reasonable alternatives in terms of development location together with an indication of the main reasons for selecting the chosen option.

1.1.3. Chapter 4 of the ES is titled 'Site Selection and Assessment of Alternatives'. In the introduction to Chapter 4, it is stated that the chapter presents a description of the site selection process and the approach taken by the Applicant to define the various elements of EA1N. It also asserts that an important part of the Environmental Impact Assessment (EIA) process is to describe the reasonable alternatives considered during the evolution of the proposed EA1N project, such as development design, technology, location, size and scale, and to set out the main reasons for selecting the chosen option.

1.1.4. In considering the way that site selection is dealt with in the ES, it is important to understand the process by which National Grid evaluates connections. The Connection and Infrastructure Options Note (CION) process is the mechanism used by National Grid to evaluate the potential options for connecting EA1N (together with EA2) to the national electricity transmission network (NETS).

1.1.5. National Grid has prepared a 'Note on the assessment of options for the connection of the ScottishPower Renewables East Anglia ONE North and East Anglia TWO offshore wind farms to the National Grid network', dated 28 June 2018 (the Note) which explains why the two offshore windfarms are proposing to connect to the NETS in the Sizewell/Leiston area. Paragraph 5.5 of the Note states that National Grid is proposing a single new 400kV substation which, subject to consent being granted, would connect the following new sources of generation to the NETS:

- (a) East Anglia ONE North – 860 MW - connecting in 2027
- (b) East Anglia TWO – 860 MW – connecting in 2026
- (c) Nautilus (NGV) – 1500 MW – contracted to connect in 2025 but likely to move back a couple of years to align with consenting timescales in Belgium
- (d) Eurolink (NGV) – 1600 MW – connecting in 2025.

1.1.6. Section 6 of the Note provides a comparative assessment of connection options for EA1N and EA2 to connect in the following areas, all of which were ruled out for a number of reasons:

- (a) Connecting in the Bacton, Bradwell and Lowestoft areas on the coast;



- (b) Connecting to the transmission network in North Norfolk, near Brandon, Shipdham, Dereham, Necton, Little Dunham, Kings Lynn or Walpole;
- (c) Connecting at Eye/Diss in Norfolk;
- (d) Connecting at Norwich Main;
- (e) Connecting at Bramford, which was originally selected as the grid connection point for EA1 and two future East Anglia offshore projects;
- (f) Connecting at Sizewell;

1.1.7. In paragraph 6.6 of the Note it is stated as follows:

"Bramford was originally selected as the grid connection point for the East Anglia ONE offshore windfarm and two future East Anglia offshore projects. The onshore cable corridor for these projects was consented under the East Anglia ONE DCO consent. Following a design review of the East Anglia offshore projects (including the cable technology to be used to make the East Anglia ONE grid connection) it is only possible to accommodate the grid connections for East Anglia ONE and East Anglia THREE within the consented cable corridor. Any further connection at Bramford would require new cable routes to be developed and constructed."

1.1.8. Further, in paragraphs 6.8 and 6.9 of the Note, it is stated as follows:

"A connection in the Leiston area is close to Sizewell and the coast, avoiding a longer cable route penetrating further inland through Suffolk to Bramford or elsewhere on the transmission network. A short cable route means the interaction between the project and other parties, such as crossings, protected areas and settlements, can be minimised.

For these reasons, when considering connections efficiency, coordination, economic and environmental impacts, the Leiston area compares more favourably than other connection options and forms the basis of the connection offers for the East Anglia ONE North and East Anglia TWO projects."

1.1.9. Paragraph 6.2 of the Note sets out a number of reasons for discounting connecting in the Bacton, Bradwell or Lowestoft areas, including: that to do so would require the extension of the National Grid transmission network out to the coast in addition to the construction of a new National Grid substation; and that

1.1.10. a new double circuit overhead line from the existing 400kV network out to the coast across Norfolk, Essex or Suffolk would carry significant consenting and environmental challenge within the proposed timescales for connection (in particular identifying route options, consulting about those, obtaining consent for them and then building new transmission lines). Despite these challenges, Therese Coffey, MP for Suffolk Coastal, has consistently noted in her submissions regarding the proposed substation at Friston that Bradwell is a more suitable site for the onshore infrastructure associated with wind generation capacity in the Southern North Sea. In addition, there is already a line of pylons connecting the National Grid core network to Bradwell which served the Bradwell A nuclear power station until it was decommissioned.



The Relevant Representation of the Rt Hon Therese Coffey MP for Suffolk Coastal, received by the Planning Inspectorate on 27 January 2020 states as follows:

"The issue though in this application (in both these applications) is how best to connect these strategic offshore energy sites to the national grid. Throughout the consultation stages, I have suggested alternatives to Scottish Power Renewables, including the proposed nuclear site at Bradwell, which would have meant less onshore cabling and substations in a more appropriate location. SPR have chosen not to pursue that, which in my view would have made their applications acceptable and are instead proposing a 32-metre wide cabling corridor across 9km of sensitive landscape with large substations on the edge of Friston village, without adequate landscaping. My biggest concern is the size and scale of the substations proposed at Friston, which will have a devastating impact on the local environment including on local listed buildings which surround the substation site. Paragraph 151 of the National Planning Policy Framework (NPPF) states that 'plans for renewable energy should ensure that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts.' SPR's submission doesn't do that, especially when you consider all the other energy infrastructure which has been planned for this part of the Suffolk coast. This was the point made by the large number of people who attended my public meeting, which goes to show the strength of feeling locally. There is also a danger that the substation will need to be even bigger than planned. While I understand it is the intention to use SF6 cooling rather than air cooling to significantly reduce the size of the power stations, this cannot be taken for granted given the government's ratification of various amendments to the Montreal Protocol and the Kyoto Protocol, which aims to reduce significantly the use of fluorinated gases as, if released, they are very potent greenhouse gases. Air cooling infrastructure is much larger and would be a far worse outcome. When SPR first proposed Friston as a site for substations, I was clear that at the very minimum – on the basis of planning conditions if the inspectorate was minded to recommend the DCO be granted - they should dig them into the ground to reduce the visual impact. This does not form part of their plans and their proposed planting to screen the development is woefully inadequate, especially when you take into consideration the growth rates of their landscaping mitigation. This really needs further evaluation."

## Objections

1.1.11 The Applicant has failed to explain why connection to the substation at Bramford was disregarded for both EA1N and EA2.

1.1.12 From a review of the information contained within the ES as well as a number of additional documents, including those set out in the Background and Issues section of Representation 2, it is known that it was originally planned that the cable routes for EA1N and EA2 would use the previously approved EA1 and EA3 cable route and connect to the existing substation at Bramford.

1.1.13 However, in the summer of 2017 (at the same time that the review process for the consent for EA3 was taking place), the Applicant was pushing forward the CION process review which resulted in National Grid offering the Applicant an alternative grid connection in the Sizewell/Leiston area. The ES does not provide any detail about



the reasoning behind the CION process review, other than to provide the following text in Chapter 4 of the ES:

1. 1.14 "SPR engaged with National Grid in early 2017 to determine connection options for the proposed East Anglia TWO and East Anglia ONE North projects based on contracted background at that time and reflecting the projects' timescales and reduced capacities. This resulted in the CION process."

1.1.15 The ES does not further explain what the 'contracted background' was or what the issues regarding 'the projects' timescales and reduced capacities' were.

1.1.16 The ES does however provide in Table 4.3 of Chapter 4, an extract of from the CION Note (National Grid 2016) and provides information on the strategic level environmental considerations as part of the CION process. Option 1 in Table 4.3 involves a connection to Bramford substation. The Table also confirms that there are no high-level environmental designations at the existing substation. With respect to landfall/offshore considerations, the Table states that landing points in the vicinity of the existing Sizewell site have impacts on the Suffolk coast and Heaths AONB; however, EA1 has connected in this location so it is assumed that a landfall would be possible and a suitable landfall location has been identified from a consenting perspective. With respect to onshore considerations, the Table states that significant environmental constraints are evident on the south Suffolk coast, but careful mapping following the EA1/EA3 route could avoid designations. Based on this, it would appear that the environmental implications of connecting to Bramford are not the primary reason for discounting this option. It is noted that the text provided within Table 4.3 for Option 3 (Leiston) has been incorrectly copied and is merely an exact repetition of the text provided for Option 2. Table 4.3 is therefore inadequate and uninformative as to the point it is trying to make, especially as it attempts to conclude that the preferred option is Option 3. Without the summary for Option 3 provided in Table 4.3, the table very clearly sets out that Option 1 (Bramford) would be appropriate at a high level.

1. 1.17 The ES does not adequately explain why connection to the substation at Bramford was disregarded when this was intended to be the connection point at the outset. It would appear that the decision was not made on environmental grounds as the decision to construct a new cable route and three new onshore substations on greenfield land in Friston will lead to unnecessary destruction of another large area of the Suffolk countryside by the Applicant.

1. 1.18 In addition, the situation shows a lack of strategic, long term planning by both the Applicant and National Grid that will set a destructive environmental precedent if consented to go ahead.

The Applicant has failed to explain why connection to the substation at Bradwell was disregarded for both EA1N and EA2.

1. 1.19 Chapter 4 of the ES does not mention Bradwell once despite the many submissions of the Rt Hon Therese Coffey MP setting out her concern about the location of the substation(s) at Friston and her assertions that Bradwell would be a more appropriate location. In her recent Submission at the October Open Floor Hearing, Therese Coffey said: "Throughout the consultation stages, I have suggested



alternatives to SPR, including the proposed nuclear brownfield site at Bradwell, which would have meant less onshore cabling and substations in a more appropriate location.”

1. 1.20 In addition, it is known that there is a redundant substation at Bradwell. This is the point at which the overhead power lines start and the redundant substation has a sign on its fence saying "National Grid".

(Source: Trowers & Hamblins November 2020).

SEAS view this failure to explore fully the possibilities relating to Bramford or Bradwell for the EA1N and EA2 projects and a range of alternative sites for the subsequent projects destined for Friston as the nub of the whole issue.

We have therefore focused on this particular issue and we would suggest that the Inspectorate will need to revisit the Applicant's site selection process, taking into account the new offshore technology available.

## **2. Failure to consider alternative technology solutions with the consequential reappraisal of site options. New HVDC technology creates better solutions.**

Our objections are as follows:

2.1. The applicant should have factored in the alternative connections to Radial or Counterfactual or as we call them 'spaghetti'. In recent years, National Grid and the Applicant were aware of the new integrated possibilities using Modular Offshore Grids, (MOGs) meshed Grids with HVDC as an option, and other countries including Germany, Denmark, Holland and Belgium were powering ahead using these new innovative solutions.

2.2. Our fellow SASES campaign colleagues who are engineer specialists have put forward the alternative solution of using Bramford for EA1N and EA2 using the new HVDC technology using just one cable trench with three conductors and one converter station. Given the long-distance capability of HVDC that converter station could be sited on a brownfield site which is available. The Applicant may even have residual consent under their East Anglia One DCO for a cable route to Bramford.

2.3. The CION analysis which found a Grid connection at Bramford to be less economic for these new projects must have been made on the basis of HVAC technology, not HVDC, using four trenches with as many as 12 conductors.

2.4. An alternative financial and holistic design conclusion could be reached, showing a Grid connection at Bramford to be the most efficient and responsible option, which was in any case what the Applicant had originally expected and scored most highly by National Grid on a non-financial basis.

2.5. With regard to the UK's new emerging MasterPlan for offshore transmission infrastructure, National Grid and BEIS are working at present through their own



consultation processes, namely, National Grid ESO Consultation and BEIS Review “Offshore Transmission” to set out the overall thinking and strategy. This Masterplan could have been established in 2017. Some specialists would say it is long overdue. Reports have been considered in Whitehall and Westminster over the last ten years at least. These reports are in the public domain, including ones published in 2008, 2011, and 2015<sup>1</sup>. Offshore ring-mains were considered and rejected because the costs were deemed to be too great and legal and policy reforms were required. Other European countries were starting to devise coordinated offshore transmission infrastructure programmes. Our lack of holistic thinking in the UK about the benefits and synergies of coordinated planning has been a barrier to advancing our infrastructure development. The UK’s fragmented, piecemeal approach has become a major issue because the sheer volume of “spaghetti” connections and the consequences of this approach are now being revealed.

2.6. The reason why it is important to understand this history is because communities up and down the country are seemingly helpless victims of the failure to step change faster to more modern integrated solutions.

2.7. We believe that this particular DCO process cannot be considered in isolation of the full series of projects anticipated for the Friston area as detailed in Appendix 1. The concept of a Mega Hub makes sense. Given the scale of wind farms anticipated between now and 2030 and 2050, it must make sense to explore the synergies gained through clustering and hybridisation. If the core question is where to locate a Mega Hub for six to ten substations and inter-connectors close to the wind farms and close to the Grid, the answer could be to identify Norwich Main, or near Lowestoft and /or Bradwell. The pylons would need to be upgraded at Bradwell, but this is a small cost in comparison with saving AONB and unspoilt countryside as well as a dynamic and

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<sup>1</sup> 2008 report

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/196493/OES\\_NatGrid\\_OnshoreETS.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/196493/OES_NatGrid_OnshoreETS.pdf) At the request of the then Department of Energy & Climate Change (DECC), NG provides input to the “UK Offshore Energy Strategic Environmental Assessment”. Para 193 notes “if coordinated development does not occur and projects are considered on a piecemeal basis, the overall network design and substation extension requirements are certain to lead to a suboptimal solution with significant increase in the impact on the onshore network”.

2011 report <https://www.waveandtidalknowledgenetwork.com/wp-content/uploads/legacy-files/00883.pdf> Major offshore wind energy opportunity around East Anglia fully realised (circa 25GW) and Round 3 Offshore Wind Farm Connection Study was launched. The need for extension of Grid to coastal substations identified but noted that this would mean a new transmission line from e.g. Norwich to e.g. Lowestoft, which could have “long timescales”. Existing Bramford substation north of Ipswich was identified as a key connection point for Suffolk, not just Sizewell. Options included an “offshore ring main” (ORM) or similar to be completed by 2030.

2015 report <https://docplayer.net/18221124-Integrated-offshore-transmission-project-east-final-report-conclusions-and-recommendations-august-2015.html>

NG led the “Integrated Offshore Transmission Project” looking at options for coordinated connection of offshore wind energy from multiple companies (such as ScottishPower Renewables (SPR) and Vattenfall), including an “Offshore Ring Main”.



successful tourism sector in and around Aldeburgh. Over 12 to 15 years, that tourism sector could lose between £600m and £700m.

2.8. We urge the Inspectorate to give serious consideration to these failures to explore fully the best technology solution allied to more relevant options for site selection.

### **3. Cumulative impact: the undisclosed scale of the total project programme behind EA1N and EA2**

3.1. Local coastal Suffolk communities are **traumatised** by recent disclosures to the effect that the prospect is not what we thought. The actual project programme consists of a minimum of eight substations and inter-connectors, not two or three if we include National Grid's substation. We refer you to Appendix 1 for the full list of substations and inter-connectors. Let us be clear. This is the largest complex of its kind in Europe. Most local residents had in their mind a small discreet substation, the size of discreet installations elsewhere in the country. Initial consultations were misleading as we have discovered and made reference to in the previous chapters. Locals had absolutely no comprehension of the behemoths envisaged and the sheer number. These communities are shell-shocked, and totally baffled as to how on earth the Applicant could have possibly considered Friston as a suitable site for this Mega Hub. Let us be accurate. The UK's largest Mega Hub. We would find this laughable, if it was not so very serious. Numerous locals have exclaimed when they have been shown the Map and the drawings of the industrial complex: *"No, come on, you must be joking.."*

We ask the question: why has this not been a totally transparent process from the beginning? The Applicant should have to explain why has the information relating to the series of projects been slipped in over a period of two years? Was it because they knew there would be an uproar, but it would be too late to do anything because the DCO process is like a locomotive, once it starts it does not stop? The Disney "Lone Ranger" movie has an excellent dramatic moment showing how we see this process. The locomotive cannot stop even when a few people realise that it needs to stop. It carries on knocking down everything in its way, until it is derailed.

3.2. These projects will adversely affect an area far larger than Friston (Appendix 2 EAC submission by SEAS). They will impact The Sandlings, Minsmere, Aldeburgh, Snape, Thorpeness, Aldringham, Knodishall, Leiston. These places will become isolated islands, cut off by years of never-ending construction works, lorry parks, haul roads, trench works, and substations. The reverberations and ramifications will extend way beyond this small area and will be felt in Saxmundham, Yoxford, north to Southwold and south to Woodbridge and West to Framlingham.

3.3 National Grid has been planning this Mega Hub for some time. That is our deduction. Surely National Grid should be presenting the plans, not SPR?

We believe that SPR is the Trojan Horse, opening the gates for National Grid and others to bulldoze their way through.



3.4 SEAS supporters are shocked and upset about the way that this whole consultation process has been totally inadequate and wrongly structured to take into account the enormity of the overall programme.

Janice Turner has expressed in the Times on 29 October 2020 how it appears.

And, I quote: *“You’d assume green firms would strive to do this ( sic).. disgorge wind power on to the national grid in the greenest possible way. Alas, their only care is the bottom line. ..a cable trench as wide as a motorway will be drilled under fragile cliffs, disrupting bird sanctuaries, throwing farmland into a decade of excavation...such stupid vandalism. How can clean energy be so dirty? “*

#### **4. The NSIP process is skewed in favour of the developer at the expense of the local communities.**

4. 1. We ask the Inspectorate to explore the price that SPR and NG are able to compulsorily purchase prime agricultural land here in coastal Suffolk. The only beneficiary of these plans is, we would suggest, the Applicant(s). To buy this land cheaply and within a short period of time sell the site to another developer and profit from a land grab is in our terms the ugly side of infrastructure development. Our countryside is trashed in the name of green energy. Local communities gain nothing in the process, but lose much. What is fair in this?

4. 2. Our voices were not heard during the so-called consultation process. SPR failed to really listen. Their plans may deliver green energy, but we would ask the Inspectorate to understand what will be lost. Our haven is to be replaced with a *“hell on earth”*.

We urge the Inspectorate to recommend to the Secretary of State that this is too great a price to pay for green energy.

#### **5. BEIS Review: convergence of findings by end of 2020**

We had requested at the Preliminary Hearings that The PINS Examinations should be delayed (Appendix 3). This delay was not granted.

We were reassured to know that the Examiners will be “strongly alive” to the BEIS interim report relating to the short to medium work-stream.

We are concerned that we still do not know who the BEIS Review Committee members are. We had requested that they should not simply consist of developers and National Grid representatives. There must be some totally neutral advisers and community representatives. Otherwise, we worry that this will be just another window-dressing Review.

This Review should be able to encompass EA1N and EA2 given that these projects are not due to be completed until 2028.



## 6. Conclusion

6.1. We have focused on the broader issues in our Representations. SASES has produced excellent specialist submissions relating to Friston, in terms of Heritage, Landscape, Flooding, Noise and Light pollution, amenities and village life. We endorse these Representations.

Our additional issues are:

- 6.1.1. Habitats and Biodiversity
- 6.1.2. Thorpeness Cliffs and Coralline Crag
- 6.1.3. Air Quality, Traffic and Transport
- 6.1.4. Tourism and Economic decline
- 6.1.5. Social & Health Issues
- 6.1.6. Alternative sites / BEIS Review

These Representations in their totality give an overall picture of the salient issues.

6.2 We urge the Examiners to explore these issues as we have had to interrogate and scrutinise what is proposed. Our supporters have given up other projects to do this work for the last year and more.

6.3 SEAS campaigners regard this as an existential threat and we will continue to make our case until a sensible alternative solution is presented.

We believe that the deleterious effects of these plans far outweigh the benefits. To quote Therese Coffey, *“the impact of this proposal on the countryside, vital habitats, heritage assets, the amenities of local residents and tourism means that I formally object to these DCO applications and I urge the Planning Inspectorate not to recommend them to the Secretary of State.”*

We concur with Therese Coffey.

With one voice, SEAS Campaigners urge the Inspectorate to reject these plans.

Thank you.

## ATTACHMENTS

4.6.1 - APPENDIX 1 - SEAS Future Planned Energy Projects Connecting to the National Grid in the Sizewell/Friston Area of Suffolk

4.6.2 - APPENDIX 2 - SEAS submission to Environmental Audit Committee

4.6.3 - APPENDIX 3 - Fiona Gilmore’s SEAS oral representation at OFH1, 7 October 2020



Suffolk Energy Action Solutions

# Appendix One

## **FUTURE PLANNED ENERGY PROJECTS CONNECTING TO THE NATIONAL GRID IN THE SIZEWELL/FRISTON AREA OF SUFFOLK**

by

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Suffolk Energy Action Solutions

## Appendix One

### **Future planned energy projects connecting to the National Grid in the Sizewell/Friston area of Suffolk**

Eight Offshore Wind Energy Projects are widely believed to be planned to connect to the National Grid at Friston. (This does not include future windfarm projects as a result of the seabed leases awarded by the Crown Estate in relation to the Round 4 process). Cumulative impact means eight substations and interconnectors constructed sequentially or consecutively. Plus, the addition of a nuclear power station, one of the largest in the world. This will be the largest complex of energy infrastructure in the U.K. situated in one of the most fragile ecosystems in the U.K. These are judged to be ill-conceived plans where the process of choosing the site for the mega infrastructure hub is shown to be flawed. There are a number of better alternative brownfield sites for this designated vast complex.

#### **1. East Anglia One North Offshore Windfarm - ScottishPower Renewables - Projected to be completed in 2028**

An offshore wind farm which could consist of up to 67 turbines, generators and associated infrastructure, with an installed capacity of up to 800MW, located 36km from Lowestoft and 42km from Southwold. From landfall the cables will be routed underground to an onshore substation at **Friston**, which will in turn connect into the national electricity grid via a National Grid substation and cable sealing end compounds, the latter to be owned and operated by National Grid. <sup>1 2</sup>

#### **2. East Anglia Two Offshore Windfarm - ScottishPower Renewables - Projected to be completed in 2028**

An offshore wind farm which could consist of up to 75 turbines, generators and associated

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<sup>1</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-one-north-offshore-windfarm/>

<sup>2</sup> [https://www.scottishpowerrenewables.com/pages/east\\_anglia\\_one\\_north.aspx](https://www.scottishpowerrenewables.com/pages/east_anglia_one_north.aspx)



## Suffolk Energy Action Solutions

infrastructure, with an installed capacity of up to 900MW, located 37km from Lowestoft and 32km from Southwold. From landfall, the cables will be routed underground to an onshore substation at **Friston** which will in turn connect into the national electricity grid via a National Grid substation and cable sealing end compounds, the latter to be owned and operated by National Grid<sup>3 4</sup>

### 3. Nautilus - National Grid Ventures - Construction 2025-2028

The Nautilus Interconnector is a proposed second Interconnector between East Suffolk and Belgium. It would create a new 1.4 gigawatts (GW) high voltage direct current (HVDC) electricity link. The project would involve the construction of a converter station in each country and the installation of offshore and onshore underground direct current cables (HVDC) between each converter station and underground alternating current cables (HVAC) between the converter station and substation in each country. In the UK, the offer from National Grid Electricity Transmission (NGET) allows for a connection at a new 400kV substation located close to the Sizewell 400kV network, provisionally referred to as 'Leiston 400kV'. The current NGET substation location being promoted is less than ten kilometres from the coast, **i.e. Friston**.<sup>5 6</sup>

### 4. Eurolink - National Grid Ventures - Construction by 2030

EuroLink is a proposal to build a High Voltage Direct Current (HVDC) transmission cable between Suffolk and the Netherlands. The capacity of the link will be 1400MW. The proposals are to follow the same path as Nautilus (see above), **i.e. Friston**<sup>7 8 9</sup>

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<sup>3</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-two-offshore-windfarm/>

<sup>4</sup> [https://www.scottishpowerrenewables.com/pages/east\\_anglia\\_two.aspx](https://www.scottishpowerrenewables.com/pages/east_anglia_two.aspx)

<sup>5</sup> <https://www.nationalgrid.com/group/about-us/what-we-do/national-grid-ventures/interconnectors-connecting-cleaner-future/nautilus>

<sup>6</sup> <http://sases.org.uk/wp-content/uploads/2018/08/National-Grid-Briefing-Note-Interconenctors-Sizewell.pdf>

<sup>7</sup> <https://www.nationalgrid.com/our-businesses/national-grid-ventures/interconnectors-connecting-cleaner-future>

<sup>8</sup> <https://www.peacockandsmith.co.uk/project/nautilus-eurolink-interconnector-projects/>

<sup>9</sup> <http://sases.org.uk/wp-content/uploads/2018/08/National-Grid-Briefing-Note-Interconenctors-Sizewell.pdf>



Suffolk Energy Action Solutions

## **5. Greater Gabbard Windfarm Extension (North Falls Offshore Wind Farm) - SSE Renewables and RWE Renewables - Construction 2025 - 2030**

The North Falls Offshore Wind Farm will comprise a number of wind turbines on fixed foundations, plus dedicated offshore and onshore electrical infrastructure. The newly-signed lease agreement is for an additional capacity of 504MW, the same as the existing Greater Gabbard Offshore Wind Farm. "it will comprise wind turbines and their associated foundations, array cables which will connect the turbines to an offshore substation, export cables which will transmit the power from the offshore substation to shore, onshore cables and an onshore substation. National Grid has not completed its technical and environmental studies so no conclusion has been made about the location of the onshore grid connection at this stage. National Grid has not completed its technical and environmental studies so no conclusion has been made about the location of the onshore grid connection at this stage". It is widely believed that National Grid will seek to use the **Friston site**.<sup>10</sup>

## **6. Galloper Windfarm Extension (Five Estuaries Offshore Wind Farm) - RWE Renewables - Construction by 2030**

Five Estuaries is an offshore wind farm to generate in excess of 300MW. The project consists of (but is not limited to): an offshore wind farm, including wind turbine generators and associated foundations and array cables; transmission infrastructure, including offshore substations and associated foundations, offshore and onshore export cables (underground), including associated transition bays and jointing bays, an onshore substation, and connection infrastructure into the National Grid. It is widely believed that National Grid will seek to use the **Friston site**.<sup>11</sup>

## **7. SCD1 - National Grid ESO - Construction by 2028**

SCD1 consists of constructing a 2GW offshore HVDC link and associated substation works between Suffolk and Kent. This project appears to have been sanctioned without it going through the DCO process. "Preliminary work to identify the optimal connection substations at

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<sup>10</sup> <https://www.northfallsoffshore.com/>

<sup>11</sup> <https://fiveestuaries.co.uk/about/>



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both ends is ongoing". It is widely believed that National Grid ESO will seek to use the **Friston site.** <sup>12 13 14</sup>

### **8. SCD2 - National Grid ESO - Construction by 2029**

SCD2 consists of a second 2GW offshore HVDC link with associated substation works connecting Suffolk and Kent. This project is currently on 'hold' which means that it is considered optimal but delivery of this option should be delayed by at least one year. Again, it is widely believed that once sanctioned, National Grid ESO will seek to use the **Friston site.** <sup>15 16 17</sup>

### **In addition, there is Sizewell C Nuclear Power Station - EDF - Construction 2022 - 2034**

A New Nuclear Power Station on a 33 ha. site near Sizewell. Two EPR reactors will generate 3.34 GW of electricity with 4 on-site pylons connecting cables to a National Grid Substation. <sup>18 19</sup>

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<sup>12</sup> <https://www.nationalgrid.com/uk/electricity-transmission/document/134036/download>

<sup>13</sup> <https://www.nationalgrideso.com/document/162356/download>

<sup>14</sup> <https://www.eadt.co.uk/news/national-grid-proposed-1bn-suffolk-to-kent-transmission-route-1-6526632>

<sup>15</sup> <https://www.nationalgrid.com/uk/electricity-transmission/document/134036/download>

<sup>16</sup> <https://www.nationalgrideso.com/document/162356/download>

<sup>17</sup> <https://www.eadt.co.uk/news/national-grid-proposed-1bn-suffolk-to-kent-transmission-route-1-6526632>

<sup>18</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/>

<sup>19</sup> <https://www.edfenergy.com/energy/nuclear-new-build-projects/sizewell-c>