



Offshore Wind Farms

EAST ANGLIA ONE NORTH

PINS Ref: EN010077

and

EAST ANGLIA TWO

PINS Ref: EN010078

**SEAS response to the
Secretary of State's (BEIS)
request for further Information
(Flooding and other issues)**

DEADLINE – 30 November 2021

by

SEAS (Suffolk Energy Action Solutions)

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

Unique Ref. No. EA2: 2002 4496



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1. This submission responds to the request for submission issued by the Secretary of State for Business, Energy and Industrial Strategy (BEIS) on 2nd November 2021.

2. SEAS has submitted a separate paper on Flooding in the Aldringham and River Hundred Area. In addition, SEAS endorses SASES submissions with regard to flood risk and drainage at Friston. These unresolved issues relating to flooding give very clear reasons for refusal because the adverse impacts would outweigh the benefits of developing in this location.

3. If these applications are not refused, the substation site at Friston will form part of the East Anglia wind energy strategy and become the site of an 'Energy Hub'. Evidence for this hub has been well documented and, amongst other projects, is to include Nautilus and Eurolink Interconnectors. (see appendix one)¹ These additional projects, which have not been properly assessed within the Examination, will undoubtedly increase the risk of flooding to Friston Village and areas along the cable corridor.

4. The devastating impacts of these projects not only with regard to the impact of flooding but to the onshore economy, environment and local communities have been well documented throughout the nine month examination and clearly outweigh the benefits of these projects as a whole (see appendix two).

5. We are proposing a positive way forward, a 'split decision' so that:

(i) The offshore turbines are recommended for consent. This will mean that no time is wasted in respect of construction of the turbines.

(ii) The onshore infrastructure is rejected in favour of full consideration of better locations for this infrastructure where the adverse impacts, including flooding, are minimised at a brownfield or industrialised site.

6. In this way the offshore turbines can be consented and constructed as planned and cause no delay to the government's roll out of its 2030 offshore wind target.

7. A 'split decision' would enable an alternative brownfield or industrialised grid connection to be identified in line with the government's emerging environmental and wind energy policy and thereby ensure the onshore infrastructure minimises its environmental and community damage in line with the [Energy White Paper, Powering Our Net Zero Future](#). Alternative brownfield or industrialised sites have been identified:

¹ On 22 April 2021 this video [REDACTED] was uploaded onto National Grid's website, quite clearly showing National Grid's intention to make Friston into an Energy Hub.



(i) **Bramford**, as proposed by the late Chris Wheeler of Substation Action Save East Suffolk in submissions to the Planning Inspectorate, [REP9-076](#) and [REP12-127](#). An alternative grid connection for EA1N and EA2, with ONE cable trench (instead of the four cable trenches that are currently proposed for the connection of these same wind farms to Friston) to connect EA1N and EA2 to the existing NGET substation site of Bramford, at which SPR already owns land, thereby substantially reducing onshore environmental impacts. This alternative is understood to be compliant with the existing Ofgem regulatory environment.

(ii) **Bradwell**, as the Rt Hon Dr Therese Coffey, our local MP, has consistently proposed, which is the site of a redundant National Grid Substation. *“The long-term capacity of Bradwell as an integrated Wind Energy Hub has significantly greater potential than the Friston site. It is closer to London and on the coast thus negating the need for cable corridors to be dug and re-dug with every future wind farm project attempting to connect to the Grid. It is a brownfield site and in need of development”* Therese Coffey MP [[Rep10-070](#)]

(iii) **Isle of Grain**, an existing industrialised substation site on the coast which would result in significantly less environmental and socio-economic damage. Its proximity to London and the Kent connections for export to other North Sea Countries means the power is brought onshore close to centres of demand. Grain was the original preferred option for Nautilus according to the presentation given by National Grid Ventures in November 2018 to the Suffolk Coast and Heaths AONB.

8. It is quite likely that even if this Application is consented in full it may well miss the CfD (Contract for Difference) application window which opens on 13 December 2021. In this case it may be late 2023/24 before the Applicant has an opportunity to bid in a CfD. By 2024, if a split decision was granted and the consenting process was accelerated, (as it has been suggested it will be by the Secretary of State, The Rt Hon Kwasi Kwarteng MP), SPR would have sufficient time to submit an alternative proposal with a grid connection designed to cherish our environment and also maximise efficiency. Viewed in this way, no time would be lost in achieving 40GW by 2030.

9. A split decision would enable an onshore site to be chosen, such as Bradwell, with greater suitability to become an ‘Energy Hub’ in line with the government’s policy of integration of grid connections.

10. A hub, strategically planned, closer to centres of demand would increase efficiencies and surely negate the need for projects such as SEAL, a proposed offshore HVDC link whose purpose is to transfer energy from Suffolk down to where it is needed in Kent.

11. A split decision would enable an onshore site to be chosen which takes advantage of the BEIS Offshore Transmission Network Review (OTNR) which has requested proposals for



'Pathfinder' projects capable of early implementation. In the case of EA1N and EA2, these two projects can share the same technology, share the same developer (which quite possibly would negate the need for changes to legislation) and therefore have opportunities to integrate offshore and reduce the harmful onshore infrastructure. This does not require a ring main or shared assets but still enables an alternative grid location to be brought forward with less damaging impacts on our environment and coastal economies in line with the White Paper and objectives of the BEIS OTNR. Despite EA1N and EA2 offshore wind farm having many elements which would make them ideal projects for Pathfinder status, SPR has refused to come to the table. Given the harm that their current plans will cause, BEIS and Ofgem should step in to oblige them to integrate. A split decision would give the time needed to do this.

12. SPR has argued that the necessary HVDC technology is not available for such wind farm connections. This is nonsense. EA3 will be using HVDC connections. Most recently, Dogger Bank wind farm has announced a 1.2GW HVDC offshore substation to be installed in 2023. This technology *"is also expected to save hundreds of millions of pounds and could be used in future HVDC projects of a similar transmission capacity"*, (OffshoreWind.biz May 4 2021). Other North Sea neighbours, Denmark, Germany, Holland and Belgium are using technology to integrate offshore. If SPR were willing, they could coordinate their EA1N and EA2 wind farms and deliver the power from these two farms together to a single site using HVDC rather than HVAC technology. Ofgem has confirmed that *"there is scope for the development of shared assets and this can be considered within the existing regime"*.

13. Professor Tim Green of Imperial College London, co-author of the White Paper 'Net-zero GB electricity: cost-optimal generation and storage mix' has stated *"The capacity of offshore wind needed to achieve net-zero electricity for Great Britain in 2035 is at least twice the existing 2030 target"*. The UK clearly needs to ramp up the construction of wind farms. It is thus essential that we get this East Anglian Hub right NOW and save time by avoiding a lengthy judicial review process not only for EA1N and EA2 but for the future projects planned to connect on the shores of East Anglia such as Nautilus, Eurolink, North Falls, Five Estuaries, SEAL (SCD1) and SCD2.

14. Costs will be incurred wherever projects come ashore as National Grid will need to upgrade the lines. But the long term cost benefits from integration have been documented in NGESO's Offshore coordination Phase 1 Final Report that: *'Adopting an integrated approach for all offshore projects to be delivered from 2025 has the potential to save consumers approximately £6 billion, or 18 per cent, in capital and operating expenditure between now and 2050.'* Spaghetti like radial connections have long been discredited; we cannot afford to wait.

15. The split decision gives the government an opportunity.

(i) An opportunity to choose a Grid connection on a brownfield or industrialised site which has the long-term capacity to act as a wind energy hub and thus facilitate the timely consenting not only of EA1N and EA2 but future projects planned to connect in



the area. Thus avoiding the costly and lengthy Judicial Review process as has been experienced in Norfolk.

(ii) An opportunity to give new strategic direction to the UK's offshore wind industry and pilot an East Anglian 'Pathfinder' project with integrated offshore solutions in order to minimise the number of connections onshore and thereby creating significant economies of scale and synergies. A major opportunity to lead the world in terms of wind energy infrastructure.

(iii) An opportunity to nurture and grow the Suffolk Heritage Coast's nature based tourist economy.

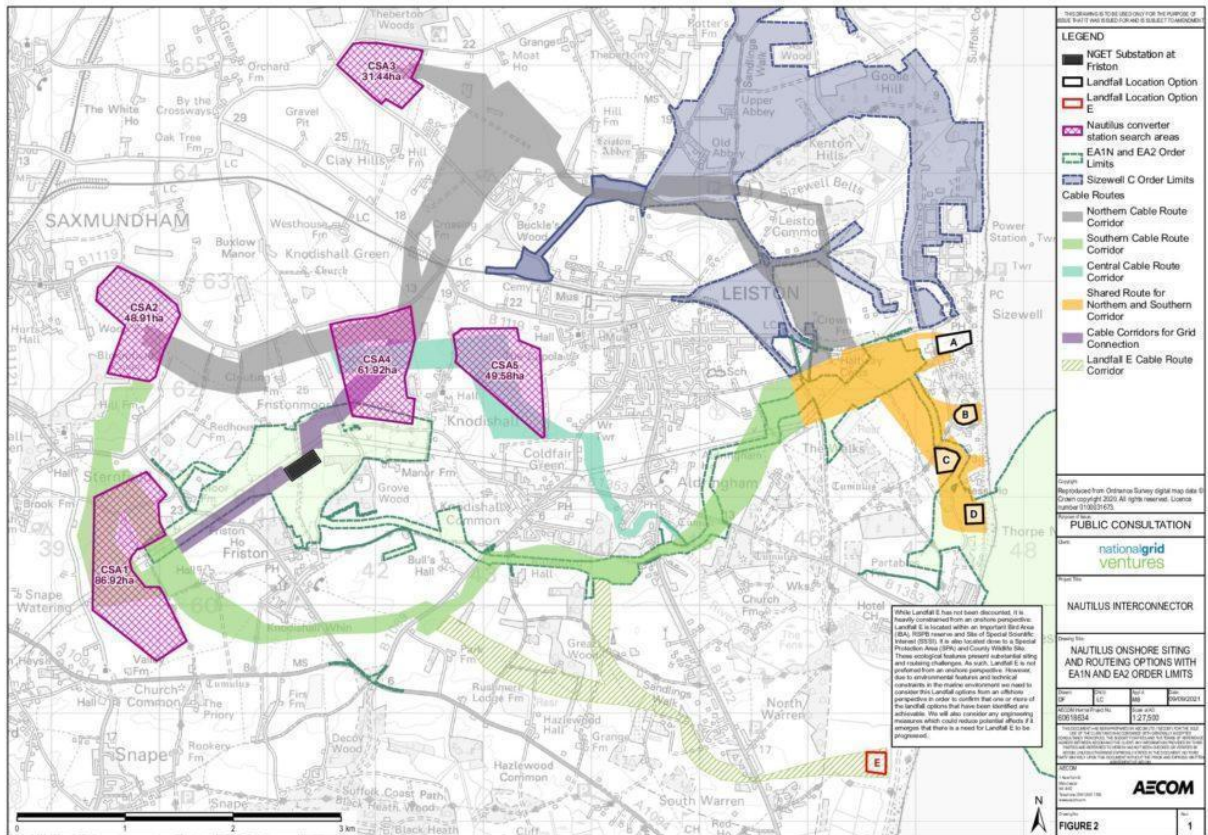
(iv) An opportunity to accelerate the government's wind energy targets.

(v) And ultimately the opportunity for a grid connection to be chosen in line with the government's environmental policy to protect unspoilt landscapes **and** biodiversity and prevent an environmental catastrophe.



APPENDIX ONE

Nautilus Interconnector onshore siting and routing options September 2021 National Grid Ventures





APPENDIX TWO

NEGATIVE IMPACTS

EAST ANGLIA ONE NORTH (EA1N) AND EAST ANGLIA TWO (EA2) OFFSHORE WIND PROJECTS

Economic Impact

Offshore wind will undoubtedly bring a positive national and regional economic impact and we welcome the regeneration possibilities for Lowestoft as a centre for the renewables industry.

However, at a micro level, around Friston and the surrounding towns and villages of Aldeburgh, Thorpeness, Snape, and the Heritage Coast, research commissioned by the [Suffolk Coast Destination Management Organisation \(DMO\)](#), suggests that new energy projects on the Suffolk coastline could damage one of the UK's most successful nature based tourism centres by up to £40 million per annum. Clogged roads and the perception of massive construction will lead to tourists choosing other destinations which are more attractive.

The destruction of swathes of unspoilt countryside which in turn will destroy a significant proportion of the nature-based tourism sector would not occur if the onshore substation complex was taken to an industrialised or brownfield site.

Environmental Impact

“We will safeguard our cherished landscapes, restore habitats for wildlife in order to combat biodiversity loss and adapt to climate change, all whilst creating green jobs.”
Energy White Paper Powering our Net Zero Future

These words in the Energy White Paper stand in stark contrast to the devastation inflicted if the current onshore plans for EA1N and EA2 are consented.

Any onshore substation and cable corridor will have an adverse impact on biodiversity but the current plans to connect EA1N and EA2 to the Grid are excessively destructive, gouging 9 km inland through the fragile Thorpeness Cliffs, across the Suffolk Coastal Path, the Suffolk Sandlings and the Suffolk Coast and Heaths Area of Outstanding Natural Beauty to arrive at the substation site of Friston, a medieval village in the midst of untouched countryside.

If consented, this destruction will be replicated and exacerbated for future interconnectors and wind farms including Nautilus and Eurolink and quite possibly Five Estuaries, North Falls, SEAL (SDC1) and SDC2, resulting in multiple cable trenches, multiple expansions to the substation



site and multiple additional converter stations. This Energy Hub is being planned on a massive scale. The substations planned for SPR's projects alone are nearly 3 times the size of Wembley Stadium.

Within the River Hundred valley four 'Priority Species': water vole, otter, bat and great crested newt have been cited. (Water voles cited by RSPB and Dr Gillian Horrocks of SEAS; otters cited by the RSPB and Dr Gillian Horrocks of SEAS; bats cited by local residents and NBIOS; and great crested newts cited by Bowland Ecology). Yet, SPR's surveys failed to spot them at the River Hundred. We believe that SPR has failed to abide by the law in protecting these Priority Species.

This degree of damage to an environmentally sensitive, diverse and legally protected landscape brimming with biodiversity, is unmitigable, unacceptable and given the availability of better industrialised or alternative brownfield sites either on the coast or using existing cable routes, indefensible.

With less environmentally harmful onshore solutions available, the onshore works, as they stand, should not be consented.

Community Impact

We recognise the impact this is having on the coastal communities which host this infrastructure and will ACT QUICKLY to take the necessary steps to address the situation.... This will consider the full impacts on affected communities, particularly on the east coast of England ..."

Energy White Paper 'Powering Our Net Zero Future

An overwhelming number of residents have courageously and passionately spoken out against the impacts of these projects upon their community, which is simply too great.

With Friston set to become an 'Energy Hub', both the huge substation site and the cable trenches will be in a permanent state of construction for the next 12-15 years, quite possibly longer if we factor in the next round of projects and decommissioning.

People have chosen to live in the midst of countryside free from the noise, lights and sites of an industrialised landscape. The substation site and cable corridors are at various points no more than 30m from gardens, a Parish Church, a medieval village, a primary school and a care home. The quintessential, rural character of Friston village will be torn asunder. Pilgrims paths will be desecrated. This is not a mitigable or legitimate sacrifice.

It is unconscionable to put down a substation in the heart of a medieval village, where noise, lights and industrial structures destroy well-being and mental health, if better site options exist. There are more suitable locations at industrialised or brownfield sites, where any unmitigable noise pollution, light pollution and air pollution, although present, will not impact on a local



community, school children, the elderly and perhaps most importantly the mental health of all who live within metres of this site or who will have their land forcibly acquired. The adverse impacts of the proposed cable route and substations clearly outweigh the benefits, when less damaging alternatives are available.

Cumulative Impact

It is inevitable that if EA1N and EA2 are approved at Friston then National Grid will consider the suitability of this site for other connections. Indeed, National Grid Ventures, is already consulting on the basis of a grid connection at Friston for Nautilus Interconnector (see Appendix One).

This is just the beginning. There are currently eight offshore wind energy projects and interconnectors that are widely believed to be planned to connect to the National Grid at Friston to form an Energy Hub. With the addition of Sizewell C Nuclear Power Station, this will become the largest complex of energy infrastructure in the UK.

1. East Anglia One North Offshore Wind Farm - ScottishPower Renewables
2. East Anglia Two Offshore Wind Farm - ScottishPower Renewables
3. Nautilus Interconnector - National Grid Ventures
4. Eurolink Interconnector - National Grid Ventures
5. North Falls Offshore Wind Farm (Greater Gabbard Extension) - Scottish & Southern Electricity/RWE
6. Five Estuaries Offshore Wind Farm - RWE
7. SEAL (SCD1) - National Grid Electricity Transmission
8. SCD2 - National Grid Electricity Transmission

To locate an Energy Hub, in the midst of one of the UK's most fragile nature-based tourism destinations will lead to: the decimation of a thriving tourism economy, a principal revenue stream for the Suffolk Heritage Coast; the destruction of biodiversity as multiple cable corridors cut through the protected landscapes of the Suffolk AONB and Suffolk Sandlings, and the decline of the health and well-being of those rural communities whose lives will never be the same. It is needless destruction when it is clear that there are more appropriate brownfield or industrialised sites such as Bradwell or Grain, which are better aligned with government policy.