

For deadline 28 February 2024

## SUMMARY

This Application is not suitable for the location chosen for the following reason:

1. The ‘Sussex Bay’, inshore coastal Sussex waters, is home to seven Marine Conservation Zones MCZs<sup>1</sup>. In the centre of these, and very closely bordering Kingmere MCZ and Offshore Overfalls MCZ, is the Rampion 2 proposal. Although the project area is not overlapping these MCZs, it is impossible to prevent impacts from affecting these areas. Impacts from piling (noise, concussion of seabed and water, sedimentation), operation (electromagnetic fields, continuous noise, non-native invasive species) are all likely if this Application were accepted. These risks are difficult, if not impossible, to mitigate and the effects of the above would be impossible to record accurately.
2. The cable route is proposed to come ashore and drill underground (Horizontal Directional Drilling) very near to a Site of Special Scientific Interest (SSSI) and a Nature Reserve (Climping & West Beach respectively). The Applicant argues this drilling would not disturb the wildlife above, however, the array itself would create a physical barrier to birds, bats and insects that migrate and forage in the proposed project area. This would contribute to **Biodiversity Net Loss**. There are 18 Red List species of insects found at Climping Beach & West Beach Nature Reserve.
3. The onshore cable route would, if accepted in its current Application, cut a scar across marshes, through ancient hedges and woods, and through the South Down National Park (SDNP), a highly protected Nationally loved natural asset. The offshore cable route would cut a swathe of destruction through the seabed, not only linking the Array to shore, but also interlinking all of the turbines (up to 90).
4. The sub-station is proposed on an untouched flood plain in the sleepy village of Cowfold, which *“contains huge biodiversity and acts as a massive carbon store, (making) achieving biodiversity net gain challenging. Based on Rampion 1’s poor track record regarding re-planting, numerous breaches of the DCO requirements, which caused pollution and contamination, and on-going regular flooding around Rampion 1 (cable corridor), there is a real danger of long-term damage and polluting the watercourses which feed the river Adur. There are a significant number and variety of protected and red- listed species including nesting nightingales, great crested newts, badgers, and turtle doves, that will be adversely affected, by the destruction of habitats, and noise and light pollution from both the construction and operation of the substation. The nightingale breeding sites are, perhaps, amongst the most significant in Sussex, and will not recover.”*<sup>2</sup>

## FULL TEXT

1. The construction of the project, if granted permission, would be disrupting to humans and wildlife alike, in such destructive ways as:

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1 Kingmere MCZ; Offshore Overfalls MCZ; Beachy Head West MCZ; Beachy Head East MCZ; Selsey Bill and the Hounds MCZ; Bembridge MCZ; and Pagham Harbour MCZ.

2 From Cowfold Residents Impact Statement on Rampion 2 Feb 2024 page 7

The piling noise of 241dB underwater, equivalent to 158dB in the air, is akin to a Howitzer Heavy Artillery gun going off at every strike. The physics of water are different from air as water is nearly incompressible, meaning that sound travels further without attenuation and the physical effects of the concussive impact of the sound waveforms. **Marine inhabitants would be, there is no question about this, affected by the powerful sonic blasts.** This would range from fleeing from their habitat (disrupting feeding, breeding, etc), physical injury such as deafness, concussion, and in some cases death will occur.

- This proposal starts only 8 miles out and is unprecedented in its scale this close to shore. The Sussex Bay is home to the miraculous regrowth of **Kelp Forest, this habitat is protected by Covention.**

- the Joint Nature Conservation Committee (JNCC) and The Convention for the Protection of the Marine Environment of the North-East Atlantic (the 'OSPAR Convention' Co-signed and ratified by the UK 22 September 1992) have **listed Kelp habitats in this area (Region III) as a threatened/declining habitat and are thus protected:**

*ARTICLE 2 In fulfilling their obligation under the Convention to take, individually and jointly, the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected, as well as their obligation under the Convention on Biological Diversity of 5 June 1992 to develop strategies, plans or programmes for the conservation and sustainable use of biological diversity, Contracting Parties shall:*

*a. take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and to restore, where practicable, marine areas which have been adversely affected; and*

*b. cooperate in adopting programmes and measures for those purposes for the control of the human activities identified by the application of the criteria in Appendix 3.<sup>3</sup>*

[Taken from Annex V to the Convention "On the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area"<sup>4</sup>]

Despite the claims by the Applicant that the sedimentation\* will not cause any issue in the short, medium nor long term, this particular Kelp forest is unlike others that are found on geologically firmer substrates and thus not comparable to present studies on Kelp and Offshore Wind Turbine construction. Strong bedrock is the perfect substrate for Kelp to grow, such as that found off the Scottish Isles, while this region (South East UK) has a mixed bed of fine and coarse substrate and chalk. Compounded by aggregate dredging up-current (as per usual west-east/longshore) from the Kelp, sediment is the biggest threat to a thriving Kelp forest. This threatened/endangered habitat is beginning to return due to a nearshore Trawler Byelaw (March 2021); historical trawling practices decimated 97% of this habitat. Sediment from construction of the turbines (piling and cable laying/burying) and decommissioning (cutting of towers/removal of cabling) will cause a layer of sediment that prevents the holdfast (the structure that anchors the kelp to the seabed) from finding stable enough substrate to maintain its life, washing ashore or out to sea instead. It would also cloud the water, suffocating light and oxygen from Kelp and also from the invertebrates, fish and mammals that inhabit this ecosystem. Kelp is for marine life a nursery, feeding & breeding area and is of vital significance to biodiversity.

\*PEIR of Rampion 2: Seabed disturbance during construction: Temporary disturbance to seabed habitat 26,421,466 sq. mtrs Total clearance of seabed for cables 4,500,000 sq mtrs Total clearance for foundations and legs 1,900,000 sq mtrs Estimate weight of the removed material hundreds of

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3 [https://www.ospar.org/site/assets/files/1169/pages\\_from\\_ospar\\_convention\\_a5.pdf](https://www.ospar.org/site/assets/files/1169/pages_from_ospar_convention_a5.pdf) 28 Feb 2024

4 [https://www.ospar.org/site/assets/files/1169/ospar\\_convention.pdf](https://www.ospar.org/site/assets/files/1169/ospar_convention.pdf) 28 Feb 2024

metric tons of 'sand and boulders', will be scoured. Total introduced hard substrate at seabed level 1,117,400 sq.mtrs. Decommissioning 25-30 yrs, disturbance of seabed habitat, 9,916,000 sq mtrs.

Another feature of the seabed in this area, which should render this Application unsuitable is Subtidal Chalk. It is a

- UKBAP Priority Habitat
- Listed in Annex 1 of the Habitats Directive: Reefs
- Occurs in marine Special Areas of Conservation (SAC), designated for their reef habitats.
- *Chalk (as subtidal chalk feature in MCZ and reef feature in SACs): chalk habitats are a relatively scarce resource. Britain has the greatest proportion of coastal chalk in Europe, despite this, chalk forms only 0.6% of the British coastline. Due to its scarce nature and inability to recover morphologically from physical impacts, cabling through chalk features should be avoided. As per other highly sensitive features, there may be instances where it is possible to cable within the site but only on other less sensitive habitats, avoiding impacting the chalk, however with the number of cables associated with windfarm developments this is becoming increasingly challenging.*<sup>5</sup>

Seahorses: **The Applicant erroneously states:** 8.9.23 *Records of seahorses are limited across the southwestern region, however again there are specific locations where seahorse is a listed feature, as described in above (Section 8.6), where individuals will be aggregated whilst breeding through the summer period. As outlined for black seabream, there are also wider areas within which seahorse will represent noise-sensitive receptors, specifically during the overwintering period for these species when it is understood they migrate to deeper waters further offshore. Low numbers of spiny/long-snouted and short-snouted seahorses have been observed in the area of the Proposed Development in common with the wider region.*

- **Neil Garrick-Maidment**, FBNA. Executive Director and Founder of The Seahorse Trust, Fellow of the British Naturalist Association, Visiting Fellow to the faculty of science and technology. Bournemouth University. Recipient of the David Bellamy Award for distinction as a field naturalist 2023 **commented on this Environmental Statement, stating that they have records from the fishing industry of seahorses overwintering offshore in large numbers**

2. **Insects were not considered by the Applicant;** Insects are numerically the largest of animal groups to be destroyed by wind farms. The turbines will represent a physical obstacle to regular, unmitigable natural processes such as Insect migration. The South Coast is an important insect migration highway. Insect impacts have the potential to arise when considering:

- The Woodland Trust states “Without insects we could not grow food, or sustain wildlife, which would be lost forever.” At least 75 percent of global food crop types depend on insect pollinators, including 70 of the 100 most important human food crops.
- Insects are key pollinators and without them human life would not be sustainable in its current density. They are crucial to ecosystems with respect to energy, nutrient, and biomass transport; regulation of crop pests; pollen transfer.
- 4 billion Hoverflies (80 tons of biomass) travel above southern Britain each year in seasonally adaptive directions, redistributing tons of essential nutrients and billions of pollen grains between Britain and Europe. 6 trillion aphids are consumed, and billions of flower visits are carried out by Hoverflies alone.

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5 <https://data.jncc.gov.uk/data/3c9f030c-5fa0-4ee4-9868-1debedb4b47f/NE-JNCC-advice-key-sensitivities-habitats-MPAs-offshore-windfarm-cabling.pdf> 26 Feb 2024 page 8

- **300 – 1,000 tons of insect biomass migrate across the Channel to and from the Southern area of the UK annually.**<sup>6</sup>
- **3.5 trillion insects fly or windsurf over southern UK each year.**<sup>7</sup> **The loss of insects via wind turbines is now a known phenomenon.**
- Model calculation of the amount of insect biomass that traverses wind rotors during operation provides a first estimate of the order of magnitude of 24,000 tons of insects crossing the German wind park throughout the summer season. Based on conservative model assumptions, five percent of the insects flying through a rotor could be actually damaged. The related loss of 1,200 tons per year since more than fifteen years could be relevant for population stability.<sup>8</sup>
- **Recently, the annual loss of insect biomass at wind turbines was estimated for Germany to amount 1,200 t for the plant growth period, which equates to about 1.2 trillion killed insects per year, assuming 1 mg insect body mass. Accordingly, a single turbine located in the temperate zone might kill about 40 million insects per year. Furthermore, Scheimpflug Lidar measurements at operating wind turbines confirm a high insect activity in the risk zone of turbines.**<sup>9</sup>

3. I refer to, and give support to, the Relevant Representations and Statutory Consultee Statements by Sussex Wildlife Trust, Natural England and Campaign to Protect Rural England for the potential impacts of this Project. We are in support of the Principal Areas of Disagreement statements by West Sussex County Council, Horsham District Council, Arun District Council.

4. I fully endorse the Cowfold Residents Impact Statement on Rampion 2, dated 2 Feb 2024, submitted to the Planning Inspectorate as a Written Representation.

I thank you for your time and regard in this matter.

Sincerely,

Elizabeth Marogna  
IP 20045425

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6 Mass seasonal bioflows of high-flying insect migrants GAO HU , KA S. LIM, NIR HORVITZ, SUZANNE J. CLARK, DON R. REYNOLDS, NIR SAPIR, AND JASON W. CHAPMAN SCIENCE 23 Dec 2016 Vol 354, Issue 6319 pp. 1584-1587 DOI: 10.1126/science.aah4379

7 Mass seasonal bioflows of high-flying insect migrants GAO HU , KA S. LIM, NIR HORVITZ, SUZANNE J. CLARK, DON R. REYNOLDS, NIR SAPIR, AND JASON W. CHAPMAN SCIENCE 23 Dec 2016 Vol 354, Issue 6319 pp. 1584-1587 DOI: 10.1126/science.aah4379

8 Interference of Flying Insects and Wind Parks Franz Trieb Stuttgart, 30.10.2018  
<https://docs.wind-watch.org/Interference-of-Flying-Insects-and-Wind-Parks.pdf>

9 Insect fatalities at wind turbines as biodiversity sinks [Christian C. Voigt](https://doi.org/10.1111/csp2.366) First published: 26 January 2021  
<https://doi.org/10.1111/csp2.366>