

Final summary of Environmental Risks and Benefits of the Proposed Rampion 2 Wind Farm

Introduction

This document provides a final summary of concerns, assessments, and recommendations regarding the proposed Rampion 2 Wind Farm turbine construction, operation and decommissioning as it pertains to coastal communities. It aims to highlight the environmental, social, and ethical considerations surrounding the project and to assist the UK Government in balancing the potential benefits of renewable energy with the risks of harm to the natural environment, biodiversity, and human well-being.

Environmental Risks and Concerns

The construction, operation, and decommissioning of Rampion 2 pose significant risks to both terrestrial and marine ecosystems. Key concerns include:

Landscape Noise (LN) and Human Health:

Construction noise from activities such as piling, drilling, and traffic is predicted to cause long-term disturbance to local communities and residents, particularly in coastal settlements.

Prolonged exposure to noise is linked to serious health issues, including stress, high blood pressure and hearing damage. Higher levels can cause neurological and organ damage.

Operational noise from turbines, including low-frequency infrasound, could negatively affect coastal communities, creating long term psychological and physiological stress.

Underwater Noise (UWN):

Piling and other construction activities including from the proposed 13.5m (not 10m as referenced) diameter monopiles are predicted to generate ambient surface noise levels as high as 240 dB(A) re 20 μ Pa, the extrapolated underwater equivalent of this is 302 dB(A) re 1 μ Pa (there is an additional 26 dB because the measurement is from a reference level of 1 μ Pa instead of 20 μ Pa, and there is 36 dB additional rise in pressure due to the higher impedance of water). This far exceeds the Marine Management Organisation's (MMO) recommended threshold of 135 dB(A) re 1 μ Pa and would prove impossible to mitigate to safe levels so close inshore.

The applicant has failed throughout the process to clearly demonstrate extrapolated and realistic underwater modelling projections based on their unprecedented proposal. These need much more scrutiny as the accurate generated levels will need more mitigation, be many times louder, will travel much farther and with a greater intensity than stated. This has been downplayed many times by the applicant, indeed even the recent documentation does so and portrays that mitigation isn't really necessary.

So close to shore, think, a Krakatoa type event for coastal communities, over a prolonged period. This is a serious warning for the whole of the Sussex Bay and cannot be emphasised enough. Such noise levels pose severe risks to marine life, including cetaceans (whales, dolphins, and porpoises), fish, and invertebrates. Potential impacts include fatalities, hearing damage, barotrauma, and habitat displacement. Other marine users, such as swimmers and scuba divers, would also be at risk of injury. Protected species such as seahorses, black sea bream, and spawning herring are at high risk, particularly within the Kingmere and other Marine Conservation Zones (MCZs).

Sound decreases by 6 dB per doubling of distance so:

Expect a 13.5m pile @ 240 dB(A) re 20 μ Pa @ 1m, to potentially still be an unbearable, ear splitting (way past the threshold of pain) 156 dB(A) re 20 μ Pa @ 16224m (approx 10 miles away!). Louder than a passenger jet aircraft taking off 6 feet away.

This puts coastal communities at great and very real risk of harm through construction noise.

There are a number of loud noises in the sea, but most are transient such as a cargo vessel, please bear in mind piling is not a single concussion, such as from a UXO detonation, but multiplied and compressed many thousands of times. In this instance prolonged over hours, days, months, years.

Underwater levels will carry even greater distances with very little dissipation, shock waves forming up after each other, the full extrapolation of which, from the correct figure for a 13.5m diameter monopile being 240 dB(A) re 20 μ Pa is not revealed anywhere in the underwater modelling projections. The applicant uses the reduced MMO figures as achievable numbers (and uses smaller piles for reference), but consistently failed to evidence the methodology to mitigate to these levels based on real world data, this proposal is unprecedented. A token gesture -20 dB DBBC will not resolve this issue so close to shore.

Cumulative Impacts:

Combined effects of construction noise, operational noise, vessel traffic, and habitat disruption could lead to long-term biodiversity loss in the Sussex Bay area.

Noise and vibration from the project may disrupt critical spawning and breeding cycles of fish species, with a negative cascading effect on the marine food web.

Significant underwater assets, including ship and aircraft wrecks, have been marked out as at risk of destruction, removing important historical and archaeological context for future conservation and interpretation.

Visual and Social Impacts:

The wind farm's proximity to shore (13 km at its closest point) would negatively transform the visual character of the Sussex coastline, impacting tourism, local communities, and the natural beauty and purpose of the South Downs National Park.

90 Eiffel tower sized black coated turbines clearly visible during the day, with red flashing lights across the vista on the turbines at night, causing an industrialisation of the seafront, would create a fencing in of the horizon and a hemmed in feeling of oppression, such as in high prison walls where there should be an unbroken horizon. This would severely degrade well being as well as the historical, cultural and recreational value of the coastline.

Ethical and Moral Considerations:

Nature is not merely a resource to be exploited but a shared heritage that requires careful stewardship for the benefit of current and future generations. The following ethical considerations should guide decision-making:

Intrinsic Value of Nature:

The natural world has inherent worth way beyond its economic or utilitarian value. Biodiversity and ecosystems provide life-sustaining benefits, including clean air, water, and climate regulation, which must not be compromised for short-term gains. Natural environmental processes of carbon capture such as kelp forests, for example, should be afforded extra protections from potential damage by industrialisation, including from pollution due to drilling, chemical release and excessive sedimentation which can stifle regenerative growth.

Precautionary Principle:

Where scientific uncertainty exists about the scale and severity of environmental harm, such as with the unprecedented levels of noise pollution that could be generated, precautionary measures must be taken. There is no empirical data on a wind farm this size and using smaller turbine data is very misleading. The burden of proof should lie with the developers to demonstrate that impacts can be mitigated to acceptable levels, in this instance this has not been achieved. If the technology does not exist to reduce these impacts to safe levels, then the project should be deemed unsuitable in its current time and location.

Sustainable Development:

True sustainability requires balancing environmental, social, and economic objectives. The Rampion 2 project, as proposed, risks creating irreversible environmental damage while failing to deliver equitable social benefits, particularly to economically vulnerable coastal communities.

Intergenerational Responsibility:

Decisions made today should not compromise the natural heritage, health, and well-being of future generations and their environments. The industrialisation of fragile coastal ecosystems is inconsistent with the ethical, moral and lawful obligations to protect biodiversity and human health.

Recommendations:

Enhanced Environmental Safeguards:

If suitable, genuine mitigation be possible, more comprehensive measures, such as multiple methods of noise abatement to be used at all times, strict adherence to MMO recommendations for underwater noise thresholds to be implemented, adhered to and monitored throughout the life of the project.

Alternative foundation technologies (e.g., floating turbines) should be explored to minimise seabed disruption and noise impacts.

Relocation of the Project:

Consider moving the wind farm farther offshore (20–25 miles) or elsewhere, (preferably with greater wind density) to reduce its impact on the more sensitive inshore marine and coastal ecosystems.

Transparent Monitoring and Accountability:

More detailed, independently scrutinised noise propagation modelling, real time as well as cumulative impact assessments and biodiversity monitoring should be made publicly available throughout the lifetime of the project to ensure safety, transparency, accountability and liability.

Community and Stakeholder Engagement:

Local communities and stakeholders, including conservation groups, should be more meaningfully involved in the decision-making to ensure their concerns are addressed, respected, considered in outcomes and not exploited for gain or ‘box ticking’ exercises.

Conclusion:

While renewable energy is critical to addressing climate change, it must not come at the expense of local ecosystems, biodiversity, and human well-being. The Rampion 2 project reflects a broader ethical dilemma: how to balance the urgent need for clean energy with the equally pressing need to preserve the natural world. The UK Government has an opportunity to lead by example, ensuring that renewable energy development aligns with the principles of sustainability, fairness, and respect for nature. By prioritising the protection of the environment and the well-being of local communities, the government can demonstrate its commitment to responsible and ethical decision-making, safeguarding both ecological integrity and human dignity for generations to come.

We believe these adverse environmental impacts that cannot be mitigated, together with the location-specific social and economic costs of this scale of infrastructure development in the ecologically sensitive Sussex Bay inshore also traversing the South Downs - far outweighs the assumed benefits.

Thank you for your time and consideration in this matter

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