

Press release

RWE's Sofia Offshore Wind Farm deploys innovative underwater bubble curtain to protect marine life

- **RWE has successfully deployed bubble curtain technology in the UK for the first time to protect marine life from offshore wind construction noise.**
- **The Sofia Offshore Wind Farm is pioneering sustainability with recyclable turbine blades and green service operation vessels.**
- **Sofia is actively supporting marine conservation initiatives through charitable contributions and partnerships.**

Teesside, 10 April 2025

RWE has been working with Hydrotechnik Offshore to successfully introduce an innovative underwater noise-abatement technology, known as a bubble curtain, for offshore wind farm construction in the UK. The breakthrough deployment at the Sofia Offshore Wind Farm, located 195km off the coast of England, represents a significant step in protecting marine life from underwater noise generated during piling activities.

The bubble curtain¹, already adopted across Europe, reduces the propagation of underwater noise by creating a barrier of rising bubbles around the turbine installation site. By dampening sound waves, this technology mitigates disturbances to marine species such as harbour porpoises, dolphins, and whales, which rely on ultrasound for orientation.

The system works by placing a perforated hose on the seabed around the turbine installation site, forming a 180m-wide ring. Compressed air is pumped through the hose, generating a continuous stream of bubbles that rise to the surface. It is this bubble barrier which effectively breaks up and slows down the sound waves, significantly reducing noise levels during piling operations.

RWE

The adoption of the bubble curtain at Sofia reflects RWE's dedication to sustainability and marine conservation. The project is situated within the Southern North Sea Special Area of Conservation (SAC), a protected zone for harbour porpoises, where noise disturbance regulations are strictly monitored.

Matthew Swanwick, RWE Sofia Project Director said, "By introducing the use of a bubble curtain on a trial basis, we are strengthening our commitment to environmental responsibility. Projects like this can ensure offshore wind energy can be developed sustainably, with minimal impact on marine life, taking cognisance of working with a Special Area of Conservation."

Sofia Offshore Wind Farm is pioneering sustainability through several initiatives, including using Recyclable Wind Turbine Blades: 50% of Sofia's 100 turbines will be equipped with recyclable blades, the highest proportion ever implemented on a major wind farm.

In addition, the project will utilise two of the world's first methanol- and battery-powered Service Operations Vessels, reducing CO₂ emissions by up to 10,000 tonnes annually.

Sofia is also delivering upon its commitment to marine conservation, with two recent charitable donations including a £25,000 contribution to North Sea Conservation, the charity behind the Whitby Lobster Hatchery, and approved funding for Clean Planet UK to remove abandoned fishing gear from the sea.

The Sofia Offshore Wind Farm, currently under construction on Dogger Bank, 195 kilometres from the nearest point on the UK's north east coast, will comprise 100 Siemens Gamesa 14 megawatt (MW) offshore wind turbines. Upon its commissioning in 2026, the Sofia project will have a capacity of 1.4 gigawatts, enough to power the equivalent of 1.2 million typical UK homes.

Images for media use are available from the [RWE Media Centre](#) (Credit: RWE).

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1 The technology aligns with the UK Government's updated guidance on reducing underwater noise from offshore wind construction, issued by the Department for Environment, Food and Rural Affairs (DEFRA) on 21 January 2025.



RWE

RWE is leading the way to a clean energy world. With its investment and growth strategy Growing Green, RWE is contributing significantly to the success of the energy transition and the decarbonisation of the energy system. Around 20,000 employees work for the company in almost 30 countries worldwide. RWE is already one of the leading companies in the field of renewable energy. RWE is investing billions of euros in expanding its generation portfolio, in particular in offshore and onshore wind, solar energy and batteries. It is perfectly complemented by its global energy trading. RWE is decarbonising its business in line with the 1.5-degree reduction pathway and will phase out coal by 2030. RWE will be net-zero by 2040. Fully in line with the company's purpose - Our energy for a sustainable life.

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