

## Adaptive approach to environmental monitoring for UK offshore wind projects

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### Summary

There are considerable differences to the approach to Environmental Monitoring for offshore windfarm projects in the UK and Germany. There are advantages and disadvantages to both approaches, with the greater degree of certainty over required monitoring for German windfarms versus the ability to achieve efficiency savings through a more adaptive monitoring approach in the UK, where the evidence supports this, and more limited opportunities for combining environmental surveys across projects.

Ørsted has considerable experience in the offshore windfarm sectors in both Germany and the UK, with a portfolio of projects spanning development, construction and operation phases. Tina Bendixen and Sally Holroyd will present this topic using case studies from Ørsted's UK projects.

### 1. Introduction

In Germany, all offshore wind projects undertake monitoring according to the requirements in the standard StUK4 [1]. In the UK monitoring requirements are more adaptive, are identified on a case by case basis, and are open to discussion between the regulator and the developer during the consenting or permitting phase and through to the operational phase.

The main aim of environmental monitoring in the UK is to address uncertainties identified in the Environmental Impact Assessment (EIA) and validate EIA predictions. However, the adaptive approach enables the developer to draw on data from previous survey programmes or published data. Should this data provide an appropriate evidence base to support the ES conclusions, the same survey undertaken on previous projects or in previous years may not need to be repeated.

A key factor in this is the process for consenting offshore wind farms, which uses a panel of independent examiners to assess the application using a purely evidence based approach. This has enabled the more traditional approach regarding the standard suite of required surveys to be challenged, and has resulted in a change of mindset for both regulators and developers.

### 2. Examples

Key examples will be drawn primarily from the Hornsea Zone in the Southern North Sea for which Ørsted has projects in both the development and construction phase. Where relevant we will draw on examples from our

other UK projects. We will draw from our experiences in relation to marine mammals, noise, benthic, ornithological and fish monitoring.

#### 2.1 Pictures



#### 2.2 Structure

Historically monitoring has been project/site focused but there is now additionally a focus on moving to a more strategic and zonal/regional approach to monitoring. Listed below are some examples of specific studies that are being considered on this basis:

- Lidar to measure bird distribution, abundance and flight height.
- Whole bird colony counts.
- More streamlined approach to geophysical seabed surveys.

### 3. References

[1] BSH, 2013. Standard. Investigation of the Impacts of Offshore Wind Turbines on the Marine Environment (StUK4).