Name	Phase	Seabasin	Location	Location Name	Wind Farm type	Lead	Timeframe	Target species	Target habitat	Technological readiness level	Project description/approach	Monitoring date and methods	Results – lessons learned in project on restoration
Light Design	Operational	North Sea	Scotland	Various Offshore Wind Farms (bottom fixed)	Offshore windfarm (bottom fixed)	Marine Scotland Directorate and RSPB		Birds	Above water habitat	**Concept**	Alter the pattern of illumination (flashing rather than steady lights), adjust light wavelength, directional intensity, shielding, reduce intensity, and reduce number of illuminated turbines	Monitoring of bird collisions and displacement with varying light designs	This concept was included in a study commissioned by Marine Scotland Directorate, though there's still high uncertainty about which approach would work best
Using Deterrent Devices for Birds and Bats	Operational	North Sea	Ireland	Various Offshore Substations	Grid Infrastructure	EirGrid	2023-2028	Birds, bats	Offshore substations	Implemented	Ultrasonic generators for bats and ADDs (Acoustic Deterrent Devices) for birds to prevent wildlife approach	Ongoing monitoring of bird and bat deterrence efficiency	Successfully implemented ultrasonic and ADD systems to prevent collisions with wildlife

Knowledge gaps left / recommendations	Possible negative effect	Sources	Credits
More research is needed on optimal light configurations and their effectiveness for bird migration patterns	Uncertainty in effectiveness of proposed lighting changes for bird protection, further studies are needed	Marine Scotland Directorate (2022). Offshore wind developments - collision and displacement in petrels and shearwaters: literature review Poot et al. (2008). Green light for nocturnally migrating birds	OCEaN mitigation database
Research on long-term effectiveness of deterrent devices in diverse environments is needed	Possible habituation of wildlife to deterrents over time	EirGrid Offshore Substation General Requirements Functional Specification	OCEaN mitigation database