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POSTER ABSTRACT

**Implications of marine bird behaviour in a fast tidal stream for interactions with wet renewable energy schemes: a Shetland case study**

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Wet renewable energy schemes, i.e. wave energy devices and tidal stream turbines, have the potential to place a new anthropogenic pressure on seabird populations. This can be through collision risk, disturbance and habitat loss. The diving behaviour, foraging patterns and seasonal distributions of a species are all likely to affect if and how they might interact with devices, and their vulnerability to any negative impacts. To understand which marine bird species are more likely to interact with tidal stream turbines we have undertaken behavioural observations from three vantage points along the length of Bluemull Sound, Shetland, prior to the deployment of a tidal stream device. We aim to establish the key marine bird species utilizing this high-energy tidal environment and explore if their behaviour and spatial distribution varies under different temporal and environmental conditions. The most frequently observed diving species during the breeding season were Black Guillemot *Cephus grylle*, Shag *Phalacrocorax aristotelis*, Puffin *Fratercula arctica*, Guillemot *Uria aalge* and Gannet *Morus bassanus*, while Black Guillemot and Shag were the most frequently observed species during the non-breeding season. We describe the key patterns of foraging activity and spatial distribution of this fast-flowing tidal stream and compare the potential for these species to interact with a tidal stream turbine.