

Recommendations for work on collision and avoidance rates from the Strategic Ornithological Support Services (SOSS) Steering Group

The Strategic Ornithological Support Services (SOSS) group brought together expert stakeholders to identify key ornithological issues relating to the expansion of the UK offshore wind industry. This document provides a summary of recommendations for further work on collision and avoidance rates identified by members of the SOSS Steering Group, as part of the strategic field-based project planned by The Crown Estate.

The analyses of avian collision risk that are currently undertaken to inform the assessments for proposed wind farm developments are dependent on a number of assumptions, most notably the avoidance rates used (see SOSS-02 review). Existing studies of avoidance have varied in their methods, and while some notable studies have taken place recently, without replication from additional sites there remains a very limited evidence base. There is, therefore, an urgent need for a strategic field-based project to collect data on actual collision rates at offshore wind farms and so validate the avoidance rates used in impact assessments.

The project should build on the SOSS-03 review of technologies to monitor collisions of birds with offshore wind farms and will need to incorporate a considerable development component to allow for the offshore testing and validation still required for the realisation of a suitable system. A number of further key considerations should be noted:

- The length of study required (given that collisions are rare events);
- The number of study sites required to provide an understanding of mean avoidance rates, and the variation around these, that can be used to provide recommendations as to the avoidance rates to be used in collision risk modelling;
- Key species of concern (see SOSS-03 outputs) and thus the study sites considered;
- The need for associated monitoring to put the relative frequency of collision events in context and so be able to validate avoidance rates. Thus, in addition to the development of technologies to monitor collisions, the study should also include radar and visual monitoring;
- The technologies used to monitor collisions should also be able to record collisions during both day and night, and in all weather conditions, so as to be able to provide an understanding the factors causing variation in collision rates;
- The need for species identification;
- The need to understand variation in collision rates across the wind farm area.

Additionally, it may be beneficial to undertake further investigation of different techniques for modelling collision risk. Different models could be used to estimate collision risk and the results could be validated by comparing them to actual collision rates measured as part of the field-based project described above. This would allow the identification of which modelling techniques provide the most accurate results for different species and in different situations, and allow models to be refined to provide the best possible estimates of actual collision rates.

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