Owen, E. 2013. *BOU Proceedings – Marine Renewables and Birds*
http://www.bou.org.uk/bouproc-net/marine-renewables/owen.pdf

This paper forms part of the proceedings from the BOU conference ***Marine Renwables and Birds***
Other papers from these proceedings can be viewed at www.BOUPROC.net.

Connectivity between seabird SPAs and wind farms: an overview from the FAME project

ELLIE OWEN
RSPB, The Lodge, Sandy, Beds. SG19 2DL, UK
Email: ellie.owen@rspb.org.uk

The UK holds almost 100 internationally important coastal and offshore seabird colonies which are designated under UK law as Special Protection Areas (SPAs) according to the EU Birds Directive. The UK has an international responsibility to safeguard the future wellbeing of the 25 seabird species which depend on these colonies for breeding, and also ensure adequate protection of the adjacent and offshore marine areas upon which they rely for food. Proposals for new marine installations are required to assess the likely impact on such designated features. Whilst at-sea surveys can provide valuable information on where important aggregations of seabirds occur, such surveys cannot establish the provenance of individuals, which is of crucial importance in establishing connectivity between the impacts of offshore developments and SPA seabirds. Information from seabird tracking studies may be of value in establishing the mean and maximum foraging ranges of individual species, and species-specific values may then be used to infer the likely colony origins of at-sea concentrations of seabirds. Here we present an overview from the RSPB's Future of the Atlantic Marine Environment (FAME) and allied projects, which have to date tracked 844 individual seabirds of five species from 20 colonies across the UK. The data collected show that some species are capable of travelling much further from the colony than previously reported and that there is considerable inter-colony variation in foraging ranges for some species. It remains unknown how these patterns change over longer time scales, but we demonstrate both stability and variation in foraging locations over 3 years of tracking. This new information provides an improved evidence-base for understanding connectivity between offshore developments and designated seabird colonies. For those colonies where tracking has been carried out, clear information on connectivity is now available. However, for the majority of SPA colonies and species, for which empirical data are not currently available, a modelling approach is required. In its simplest terms, such a model relies solely on species-specific foraging information, which may poorly represent actual foraging behaviour for many colonies. Incorporation of colony-specific attributes and information on oceanographic features in the surrounding waters may increase our ability to accurately predict foraging locations in such cases.