



*This paper forms part of the proceedings from the BOU conference **Marine Renewables and Birds**
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CONFERENCE INTRODUCTION

Marine Renewables and Birds

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The drive for renewable energy is an increasingly prominent theme in the policies of the UK Government and of the Devolved Administrations. The Scottish Government gives particular emphasis to renewables in its economic strategy, recognizing that Scotland possesses certain environmental advantages over some other countries, and has correspondingly ambitious targets for electricity generation and carbon emissions.

Marine renewables will be an element in the emerging mixed base for power generation. Offshore wind is clearly the most mature technologically, but wave and tidal energy projects have the potential to exploit different aspects of the marine energy resource, and add diversity to the marine sector.

The role of Government is to set clear objectives, and to establish policies, instruments and procedures to enable development to meet these objectives. Development must take into account existing uses of the sea, and a wide range of other national and international obligations. In other words, it must progress along sustainable lines. Ornithological interests, particularly those related to protected locations and species, are one of the considerations setting the landscape for sustainability.

The Scottish Government has stated that future marine renewable energy developments should be plan-led, sustainable, occur within a commercially attractive and facilitative setting, and bring economic benefits to Scotland's people. To these ends, the marine planning authority in Scotland, Marine Scotland, has developed a sectoral planning approach to the renewables industries with the ultimate aim of increasing the efficiency of the licensing process.

Ornithological information is required at several stages in the process from plan initiation to licences being determined. As experience is gained in use of the planning and licensing processes, it has been possible to identify key gaps in knowledge, and various players have become more prominent in commissioning survey and research work. Current needs include:

- 1 Early Scoping Study stages of planning
 - National-scale maps of the distributions of protected species at sea
 - National-scale understanding of the relative importance of different sea areas
 - Sensitivity maps of the sea
- 2 Strategic Environmental Assessment, and associated HRA
 - Understanding of the capacity of marine space to accommodate development
 - What limits to growth, at national or regional scale, are presented by marine ornithology?
- 3 Plan refinement



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- On a regional or more local scale, can more sensitive areas be identified where development might be particularly harmful (in addition to Natura sites)? See the Zonal Appraisal approach
- Is there scope to review the application of the Birds and Habitats Directives to better reflect current national aspirations?

4 Licensing

- Up-to-date information on the use of sea areas by birds. European Seabirds at Sea (ESAS)?
- Continued improvement for models of collision risk and of the consequences of displacement
- How much displacement actually happens?
- Behaviour of diving seabirds in tidal streams and their reactions to underwater turbines
- Improved, validated models of seabird population dynamics
- Better quantification of collisions and more reliable estimates of avoidance
- Better targeting within the Environmental Impact Assessment (EIA) and HRA process to concentrate on significant risks

This list is inevitably incomplete. However, it is important that critical evaluations are made of the gaps that need to be filled to allow regulators to have sufficient confidence in their recommendations to Ministers. Renewables will inevitably alter the pattern of use of the sea. The ultimate balance of interests within the new pattern has yet to be made clear.