

# Marine Scotland

COLLATION OF DATA ON SALMONID POPULATIONS IN  
THE SOLWAY REGION TO ASSESS THE POTENTIAL  
INFLUENCE OF THE ROBIN RIGG OFFSHORE WIND FARM  
DEVELOPMENT

# Marine Scotland



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# RESEARCH SPECIFICATION

Project No: WP AP 5

COLLATION OF DATA ON SALMONID  
POPULATIONS IN THE SOLWAY REGION  
TO ASSESS THE POTENTIAL INFLUENCE  
OF THE ROBIN RIGG OFFSHORE WIND  
FARM DEVELOPMENT

## **Research Specification**

**Collation of data on salmonids populations in the Solway region to assess the potential influence of the Robin Rigg offshore wind farm development.**

### **Introduction**

1. This specification sets out the terms of reference for the research project “Collation of data on salmonids populations in the Solway region to assess the potential influence of the Robin Rigg offshore wind farm development”. The project will identify and compile (in agreed formats), available data gathered before, during and after installation of the Robin Rigg offshore wind farm.

2. The Scottish Government has a target for 100% of Scottish demand for electricity to be met from renewables by 2020 by creating a balanced portfolio of both onshore and offshore technologies. The Robin Rigg wind farm development was the first major offshore wind farm development in Scotland. The development can produce approximately 180 Megawatts of electricity from 60 turbines. Robin Rigg is located on the Scottish side of the Solway Firth. It is 11 km from the nearest landfall at Balcary Point on the coast of Dumfries and Galloway, and is 13 km from the Cumbrian coast. Each of the 60 turbines are connected to offshore substations by subsea cables. These substations are connected to the local electricity distribution system by two 132kV cables. The cables come ashore near Seaton, Cumbria, where they run about 2km inland to a new onshore substation.

3. With this development came the opportunity to monitor and assess environmental impacts, to inform future decision making and monitoring plans. The potential for interactions of the development with salmon and sea trout was recognised late in planning of the environmental monitoring programme and a robust monitoring plan was not established in the way that it had been for birds and marine mammals. However, there is a strong desire to determine if available data reveals anything of potential impacts and if not whether this is due to convincing evidence of no impact or inadequate monitoring effort. In particular there is a strong desire to apply lessons learned from Robin Rigg in the design of future monitoring activities.

### **The Study**

4. It is thought that the most likely cause of impacts on migratory fish from offshore wind developments would come from barrier effects, arising from the response of fish to structures in the water, noise and electrical/magnetic fields arising as a consequence of power transmission through associated cabling. A range of disparate data is available for the area and there is a desire to establish the potential for these data to inform us about the impacts of wind farm development.

5. The project will aim to clarify exactly what data are available and for what time periods. These data then need to be collated in common and readily useable formats for use by Marine Scotland Science following discussion between MSS and the chosen contractor.

## **Aims**

6. The aim of this research project is to identify and compile (in agreed formats), available data gathered from the Solway region in order to inform potential impacts on migratory fish such as salmon and sea trout.

7. This is stage one of a two part project that will provide information to assist Marine Scotland Licensing Operations Team, Science and Planning and Policy, as well as offshore wind developers, to assess the potential impacts of offshore wind farm developments on migratory fish species as part of the required environmental evaluations.

## **Objectives**

8. The research objectives for this project are as follows:
- establish the availability of datasets with those involved in data collection in the Solway area, particularly Environment Agency, Galloway Fisheries Trust, Scottish Power;
  - Produce a meta-data summary report of available data (Maps with sites, tables showing sampling frequency, method, data duration, etc);
  - meet with staff from MSS to agree which datasets are useful and should be taken forward;
  - Consult with MSS and agree a series of common data formats for each data type (fish counter, electrofishing etc);
  - compile datasets from different sources into common formats for each data type (counter, electrofishing) and deliver them to Marine Scotland Science in agreed electronic formats;
  - respond to queries from analysts with respect to compiled data during the later analysis phase (phase 2 project).

## **Methods**

9. It is anticipated that the successful contractor will develop the proposal in line with the aims and objectives of the project and wider policy requirements. However, as a minimum it is anticipated that the contractor will be able to draw upon significant experience of collecting data within the Solway Firth region.

10. The responses to the tender should include details of the approaches to be taken to the identification and review of available datasets, consultation methods with MSS and previous experience of compiling datasets from different sources into a common format for each data type.

11. The contractor is encouraged to expand and develop their ideas based on the information presented here to fulfil the project requirements in the optimum manner.

### **Research Output**

12. At the end of the contract, the successful contractor will provide the Scottish Government with the following outputs:

- A short and concise final written report summarising the meta data available and collate and deliver those datasets that MSS deem useful in a format specified by MSS.
- Delivery of the final report should be supplied in hard copy and a disc copy of the final version in a format compatible with Microsoft Word.

### **Timing**

13. It is envisaged that the study will begin in August 2012 and will be completed by 1<sup>st</sup> November 2012.

### **Project Management**

14. The project will be jointly managed by Marine Scotland Planning & Policy and Marine Scotland Science. Officials from both teams will meet with the contractor after the contract has been awarded with further meetings organised as necessary.

15. The contractor will be expected to engage in a close working relationship with Iain Malcolm or other nominated persons in Marine Scotland Science.