

Forestry Commission

GIS



Research & Development

Client

Forestry Commission

Location

Scotland

Awarded




2014-16

Overview

Development of an accurate and time efficient run of river hydro scheme assessment tool for the Forestry Commission.

 **Multiple sites**

Project Team

-  Martin Gorevan
-  Andrew Jenkins
-  Simon Glen – Specialist

Project

Run of the river hydro schemes use the natural downward flow of rivers, incorporating a micro turbine and generator to capture the energy carried by water. Water is taken from the river at a high point and gravity fed down a pipe to a lower point, where it emerges through a turbine generator and re-enters the river. The main benefits are low installation cost, very limited environmental impact and more consistent electrical generation than other small-scale renewable systems.

However, the evaluation of large numbers of potential schemes is labour intensive and very slow. As such, the objective of the project was to develop an assessment methodology using GIS for the simultaneous evaluation of a large number of potential sites belonging to the Forestry Commission. The software developed allowed Zebec to produce a short-list of the 12 best sites for development in the space of only six months.

Key Skills

-  GIS
-  Experimental programme
-  Mapping
-  Computer simulations
-  Data collation
-  Data Analysis
-  Financial modelling
-  Client Reporting

“At the outset of this project it wasn't possible to robustly and reliably evaluate a large number of sites simultaneously – now we can thanks to the research & development by Zebec.”

