

Capability Statement

Hydro Electric

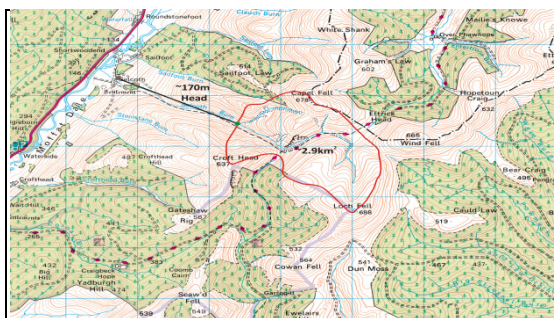


Green Cat Renewables



Green Cat Renewables Limited provides environmental, technical and project management support for hydro electrical scheme developers. There are several stages involved in developing a project of this nature, taking it from outline design through to construction.

The first stage involves visiting the site to assess the potential viability of the project. The location of the inlet works, pipeline route and power house are considered at an outline design level.



Once the catchment has been defined, Low Flow's 2000 software is used to estimate the flow distribution curve. This software is the industry standard and accepted by the Scottish Environmental Protection Agency (SEPA) when applying for an abstraction license (CAR license). When a scheme's feasibility has been established there are several aspects to a project of this nature;

- The grid connection is necessary to export the power into the grid. We can manage the connection application process and negotiate the connection agreement.
- A CAR License is required from SEPA. We can manage the process from initial consultations with SEPA through environmental assessment and license application.

- Planning Consent is also required. We can manage the process from initial consultations with the local planning authority and consultees such as SNH through environmental assessment and application.

In addition to securing consents we can provide engineering services to deliver the project.

- The Conceptual design starts with a topographic survey which is used as the basis for outline designs for the inlet structure, penstock (pipeline), power house and tail race.
- The most appropriate turbine type is determined based on the flow and available head. Then turbine manufacturers are contacted to obtain budget quotes. There are no "off the shelf turbines", each is designed to suit the site conditions.
- A budget estimate is produced based on the outline design and the predicted revenue forecast is calculated.
- Detailed design drawing and specifications are produced and contractors are invited to tender for the work. Tender evaluation is carried out to ensure the client obtains best value for money.
- Tender appraisal is carried out on the finalised offer from the turbine manufacture including the control system.
- Once construction starts we provide site supervision and project management & Health and Safety Services in accordance with the Construction (Design & Management) regulations 2007.

In summary we can support projects from initial feasibility, through consenting, design, construction to operation.

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