



Renewable Energy - Hydro

Client: Multiple Clients

Location: Nationwide

Project Overview

Atmos has extensive experience of hydro development and have completed noise impact assessments and EIA noise chapters for numerous run-of-river hydro schemes. Assessments have included the following activities:

- Baseline noise monitoring.
- Internal noise measurements of powerhouse.
- Noise propagation modelling.
- Liaison with Environmental Health Officers and regulatory bodies.

Key Challenges

Noise impact assessments for small-scale hydro schemes can be challenging because turbine and generator sets are almost invariably bespoke. Unlike wind turbines where noise data for specific models is available, little hydro noise data is available.

Our Solutions

Having recognised this constraint, we have invested in acquiring data from as many operational sites as possible, covering different power outputs and turbine types. This means we have an objective basis from which to make realistic predictions. This data has been fed into our bespoke hydro noise database which we have developed using our in-house GIS expertise. This database provides real time measurements of noise which can be directly correlated with turbine power output.

The Successful Outcome

As well as aiding existing schemes, the database aids assessment at the pre-planning stage by providing detailed data for noise modelling and removing the need for additional monitoring, thus providing significant cost and time savings for developers.

Below are examples of projects we have worked on, all of which have achieved planning consent:

- Rumbling Bridge – 500kW Francis turbine
- Larairidh – 486kW twin jet Pelton turbine
- Camps Reservoir – 65kW Francis turbine
- Carie Burn – 500kW turbine
- Afon Gafr – 330kW Pelton turbine
- Udston – 75.8kW turbine
- Allt na h-Imrich – 450kW Turgo turbine

What our client said

“It’s an impressive document and I’ve been impressed by the level of detail and presentation.”

Forestry Commission Scotland,
Referring to the Atmos
produced EIA for Carie Burn

Our Acoustics and Noise Expertise

Environmental noise regulation is now more stringent than ever, and as a result, regulators are becoming increasingly rigorous in relation to noise assessments and noise control measures.

Our specialist consultants bring extensive experience in environmental and occupational noise impact assessments across a wide range of projects – from wind farms, hydroelectric and biomass stations, to schools, residential developments, commercial buildings and industrial sites.

Our aim is to simplify the process of noise monitoring, assessment and management, providing effective advice and innovative solutions that helps smooth the way to realising the vision of your project.

Our Solutions

Atmos offers a comprehensive range of acoustic and noise solutions across the entire project life-cycle. From feasibility, scoping and planning submissions through to construction and on to post construction and operational monitoring.

Choose from an integrated service approach or one of our specialist services that can seamlessly feed into your project, whatever its current lifecycle stage, including:

- Baseline and Specific Noise
- Monitoring and Analysis
- BREEAM Assessments
- Compliance Monitoring and Discharge of Planning Conditions.
- Compliance with PPC and EP
- Conditions and Preparation of Applications
- Consultation and Liaison with Regulatory Bodies
- Environmental Due Diligence
- Noise Impact Assessments
- Noise Management Plans
- Vibration Monitoring and Reporting
- Noise Propagation Modelling and Prediction
- Response to Noise Related Complaints
- Specification of Noise Mitigation and Noise and control measures.
- Vibration Monitoring and Reporting



atmos
CONSULTING

your project
our expertise

CBC House
24 Canning Street
EDINBURGH
EH3 8EG

t: 0131 346 9100

edinburgh@atmosconsulting.com

Old Kilcoy House
Tore
ROSS-SHIRE
IV1 1QY

t: 01463 723500

inverness@atmosconsulting.com

Linden House
Mold Business Park
Wrexham Road
MOLD
CH7 1XP

t: 01352 744512

mold@atmosconsulting.com