



The Wigton Baths Trust Initial Feasibility Study

Rural Community Energy Fund

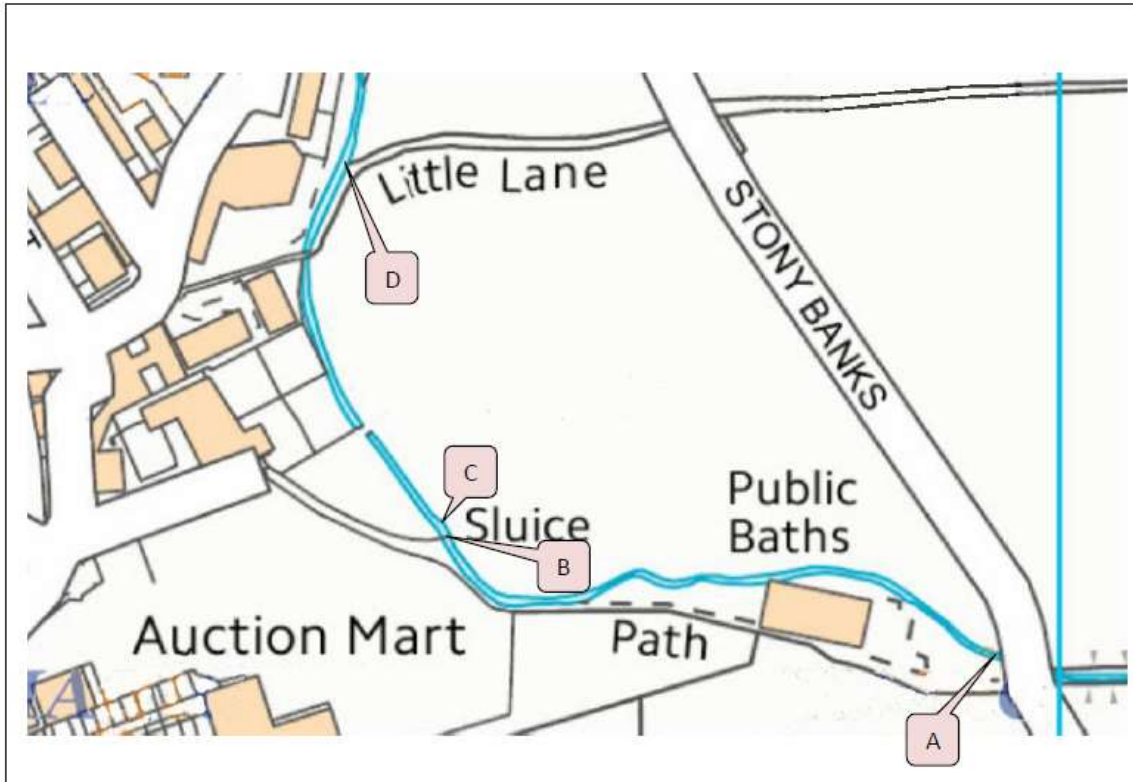
Rural Cumbria Connects

- Committed to support community energy
- Consortium – expertise wide ranging
 - District Heating Systems
 - Anaerobic Digestion
 - Combined Heat and Power Units
 - Solar
 - Biomass
 - Hydro/Tidal

Hydro Power Opportunities

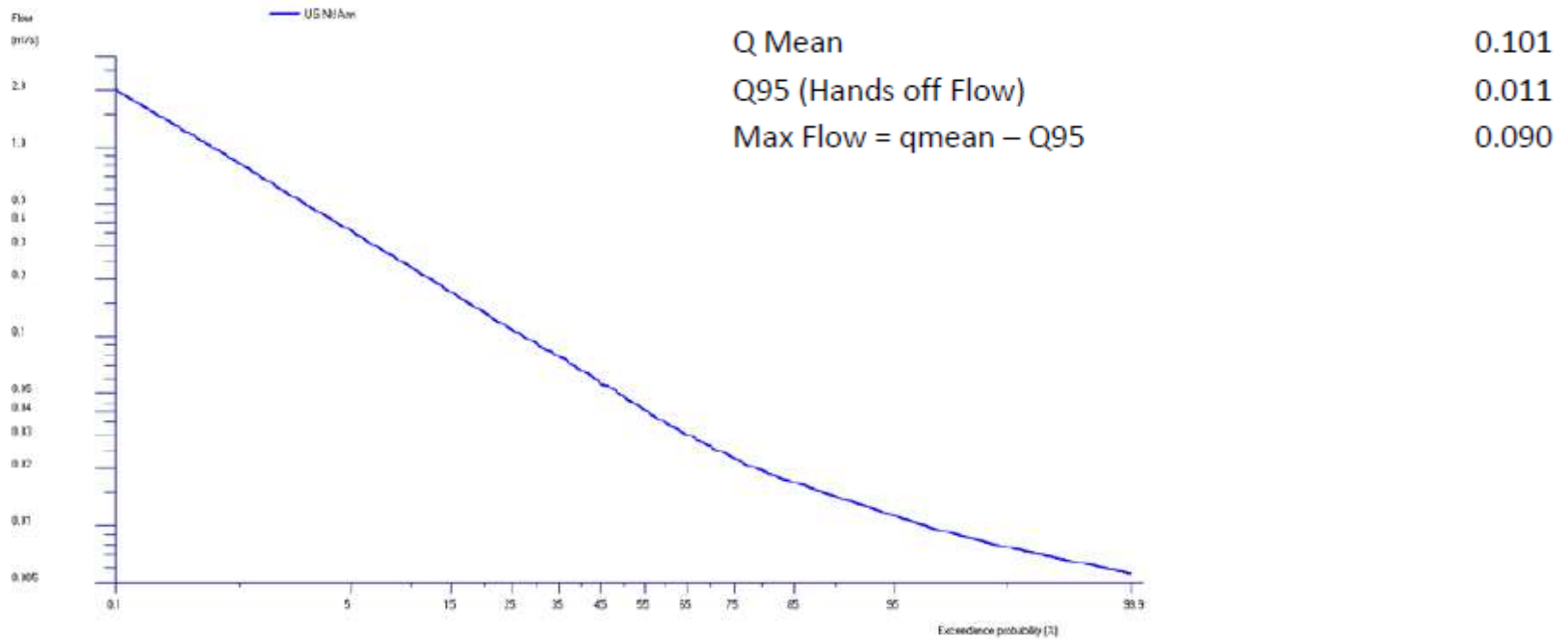


Flow Modelling



- Modelling
- Spot Gauging

Flow Duration Curve



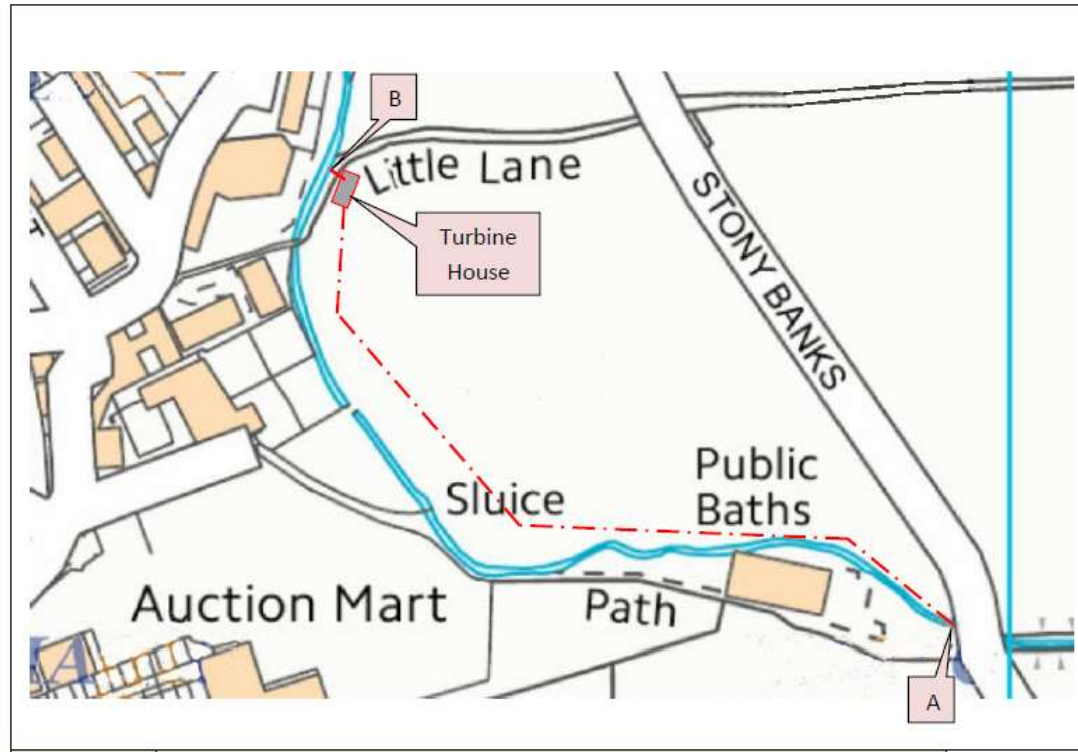
Annual Flow Duration Curve

Constraints and Opportunities



- Environment Agency
- Designations
- Grid Connection

Option 1 Crossflow Turbine

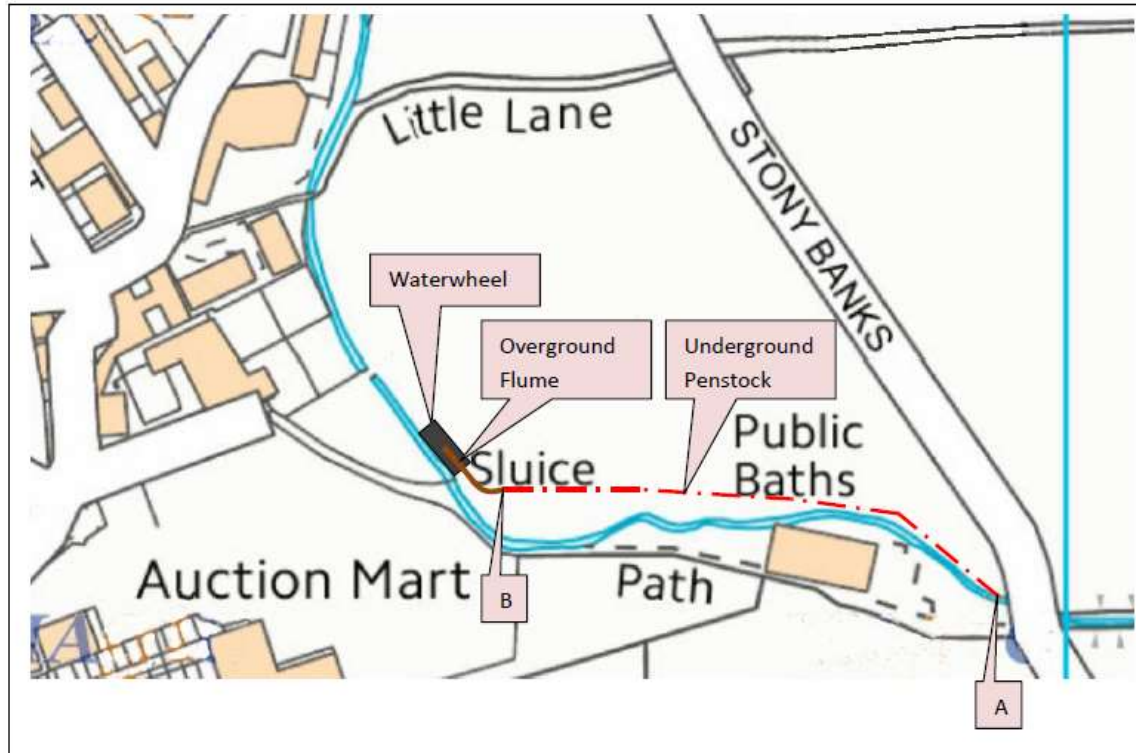


Crossflow Turbine Example



Peggs Mill Crossflow Turbine
Installation North Dorset
www.potenergy.co.uk

Option 2 Overshot Waterwheel



Overshot Waterwheel Example



Langdale Hotel and Spa



Model Results

Option 1. Turbine

Hydrostatic Head 5.5m

Flow 0.090m³/sec

Max Power 3.6kW

Hydrostatic Head 5.5m

Flow 0.150m³/sec

Max Power 6kW

Hydrostatic Head 5.5m

Flow 0.200m³/sec

Max Power 8kw

Option 2. Waterwheel

Hydrostatic Head 3.7m

Flow 0.090m³/sec

Max Power 2.45kW

Hydrostatic Head 3.7m

Flow 0.150m³/sec

Max Power 4kw

Hydrostatic Head 3.7m

Flow 0.200m³/sec

Max Power 5.44kw



Next Steps

- Finalise Validation of Data
- Exploratory Talks with Planners, Landowners and nearby householders
- Financial Viability - currently marginal/unviable
- Finalise Study – Conclusions & Recommendations
- Submit to WRAP for external evaluation and sign-off