

A large, faint, light blue water wheel graphic is centered in the background. It has multiple spokes radiating from a central point and several curved buckets around its perimeter. The wheel is partially obscured by the text.

Case Study - Gloucestershire

*Small scale micro-hydro
installation*

Very low head

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Case Study:

Site: Gloucestershire
Turbine: Compact Archimedes screw
Power: 6kW
Head: 1.4m

Western Renewable Energy (WRE) was brought in by another firm to act simply as installer of the mechanical and electrical equipment, and for commissioning.

Site specific issues include:

- Very low 1.4m head
- Small flow
- Particular flooding issues



Existing weir and pump house, with leat out of use and tailrace filled in
Brief to house screw as far as possible in building to retain historical use



The first Rehart screw turbine in the UK, an enclosed compact, seen here under construction in factory (courtesy MPC Ltd)



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New channels shown with pump house temporarily without end wall for turbine installation.





Installation was a quick job, as the compact design removes much of the installation time, although the location in the powerhouse required careful manual handling once the system was under the roofed area.



After installation the pump house was rebuilt by the contractor and commissioning followed



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