

A large, faint, light blue water wheel graphic is centered in the background. The wheel has multiple spokes radiating from a central point. The text is overlaid on this graphic. At the bottom of the image, there is a dark blue wavy shape representing water, and a faint, light blue banner with the text 'ern Renewable Energy' is visible.

# *Case Study - Gloucestershire*

*Small scale micro-hydro  
installation*

*Very low head*

## 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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