THAMES PATH

NATIONAL TRAIL

Hydro Schemes along the River Thames

The power of the River Thames was harnessed for centuries by the mills on the river's banks. Now only one, Mapledurham Watermill, is still using river power to grind flour.
Instead, the power of the river is driving Archimedes screws and power turbines in eight microhydro projects – some community-owned, others privately or commercially owned. The fall of the river, position of weirs and other technical issues like fish passes and access to the National Grid have to be considered when installing microhydro schemes.

Osney Lock Hydro in Oxford is the first community-owned hydro scheme on the Thames. It was set up by local residents on Osney Island, just west of the city centre, and supported by West Oxford Community Renewables.

The hydro building, where the Archimedes screw operates, is located just off the Thames Path near Osney Lock. A fish pass alongside the turbine building enables fish to swim upriver beyond Oxford to spawn.

The 49kW Osney Lock Hydro scheme started generating electricity in May 2015.
http://www.osneylockhydro.co.uk/

Sandford Hydro south of Oxford opened in 2017. This is community-owned through the Low Carbon Hub in Oxford.

Three Archimedes screws are within this 450kW hydro scheme across the river at Lasher Weir by Sandford Pool. The Thames moves into channels above Sandford-on-Thames, and the Thames Path passes the Lock.Take a virtual tour of Sandford Hydro https://www.lowcarbonhub.org/p/sandford-virtual-tour-now-live/

At **Culham**, south of Abingdon, a privately-funded 394kW hydro scheme with three Archimedes screws was opened in 2016 at Sutton Pools. This is another location where the river braids into separate channels.
The Thames Path follows the Culham Cut, which was engineered in 1809 to enable boats and barges to reach the busy trading wharves at Abingdon. There is a footpath from the Thames Path to Sutton Courtenay, which goes past Culham hydro.

The fish and eel pass was installed by Fishtek, video here https://www.fishtek.co.uk/culham-hydropower-scheme/

Mapledurham hydro scheme powers the watermill which still grinds locally-grown flour. There's been a watermill at Mapledurham since before the Domesday Book, which records three mills here.

The Archimedes screw was fitted in 2012, and at the time was the most powerful single-screw hydro scheme at 99kW. It replaced an old vertical turbine installed in the 1920s, and provides power to the Mapledurham Estate as well as the National Grid. https://www.renewablesfirst.co.uk/project-blog/mapledurham-watermill-turbine/

Although the Thames Path is on the opposite bank of the river, there is a bridleway from Caversham to Mapledurham where the Estate runs guided tours of the Watermill. https://www.mapledurham.co.uk/the-water-mill

Reading Hydro scheme opened in August 2021 and is the newest community-led hydro on the River Thames. It is funded through a community shares scheme run by Reading Hydro Community Benefit Society. https://hydro.readinguk.org/

The 46kW twin Archimedes screw system is located between Caversham Weir and View Island. Volunteers worked on many elements of the project, including installing the fish pass. This and the turbines are located next to a public footpath from the Thames Path to View Island.

The turbine house has colourful murals of water droplets at the gym, making energy from Mother Thames. One wall shows Climate Stripes created by Ed Hawkins, professor of climate science at University of Reading, to highlight the climate crisis and the need for more renewable energy schemes.

The nearby Thames Lido swimming baths and spa complex are powered by the electricity generated and help this venture reduce its carbon emissions. Surplus energy is sold on to the National Grid.

The Mill at Sonning Dinner Theatre installed the first microhydro scheme on the River Thames in 2005. The 18.5kW turbine powers enough electricity to power the theatre's numerous powerful lights, restaurant, offices and backstage areas.The Thames Path passes close by The Mill, the only Dinner Theatre in the UK. It's well worth visiting for a meal and take in one of their exceptional productions.
http://www.millatsonning.com/Hydro.html

Waterpride Estates installed a 99kW single screw microhydro scheme in 2017 at Sonning Weir. Enough energy is produced to offset the company's annual energy usage, making it the only carbon-neutral moorings business in the UK. https://www.waterwayleisure.com/

Romney Weir Hydro opened in 2013. The twin Archimedes screws replaced two of the weir gates. This 300kW scheme was funded by Southeast Power Engineering and provides electricity to the Royal Household at Windsor Castle, with any surplus going to the National Grid. Romney Island is accessible from the Thames Path, and the turbines are an impressive sight. Follow Romney Weir on social media @RomneyWeir