

TUTBURY HYDRO-ELECTRIC PROJECT

MILL FLEAM, TUTBURY, STAFFORDSHIRE

Tutbury Mill was constructed in 1781 for use as a Cotton Mill, housing 60 carding machines and 7000 spindles; in 1888 the mill was converted into a Plaster Mill processing gypsum into 10,000 tons of plaster products per year. The Mill was demolished in 1968 and the site was gifted to the people of Tutbury by British Gypsum in 1972. In its day the Mill was powered by a man made water course, which is believed to be over a thousand years old, and locally known as the Mill Fleam. It was once known as the Little Dove as it is fed from a weir on the River Dove one kilometre upstream. In its day the Mill was capable of producing 750 hp or 560 kW, which would be enough electricity to power approximately 500 homes.



As it is now known, The Mill Picnic Site is an excellent recreational facility for all ages, including open spaces, toddler and teenager playgrounds, a teen shelter and a sculpture of relevance to the site has recently been put in place. The site is adjacent to the Village Cricket Club and overlooked by Tutbury Castle.



The flow of the Mill Fleam is still in evidence, although greatly reduced from its former glory, and still supports a variety of wildlife such as fish, herons, kingfishers, bats and more. Down stream there is a separate project to encourage Otters back the area.

The Tutbury Hydro Electric Project (THEP) team are a group of local residents who aim to reinstate the Mill Fleam so that a Hydro Electric scheme can be installed to generate electricity to be sold off to a customer via the National Grid. The proceeds of which will be returned to the benefit of the local community and the upkeep of the Mill Fleam.



The benefits of which will be:

- Improved environment for the Fleam, the surrounding area and for wildlife. The water will flow again.
- Improving the green credentials of East Staffordshire/South Derbyshire and Tutbury/Hatton. By acting responsibly towards the planet and reducing our collective carbon footprint
- The Hydro Plant will in turn pay for itself, in time generate income and return funds to the community.
- The design process will consider Educational and Visitor interest both during construction and through life.

Recent developments:

An initial feasibility study has now been carried out which suggests:

- Inclusion of a Reverse Archimedes Screw as per the Torrs Hydro Scheme above Buxton.
- Increase flow up to 1000 ltrs/sec along the Fleam.
- Produce output of 20 kW or 150,000 kWh per year

The project team have conducted a number of site visits to completed or emerging schemes – Torrs Hydro, Alport Mill on the Duke of Rutland's estate, Cromford and Burton Flour Mills in Burton upon Trent. This has provided valuable information in terms of lessons learnt and good contacts for future advice.

A valuable link has also been made with a representative of the Midlands Co-op, who has been extremely helpful in terms of both financial advice and also in the possible offer for the scheme to be the potential supplier of electricity to the Co-op in Hatton.

E.ON UK have also become interested in the scheme, following a conversation between the THEP's Vice Chairman Gary Rowe and the CEO of E.ON UK. A video was made recently, in partnership with representatives of the Project Team, the Co-Op and E.ON UK to raise the awareness of how E.ON UK employees could involve themselves as volunteers in other such schemes up and down the country, as a way of reducing their own and their communities collective carbon footprint. This has been aired on the company's intranet.

Supportive links have been made with a number of stakeholders. These include: Trent & Dove Housing Association, Staffordshire County Council, East Staffordshire Borough Council, Tutbury Residents Association and Tutbury Civic Society and the Campaign to Protect Rural England (CPRE).

A meeting was held with the Environment Agency (EA) towards the end of June 2009. The meeting was a challenging one and was well attended by EA representatives – all having differing areas of expertise. They were given an overview of THEP objectives. The EA clearly see two separate projects – restoration of Fleam and installation of Hydro. They questioned the financial viability of such a small scheme, drew attention to environmental issues eg bats and the suggested site of the screw. The Chair and Vice Chairman of THEP have drawn up an action plan to counter and investigate these issues. The advice and expertise of H2OPE will also be sought prior to the next THEP meeting to discuss the EA report.

THEP consider the suggestion from the EA that the project should form 2 distinct phases – the clearance of the Fleam and the introduction of a mini hydroelectric plant – to be a sensible one and aim to follow this path.

A number of tentative approaches have been made to funding bodies and the reaction so far has been very positive.

The team have also had extremely good feedback from the Fairs and Events that they have attended within the last 6 months. This has included the Whittington & Fisherwick Environmental Fair and Hatton Carnival, as well as presentations given to the Staffordshire CPRE AGM, local rotary clubs, East Staffordshire Borough Council and the SALGS funding advisor. Anyone wishing to visit our stall will also find us at the North Lichfield Initiative – 'Environment on your Doorstep' event on Saturday 12th September.

Way Forward:

As mentioned above, a key stakeholder for the project is the EA and further discussions are planned to fully explore how this project can now be delivered.

The team will soon make a decision on which financial business model to be used, however any decision will result in the project developing a business model that will benefit the local Community.

A website is currently being developed and one its aims will be to capture the knowledge gained by the project team as the project is developed, which can then be used by other communities should they wish to develop similar schemes. Information can currently be found on: www.discovertutbury.com

The Project Group are also planning to engage with some local schools to help in creating a 'snappier' project title and develop a project 'logo'.

For more information please contact:

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