

(Continued from inside)

I was most impressed by the overflow system at the top of the leat and the filter screen on the tank at the end of the leat: both were working so well, but not at all complicated.



As for the pipe running from the tank to the turbines, laying that with seamless joints involved members of the family going through the inside of the pipe and applying mastic around each joint so as to ensure that there would be no unevenness which could cause turbulence in the water flow.

The way they ensured the safety of the fish by providing a separate pipe going to a tank where they would be safe and unharmed was something that could so easily have been overlooked but was such an essential part of the scheme.

I also thought it was wonderful how the whole scheme not only had no detrimental effect on the wildlife habitat, but actually enhanced it.

The turbines and alternators were not as large as I had expected them to be in view of the high power they produced and I thought that, with such a lot of water going through them, they would have been bigger.

I was told that the amount of power they sell to the grid is enough to supply Ponsworthy, Widecombe and Poundsgate with all the electricity they need!

On the whole, the visit was very interesting and gave us all a lot of "food for thought".

I personally think that such a scheme could be applied here and I expect that there is unlikely to be as much rock clearance if we follow the old leat.

There are many people in Belstone and the surrounding area who have all the necessary skills and even those with little or no knowledge could play their part.

Finally, I would like to suggest that we seek any advice on setting up a scheme here from the family who achieved such excellent results at Old Walls. I'm sure their advice would be of great value!

**Brian Nockolds**

**Waterleat walks and talks are held at Old Walls Hydro on the first Wednesday of every month during 2007. Meet at Old Walls Farm (grid reference SX 701 747)**

**Arrive 2pm Start 2.30pm (2hrs)**

**Adults £5.00 Children £ 2.50**

[www.waterleat.co.uk](http://www.waterleat.co.uk)

### Important Meeting

Further to our visit to Old Walls Richard Pymm will present the DARE (Devon Association for Renewable Energy) "Project Journey" on 11<sup>th</sup> July at 7.30pm in the Village Hall.

**If you are at all interested in taking the Hydro project forward in Belstone please join us at that meeting.**

**Don't forget . . .** the visit to Julia Kuhn's garden (Broadhayes) on Sunday 29<sup>th</sup> July at 2.30pm – follow it up with a cream tea in the Village Hall!

### Coming to Belstone Village Hall

An exhibition by Dartmoor National Park Authority on Climate Change 22<sup>nd</sup>-25<sup>th</sup> Nov 2007

If you have any queries/suggestions about the Green Village Project, please contact the editors Eddy & Robin Hill:  
01837 840332 [edwinarobin\\_hill@yahoo.co.uk](mailto:edwinarobin_hill@yahoo.co.uk)

# Belstone Green

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## HYDRO SPECIAL

The majority of this month's newsletter consists of articles on the visit to Old Walls Hydro Scheme, situated near Widecombe in the Moor, on the West Webburn. A small scale hydro scheme had been in operation there since the 1930s but was in need of replacement. It took the owner three years to get the necessary consents, the whole scheme costing £80,000 (plus their own labour) in 1995. The scheme now provides an income of £21,000 per annum, with an expected life of more than 30 years. The only ongoing maintenance is checking the weir and leat for large objects and occasional inspection of the screen cleaner and removal of the leaves. The direct benefit is an additional source of income for a Dartmoor hill farm. Benefit to our fragile world is the avoidance of about 170 tonnes of carbon dioxide emissions per year.

Our grateful thanks go to Miles, Gail, Luke and Chris for a truly inspirational afternoon. Also to Andrew Terry for organising it all

The following, are responses from three people in the party. We hope will give you an idea of some of the things we learned from the day. Photos courtesy of Brian Nockolds.

Saturday was a misty wet affair when about 30 of us Belstone residents gathered in the car park prior to setting out for Ponsworthy to visit the 'Old Walls Hydro' scheme. As we crossed the moor the mist thickened but was forgotten and mentally dispersed on arrival where we couldn't help being immediately infected by our hosts' enthusiasm and commitment. This is a truly inspirational project: not only have the Fursdon family built a hydro electric scheme – and by that I mean hands on built – but it is also a beautiful construction that has minimal impact on the environment. It is a renewable energy source and, as a bonus, revenue is generated by the surplus electricity being sold to the National grid.

Here is a place where problems are a challenge not an insurmountable obstacle. Miles Fursdon has come up with his own innovative solutions when existing technology has not proved appropriate. He has then constructed and fitted ingenious devices such as his debris collector screen and fish diverter! We listened to informative and varied presentations and walked to the power house by way of the beautiful and naturally landscaped leat which runs through the old established woodland.

The family answered many and varied questions as we went along, pointing out and explaining the construction process and how they had preserved natural habitats and protected migrating fish. Their explanations on 'how it all works' to the enthusiastic but non-technical amongst us were patient and illuminating.

At the end of the tour, when we were all damp and soggy, we received a very welcome and warming cup of tea followed by a presentation on the feasibility study for a

Belstone scheme. I was inspired and would love to see our own community scheme up and running through the Belstone Cleave, generating green electricity for the foreseeable future and communally helping to protect the environment.

**Hetta Pagella.**

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The visit was arranged as a result of a feasibility study into the provision and instillation of a hydro-electric system at Belstone Cleave, sponsored by the Belstone Green Village committee.

The visit provided us with an insight into the sort of work, and problems, which would have to be overcome if Belstone was to achieve its ambition to have a hydro-electric system of its own.

An introductory talk, illustrated with photographs, detailed the Old Walls project and provided information on planning requirements, the need to consult with the Environment Agency and other licensing bodies, particular attention being paid to the archaeology, flora and fauna of the area and the protection of fish.

Following the talk, the party walked the length of the scheme. This included viewing the Intake from the West Webburn, the weir construction and the new leat approx. 460m in length with a shallow fall to the Forebay, a concrete structure enabling fish to be diverted back to the river and debris to be extracted on a revolving electrically operated screen. From the Forebay, a pipeline with a 15m fall runs underground to two turbines, one operational when the leat is full and one to run on minimal flows, this being more economically viable. The fast flowing water revolves the turbines, which convert the energy into electric power. An underground cable links this to the Farm with excess supply being exported to the grid.

The day finished with a presentation by Chris Elliott, WRE Ltd, concerning the Belstone feasibility study. Construction of the leat at Belstone should be

easier as it requires reinstatement only, rather than fresh excavation. Attention would have to be paid to fish protection at or near the intake. The head water being some 35m would be considerably steeper than Old Walls Farm and therefore the power generated should be rather greater, making it more viable. The various licences required were highlighted and the costing for the project discussed. It was noted that, as a community venture, all the power generated would be sold to the National Grid and not to individual households. The Belstone community would benefit from that sale. Recovery of the capital cost, estimated at approx £190K, depending on the final scheme, should be possible over a period of between seven and eleven years. All in all, those attending the visit left feeling enthusiastic that, with community backing, a Hydro-electric system for Belstone should be possible. **Peter Hammond**

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It was an amazing experience to see what had been achieved by the members of one family and the end result, which made all their efforts so worthwhile.

I felt that cutting through the massive rocks and the building up of the banks of the leat must, at times, have made them wonder whether they had taken on a job which was too much for them.

Nevertheless, they persevered and eventually completed the work, which I feel was an example of what could be done if one is not afraid of hard work.

Many of the features incorporated in the scheme were basically quite simple, but the thought that went into every aspect was to be admired. **(Continued on back)**