

# Green Centre News

## *Wales to introduce bag tax*

*by Andrew Jessopp ZWM*

Wales is the first part of the UK to introduce a tax on single use carrier bags.

The tax was introduced on the 1st October meaning bags will no longer be handed out free of charge to shoppers from this date, but charged at a minimum of 5p each.

The government in Wales based their decision on a concern the voluntary scheme operated by many large retailers to reduce the amount of bags handed out was running out of steam and numbers may start to increase again. It is estimated Welsh consumers take home 175 million bags between them per year, and the majority end up in landfills or as litter with all the consequential harm it causes.



ZWM wonders why the Welsh are able to recognize the waste of resources etc in the use of single use bags, and the need to do something about it, but the Manx government seems unable to. The reluctance to tackle the problem in the IOM appears to stem from the usual political inertia to deal with environmental issues; they are always appear to be a secondary or peripheral consideration compared to the primary goal of protecting business interests.

However, this is not an issue ZWM will allow to be swept to one side and we will be lobbying the new government when it is formed to follow the Welsh lead at the earliest opportunity.

For details of the Welsh scheme see: <http://bit.ly/bd31fE>

Meanwhile, in Somersham in England, villagers have forced Tesco to agree that a new Tesco *Express* in their village will not hand out plastic bags at all.

Somersham parish council voted to go plastic bag free in 2008 and the opening of the new store had threatened this initiative. But concerted effort by the local community persuaded Tesco to stop handing out bags in the store.

<http://www.dailymail.co.uk/news/article-2034310/Tesco-store-country-stop-handing-free-plastic-bags--villagers-slap-ban-them.html>

ZWM says this begs the question, if Tesco can successfully operate on this basis from a store in Cambridgeshire why can't they in the IOM?

## *FoE 40th Year Celebration Conference*

*By Phil Corlett IOM FoE - continued on back page*

Starting on Friday 8<sup>th</sup> September a full weekend of events was attended by over 250 members of FoE UK, representing groups from England, Wales, Scotland, Northern Ireland; and the IoM!

The main event on the Friday evening was in the conference theatre with 4 ex directors (Charles Secrett, Jonathon Porritt, Tony Juniper & Tom Burke) & the current one, Andy Atkins talking on stage about their experiences working with FoE over the years. This included some humorous reminiscences and some stark facts on how despite the organisation fighting hard for carbon emissions to be cut in many countries throughout the world (including the British Isles) they continue to go up!

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### Latest News:

- Members of Zero Waste Mann, IOM Friends of the Earth and Manx Energy Advice Centre participated in the 'Big Tidy Up' on Saturday 1st October. Between them they collected several bin bags full of litter and recyclables from close to the Green Centre on Well Road Hill. A full report will appear in the next newsletter.
- Now the dust is beginning to settle after the Manx general election, the Green Centre will be lobbying candidates vying to become the next Chief Minister to ensure they: **do not** overlook environmental issues in their manifestos; and **do** provide a commitment to support sustainable development principles.

## *Settle Hydro co-operative - by Chris Burton MEAC & IOM FOE*



*The wear at Settle with the screw and generator house*

On my recent holiday I was cajoled by Phil to attend with him the coordinators' weekend for Friends of the Earth at Howarth. We had decided to go down from Ambleside on a motorcycle and as Settle was half way there we decided to have a look at the hydro station there.

I am actually a shareholder of this very uniquely funded environmental Hydro Electric power generating system. It is a community share cooperative in which I invested a small amount of money. The scheme is on the old wear of a mill (converted to flats) although an investment, I have looked at this as an offset to my carbon emissions and to create start up capital for such schemes. It disappoints me that similar schemes are not available to Manx people on the Isle of Man.

The weather was good but unfortunately it had not rained for some time and the river was below the level required to extract water, some observers at the wear were quick to criticise the fact that the screw was not turning. They seemed to think this was the problem with all Renewable Energy Projects.

The engineering is an Archimedes screw with the 50kw generator taking the drive off the top of the screw. These modern generators are an efficient way of getting power from low head hydro sources.

Whitby residents are at present trying to create a similar scheme on the river Esk and are looking for investors. See <http://www.whitbyeskenenergy.org.uk/>

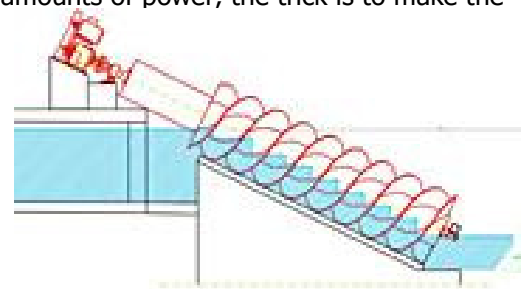
Manx rivers have a history of water extraction for industrial purposes they were in the main low powered waterwheels designed to run machinery. One of our major landmarks is the Lady Isabella originally designed to take water from mine workings and Silverdale glen still has a working Victorian hydro powered merry go round.

These former wears and workings on rivers can be reconditioned to take these modern generators and produce modest amounts of power, the trick is to make the communities be included. In the Settle Scheme the power generated is used by the owners of the flats in the mill with any excess being sold to the national grid.

Some of the profits generated are used in a community fund which is administered to benefit local green issues such as insulating community buildings and providing grants to homeowners. This way financial savings in heating and money returned from grants are recycled to the community and the community's carbon footprint is further enhanced.

These schemes can only work by a combination of direct grants from regional development funds from government, private investments from community members, feed in tariff mechanisms to guarantee returns and a management committee who are prepared to work extremely hard to get things done.

Could we do one of these schemes on the Island? As discussed earlier I can think of dozens of places where similar works can be implemented producing many kw of clean energy and I have discussed such schemes with Ministers but have been told



*There is a web page for more information.  
<http://settlehydro.org.uk/index.html>*

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## *Enhanced Geothermal Energy*

*by George Fincher MEAC*

If you drill down into the earth, the temperature gets progressively higher the deeper you drill. Drilling to a depth of 10 km will typically reach hot rocks at a temperature of 150 to 200 degrees c. Drilling bore holes to this depth is not easy but is possible and done regularly by the oil industry.

The temperature is made up of heat flowing from the molten earth core to make its escape from the earth into space, and from radioactive decay within the earth's crust. There is also a contribution from the flexing of the earth due to gravitational influences of the moon and sun, so the high temperatures available at these deep bore holes is potentially sustainable provided it is not extracted at too high a rate.

The heat can be extracted by pumping water down a borehole to this deep heat source then sucking out the hot water and steam from a second borehole. The water flows from the source borehole through fractures in the hot rocks to the output borehole where the heat is extracted and used to drive a steam turbine to produce electricity or used for general space heating.

The extraction of the heat from the hot rocks is determined by the number of cracks and pores from the source water borehole to the extraction borehole. If these cracks can be improved through more pathways the extraction water can more easily flow from source to extraction bore holes, then the amount of energy

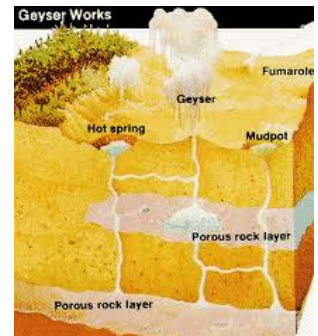
capable of being extracted will be increased. Increase the extraction too much though will mean a more limited time period when the heat extraction can occur (at least until the heat is given time to build up again).

The cracks and pores can be enhanced by pumping water down the supply bore hole at very high pressure so it forces the pathway to the extraction bore hole to be opened up. A side effect of this process is that it can cause minor earthquakes, though these are generally not above 3 on the Richter scale, i.e. they are well below the level where they cause damage.

The major advantage of this potential energy source lies in the fact it is continuous and therefore capable of supplying base load electricity or capable of replacing nuclear power. An experimental energy extraction system is being developed at Cooper Basin (Australia) to test the whole process and check its viability as a power source.

The technique is generally available at most locations throughout the world, though some areas like Australia have a better resource in the form of hotter dry rocks at a little less depth.

A small scale 3 MW geothermal bore hole is being planned at the Eden Centre in Cornwall, aimed at supplying all the Eden projects energy needs, and to check whether the method is viable in the UK.



*Hot rocks*

## *Settle Hydro Co-op - continued*

our rivers are not suitable or not the right type of water? Without government support through grants and feed in tariff then it will not be feasible. The shame is that we have the resource it is plentiful and free, we have the engineers and expertise to create them and maintain the plant creating local employment and we have a number of people who would be willing to partly finance such enterprise.



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## The Green Centre Yn Laare Ghlass

### The Green Centre

Chester Street Centre, Douglas. IM1 2PG

Tel: 666029

Email: [greencentre@manx.net](mailto:greencentre@manx.net)

[www.zerowastemann.org](http://www.zerowastemann.org)

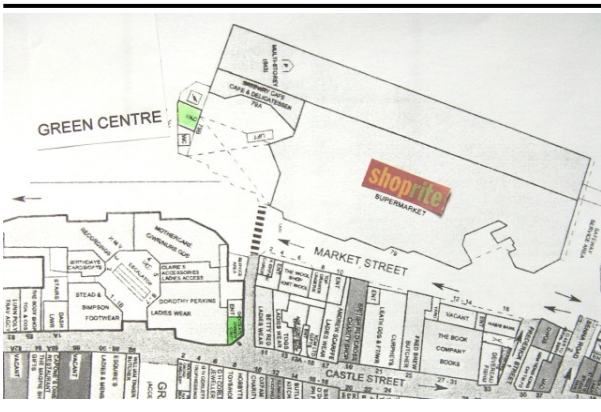
[www.meac.iofm.net](http://www.meac.iofm.net)

[www.foe.org.im](http://www.foe.org.im)

Opening Hours: Saturdays 10.00 am - 2.00 pm

(Although generally open for longer)

### Campaigning for the Island's environment



### Did you know?

We can save 17 trees, 380 gallons of oil, three cubic yards of landfill space, 4000 kilowatts of energy and 7000 gallons of water by recycling just one ton of paper!

And

1 ton of paper = 400 reams = 200,000 sheets

Recycling one glass bottle will light a 100-watt light bulb for four hours

Recycling a stack of newspapers 3 feet tall can save one tree!

### Renewables Expand in Germany

A recent German report (see [http://www.bdew.de/internet.nsf/id/DE\\_20110829-PI-Erneuerbare-liefern-mehr-als-20-Prozent-des-Stroms](http://www.bdew.de/internet.nsf/id/DE_20110829-PI-Erneuerbare-liefern-mehr-als-20-Prozent-des-Stroms)) shows renewable energy generation was 57TWh for the first six months of 2011 which equates to 20.6% of the German supply.

Solar photovoltaic systems on rooftops of home, farms, and factories generated 3.5 percent of national supply. Conventional hydroelectric power plants generated 3.3 percent, wind produced 7.5 percent of German supply and biomass 5.6 percent.

## FoE 40th - continued

On learning about IoM FoE's Renewables campaign, Friends of the Earth's Executive Director Andy Atkins said:

"We must develop the UK's huge renewable energy potential to tackle rocketing fuel bills and create new jobs and business opportunities.

The Isle of Man is ideally placed to be at the forefront of the green energy revolution - and reduce its dependency on expensive fossil fuels."



Past and present directors of FOE

Other representatives at the conference included Nnimmo Bassey, the Chair of FoE International from Nigeria, who highlighted the inequalities the poorer countries had to fight against: like the pressure to introduce GM crops by big business and pollution from the oil industry. FoE Croatia's Jagoda Munic told us all about their determined campaign against a hypermarket which would damage local businesses; and how a demo filled Zagreb square.

The weekend is a mix of seminars, talks, workshops & training sessions all built round the central idea of reinforcing the supporters with environmental knowledge and the latest FoE campaigns.

As IoM FoE have been campaigning for some time now on climate change, CO2 reductions and future energy strategy for the Island - mainly in the form of Renewables and in particular an onshore windfarm comprising of 7-9 turbines, which would give us less dependence on fossil fuels while at the same time cutting our carbon emissions - I attended the workshops which most related to carbon cutting: like Emissions Impossible covering the controversial subject of geoengineering; which some see as the 'techy' solution to reducing CO2. Most environmentalists however see it only as another excuse which could be used for carrying on with 'business as usual': i.e. pumping out endless CO2.



Mike Childs, who recently visited the Island to give a talk on environmental issues including CO2 reductions & Renewables, introduced this workshop and gave his views that it must not be seen as the easy way out.

Geoengineering is a 'new' science which could if used incorrectly unbalance our delicate climate!

A 5 step strategy for the next 40yrs was outlined by FoE's Craig Bennett, who was on Channel 4's 'Great Global Warming Scam', and he successfully argued against that controversial programmes rubbishing of manmade climate change. Climate & Energy security are top of the strategy list. Craig also chaired the new 2012 FOE 'Save the Bees' campaign which is to be launched later this year.

Another useful workshop attended was the Pro-wind Alliance where groups can work together in a common cause of promoting a sustainable energy source and many local groups went to this.



Phil on his travels: again!

To find out more about FoE UK's work and Conference: [www.foe.co.uk](http://www.foe.co.uk)

IoM FoE also has an extensive web site with details of their windfarm campaign: [www.FoE.org.im](http://www.FoE.org.im)