



# THE GREEN NETWORK

## The Environmental Network of North Somerset

Issue 6

August 2009

### SEVERN TIDAL POWER

There are eight main sites around Britain where tidal power stations could usefully be built. These include the Severn, Dee, Solway and Humber estuaries but of these only the Severn could alone generate a significant amount of power, principally because it has the second highest tidal range in the world of approximately 40 ft.

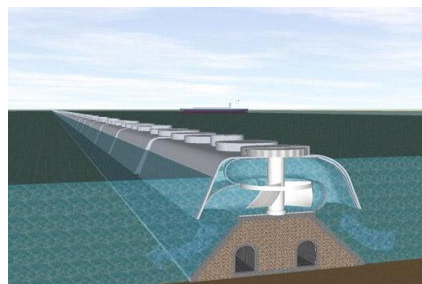


La Rance Tidal Power Plan

The question is what option if any, should be chosen to exploit this energy. There are five preferred

schemes following the first consultation for the public by the Government and these are either barrages or lagoons. There are however embryonic schemes for harnessing this power whilst giving greater protection to shipping and key environmental concerns such as migratory fish or destruction of salt marsh. These include the Tidal Reef and off-shore turbines.

As all this is happening on our doorstep, TENONS are inviting everyone who is interested to the first of two public meetings.



The Tidal Reef

We are delighted that at October's event we will hear from Rupert Armstrong-Evans who is the pioneer of the Tidal Reef, one of the new technologies chosen to benefit from the £500k

fund created by Ministers to develop them further. We will also hear from Professor Roger Falconer who is Halcrow Professor at Cardiff University, an expert on the barrage options; Jim Galvin, General Manager of Fleming Energy

(tbc), who will speak about lagoons, and Peter Kydd, Director of Planning and Environment at Parsons Brinckerhoff.

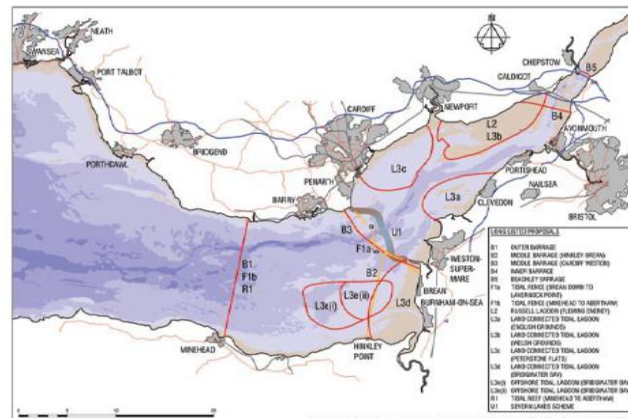
Marian Barber, Head of Economy and Regeneration at



North Somerset Council will be introducing the event and also will be part of the panel for your questions and comments.

Entry is free and doors open on Saturday 24<sup>th</sup> October 9.45 a.m. to 12.45 p.m. at The Blakehay Centre, Wadham Street, Weston-super-Mare. Please see [www.tenons.org.uk](http://www.tenons.org.uk) for more details and to make any special arrangement for mobility concerns, please phone 01934 623000

Severn Estuary showing options of lagoons, barrages and Reef



## Centre for Sustainable Energy

To celebrate their 30<sup>th</sup> anniversary, The Centre for Sustainable Energy (CSE) held an energy conference at the Watershed in June to which TENONS sent representatives. The Centre provides advice and training in alternative energy, reducing energy demands and fighting climate change and their event reflected this in its varied and novel presentation. There were short talks following which the audience was asked to comment on a question put by each of the presenters.

In the morning there were over 9 short talks starting with Brenda Boardman who spoke about fuel poverty. Her main research focus is on energy efficiency and the way that energy is used in British homes, particularly by low-income households, i.e. fuel poverty. It was interesting to be told by Frazer Winterbottom of the CSE that 75% of people want to do something about energy. This 75% included those whose main interest is in saving money; with the remaining 25% described as apathetic. He also said there was no evidence yet that asking people to take small steps led to them taking further big ones and that what was needed was a shift in ideas, maybe by using smart meters or Government initiatives. His main point was that when people see changes going on around them they are more likely to change as well.

Bristol City Council, represented by David Bishop, is bounding ahead with their vision to be one of the most sustainability cities in Europe. They have planning permission to install two more turbines in Avonmouth and biomass plants in blocks of flats and schools are on the books, using some of the wood harvested from the city's parks. Last year Bristol beat Brighton to claim the top spot in the 2008 Sustainable Cities Index as well as being chosen as the only city in the UK to be short-listed for the European Green Capital award. So with so much achieved in Bristol, it would be good to see the same enthusiasm in our county's main town.

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## Out and About

★ Congratulations to Winscombe for a well run Energy Day which they held on 27<sup>th</sup> June. Their Community hall was full of information boards from recycling to waste disposal and alternative energy to Permaculture. Tenons were also invited to put up boards as well as Sustrans, Greenworld Trust and Axbridge Community Allotment who use the principal of Permaculture in their planting.

During the afternoon questions sent in previously were put to a panel consisting of our MP John Penrose, Roger Wade of the Environment Agency, Andy Tubb UWE lecturer on waste and Nick Pyatt international forestry consultant. Questions asked covered the interim waste contract with New Earth Solutions for dealing with residual waste, the effects of any planned barrage for the Severn Estuary, incentives for reducing waste and creating an edible landscape.

★ Transition Long Ashton are aiming to try to eliminate single use plastic bags and to this end, Tenons took along their film on the devastation caused to wildlife in the Pacific to their meeting and subsequently has sent more information to help to further their project.

★ Tenons were also represented at Weston in Bloom, Community Show on Beach Lawns near the watchful eye of the big wheel.

★ The update from Uphill : The Village Society held an event over the first bank holiday weekend in May. This included an exhibition of Uphill's historical archives and was also an opportunity for residents to meet up over a slice of cake and a cup of tea. The E-Team gave away tomato plants to each household as a way to promote and encourage householders to have a go at growing their own. It is hoped some people entered their tomatoes in the Uphill Horticultural Show at the end of July. They also promoted their seed share scheme and there were children's activities like cress growing and quizzes. Within school, the plastic bottle greenhouse has a very sturdy

structure and when the sun shone the children finished off putting the plastic bottles in place. The after school Gardening Club and all the classes are now able to make use of this wonderful new teaching area

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## **Fuel Poverty Facts : What is Fuel Poverty?**

Fuel poverty occurs when a household needs to spend more than 10% of its income on gas, electricity or oil to achieve a warm healthy comfortable living environment in the home. The solution to fuel poverty is to ensure that all householders should be able to heat their home sufficiently to an adequate standard at an affordable cost. Cold homes affect the physical and psychological health of a household ranging from miserable living conditions to life threatening illness.

**What causes Fuel poverty?** A combination of :

- Low household income
- Inadequate or ineffective thermal insulation
- Inefficient and uneconomic heating systems
- High energy costs
- Under occupancy, e.g. a single person or couple living in a large family sized home

## **What are the effects of fuel poverty?**

Living in cold damp home can have a significant detrimental effect on the health and well-being of the occupants and may:

- Make an existing illness/condition worse
- Increase risk of heart attack or stroke
- Increase the risk of developing bronchitis or asthma
- Weaken the immune system
- Cause misery and anxiety.

There is help available to alleviate some of the above conditions so if you or someone you know is affected please contact:

Kim Herivel –Home Energy Efficiency Officer  
North Somerset Council, Tel 01934 426686  
[Kim.herivel@n-somerset.gov.uk](mailto:Kim.herivel@n-somerset.gov.uk)

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## **Institute of Engineering and Technology Event: Energy – Small Scale Micro Generation : Peter Barrington**

Peter recently attended this event held at the University of Bath. The talk was given by Graham Eastwick, Technical Director of Encraft.

He covered the various options for generating power with or without a connection to the grid. These are called grid tie, off grid and hybrid. Equipment is available to manage the connection with type approved inverters. There are 2 standards, G83 up to 16A/phase and G59, up to 1MW. A key point to note for those interested in feeding surplus power back into the grid is that if the mains power fails the home generation is automatically disconnected and will not reconnect for 3 minutes after the mains comes back on. This is to protect anyone working on the power network who would expect it not to be live.

Solar power using photo voltaic cells is being installed in places, typically £60,000 for a £2000 saving at current prices.

Many installations like schools appear to have received grants to cover the cost. A south facing roof is best for mounting the panels and Encraft have a device called Suneye to assist with checking the potential of a site.

Wind turbines should be installed at a distance of at least 10 times the height of the nearest build to prevent turbulence affecting the wind flow. Encraft have worked with Warwick University to evaluate small scale turbines and note that the NOBAL database which gives wind speeds in the UK has higher results than actually found. Actual speeds can be up to 40% less than quoted. Mounting wind turbines of the ends of buildings has caused problems.

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A 6kW wind turbine is about £25,000 to install, PV cells about £35,000. Both are dependent on the sun and wind!  
Where water is available hydro –power can be a source of energy.

A lively question session followed including comments about intelligent equipment, such as fridges that switch off when there is less power available, and the potential for grid and local network overload. Most installations have not been purchased to save money.

Encraft can be found at [www.encraft.co.uk](http://www.encraft.co.uk)

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## WASTE : Love Food, Hate Waste

A new book just out is 'Waste' by Tristram Stuart. A thought provoking book with facts on food waste you never could imagine. We are told of waste both in the manufacture and retail of

foodstuffs, canteens, restaurants and by ourselves.

The average UK household, as researched by WRAP\*, throw away on average food worth £420 per annum. We



Four million tonnes of food a year is wasted in the UK : WRAP

may think that composting leftovers lets us off the hook, but the author rightly says that this was good food which should have been consumed. He goes on to tell us that if we only bought enough for our needs there would be ample food produced to relieve the world's hungry as well as answer many environmental concerns.

Look out for a 'Love Food, Hate Waste' campaign happening in the South West later this year and go to the website

\*[www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com) for more information on how to save on waste and use up leftovers in tasty dishes

## Folly Farm Walk

Twelve members and visitors braved the weather and were not disappointed as the sun shone down on us when we met for a walk around Folly Farm. We had an excellent guide in



Roger Moses and ended the day with a pot of tea at the local farm shop. We are planning a walk in the Spring at Shapwick Heath Nature Reserve.



## Tenons Future Events

20<sup>th</sup> Sept : 'Sunday in the Park' 12.00 – 4.00  
top of Ashcombe Park, Upper Bristol Road, WsM

21<sup>st</sup> Oct : the film 'Power of Community, 7.30 p.m.

24<sup>th</sup> Oct : Severn Tidal Power 9.45 – 12.45

18<sup>th</sup> Nov : AGM and talk 'Food for Thought' Liz McPherson of Riverford 7.30 p.m.

All October and November meetings will be held at the Blakehay Centre, Wadham Street, WsM

Contact: [www.tenons.org.uk](http://www.tenons.org.uk) – 01934 623000

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