

Eco Retreat Newsletter - December 2013

Hello!

And a special welcome to you if you are one of the many centres that recently joined our mailing list (now some 300-strong). It's great to know that so many people are being mindful of the ways in which we impact on the environment and to hear about the many imaginative and ambitious ways a retreat centre can begin to address them.

As we head into the depths of midwinter 2013 there is much controversy around the material cost of fuels like gas and electricity but it's important to remember the environmental cost of carbon-based fuels too. In this letter we're featuring encouraging news from a couple of centres who, in different ways, have been able to harness the natural potential of their location to reduce both their fuel bills and their carbon footprint.

- [Lee Abbey](#) (Devon) launches hydro-electric generator
- [Scargill Community](#) (North Yorkshire) switches to woodburning
- [Minsteracres](#) (County Durham) biomass boiler system goes live
- [Llansor Mill](#) (Monmouthshire) unveils DIY eco-poustinia
- [Bryndolau](#) (Carmarthenshire) leading by example on meatlessness

Going with the flow – hydro-electricity in Devon

*There can have been few places where the onset of rainy autumn weather was more excitedly anticipated than at Lee Abbey. The 90-strong resident community welcomes up to 120 guests in their Christian holiday, retreat and conference centre situated on North Devon's glorious Exmoor coast. That's a sizeable operation that runs up big electricity bills, especially in the winter, but thanks to their new hydro-electricity generator they're expecting significant cost savings this year (as well as greatly reducing their carbon footprint). Lee Abbey's publicity co-ordinator **Andrew Mann** is pleased to share their good news:*

“ After a dry summer Lee Abbey’s new hydro electricity generation scheme finally got going with October’s wild and wet weather. The water levels in the River Lee rose quickly in October and have stayed high, so Lee Abbey has been able to take the maximum allowable amount of 60 litres of water every second from the streams running through its estate. The turbine and generator have been operating close to full capacity for the last few weeks and Lee Abbey is currently generating about 900kWh of electricity every day – about two thirds of its electricity use, equating to about £5,000 worth of savings in a month.



Up to 60 litres a second pour through the Lee Abbey turbines and back into the river Lee

Lee Abbey is committed to reducing its carbon footprint and also for caring for the natural world, so during the summer when river levels are lower the hydro turbine automatically shuts itself down so that there is always water left in the River Lee streams for wildlife. Over a whole year Lee Abbey anticipates that it will generate at least 150,000kWh of electricity reducing its carbon footprint by about 65 tonnes of CO₂ on an annual basis.”

Rachel Oates (who has a civil engineering background) is the Lee Abbey community’s Environmental Co-ordinator and is part of the full-time community. It’s a post that was put in place through the centre’s link with the A Rocha environmental network.

She gave us some important background information about how the project came together:

“ We had some funding for the early feasibility study, but the ‘funding’ for the scheme is essentially the government Feed in Tariff (FIT). We get paid about 21p per kWh we generate and that, along with savings on our electricity bills, should mean the scheme pays for itself within eight to ten years. After that FIT income and electricity savings will be our ‘profit’ and should be a healthy sum.

We had to have permission from the Environment Agency to make sure anything we changed about our streams would not have a negative effect on the streams’ ability to cope with flood water, or on any of the wildlife the streams support. We also have to have a licence from the Environment Agency which limits the amount of water we are allowed to take out (even though we put it back further down stream). This is to make sure we don’t damage the wildlife in the approximately half-mile length of stream where there’s now less water. We had to do an environmental study of the river to account for this.

We also had to get planning permission and we had to get the electrics wired up by a suitably qualified electrician so that we can export electricity to the National Grid.”

Baldwyn the Biomass Boiler

*No, he’s not a character dreamed up by the Reverend Awdry to keep Thomas the Tank Engine company (as far as we know) but a friendly green addition to life in the Scargill Community in North Yorkshire. Community member **Matt Stone** explains how, faced with the need to replace their aging oil-fired heating system, members were guided by a commitment to balance financial sustainability while minimising their environmental footprint. The result - a brand new boiler known as Baldwyn which will take over just before Christmas.*

“ Located in the heart of the Yorkshire Dales, Scargill House was previously a private hunting lodge but has been a Christian conference centre since 1959. It closed down in 2008 after running for some time at a deficit but was purchased and reopened again in 2010 as a new charity, the Scargill Movement. There is an international community of around 30 that live and work here and we can accommodate about 70 guests for our programmed events and private retreats.

The original house has been added to and changed throughout its life and now comprises of different parts of varying ages, making a complex building indeed. The main centre is currently heated by four oil boilers, all of which are old and in need of replacement. On average we consume around 100,000 litres of oil per year costing in excess of £60,000. There has been an upwards trend in the price of oil which has increased 200% in the last ten years. The carbon emissions of the current system are high, running at above 160 tonnes p.a.

One of the core values of the Scargill Movement is 'to model and promote responsible stewardship of creation'. In light of all this, a rethink was due about how we heat the centre and the extent of our reliance on oil and ultimately to move to a more sustainable system. The decision on a heating system for the main house is very important because of the dual impact that it has on the environment and on the day to day costs of the centre. It is important for Scargill to be financially sustainable whilst also minimising our environmental footprint on the Dales.

There were of course alternatives to the biomass installation. We could have replaced the boilers like for like or installed central oil boilers which would involve a relatively small installation cost but would not reduce carbon emissions or our dependency on oil, resulting in expensive long term oil costs. Heating systems using electricity (including heat-pump options) would not be suitable for Scargill House and LPG would be a higher cost option than oil.



Now, where did I put that spanner? Installation costs are a significant part of the overall budget.

The installation of the biomass boiler is a very expensive process; we're talking in the region of £425,000. Funding the large initial

outlay has required loans and grants, however the project will pay for itself in the long run, especially with the income from the Renewable Heat Incentive (RHI). The carbon emissions from this system will be less than 20% of our oil system. Another sustainable aspect of this solution is the long term contract we have with a local provider for the woodchip.

While some may worry about the future supply of woodchip, the biomass boiler represents the most economically sound and environmentally sustainable solution for Scargill's heating needs in this context. The mission statement here at Scargill is 'lives changed lives transformed' we hope this boiler will allow us to continue for many years to come. We are already seeing the effect, one of the builders Rick, whose job it was to dig out all the limestone, got to know the community here very well and after many chats and prayers became a Christian. Baldwyn means friend, a friend in more ways than one."

Biomass and chips

*In the last newsletter we reported that Minsteracres in County Durham were hoping to have their ambitious biomass boiler system in operation by the end of the summer. The good news is that it was up and running in time for the winter so now it's (wood) chips with everything as they switch from oil and LPG to a cleaner greener and – importantly – cheaper energy source. Operations manager **Geoff Bockett** sent us this update:*

“ It's been a momentous occasion! Every once in a while a new technology comes along which creates a step change. We began in the 1940s with coke to fuel our boilers, then, from the 1990s, oil and gas. Now we have the latest sophisticated wood burning technology and, in terms of global warming, this allows us to make our own contribution, reducing our CO₂ emissions from 143 tonnes to 18 tonnes per year.

The biomass boiler has been



No more tankers for Minsteracres!

installed thanks to a significant gift from Gateshead Church Enterprises. The government's RHI (renewable heat incentive) scheme will also enable Minsteracres to earn an estimated £20,000 a year, which together with savings will amount to £37,000 a year income for 20 years.

We have received considerable professional advice and guidance free of charge from architect Kevin Doonan and from Monty Burton, a procurement expert, both of whom have a long association with Minsteracres. We also deliberately sourced technical expertise from local businesses to help us to support the local supply chains. And it hasn't just been a steep learning curve for us, but for them too – it's a very new technology in the UK!"

This development links Minsteracre's woodland management plan, as trees felled on the estate become a home-grown fuel supply. Geoffrey told us more about the environmental significance of the plan:

“One of our three key charitable aims is the sensitive and responsible management of the environment, and in particular our 110 acre estate, part of which is ancient woodland, charted on maps going back centuries. Indeed two of the oak trees are themselves over 500 years old. In recent years, however, the woodland has been unmanaged and has become overwhelmed by invasive species, especially sycamore, Italian laurel, European laurel and rhododendron. To reverse the decline of the woodland and ensure its long-term survival, work has begun to support natural regeneration with a diversity of natural species including English oak, Scots pine and Downy birch.

It is not only the native trees that will benefit from better management. We also hope to reverse the decline of woodland birds, increase the numbers of red squirrels and protect the plant species on the ground which thrive in the ancient woodland. Alongside this we will improve access to the woodlands for visitors, and protect the existing collection of historic pine trees and the Wellingtonia avenue. The flowering rhododendrons along the drive from the A68, whilst not native, do have historic interest and won't be removed.

This is no short term fix. The work which began this year is planned in phases up to 2032, by which time we will have ensured the survival of this natural gem.”

Well-rounded thinking

Many Welsh place names begin with 'Llan' but did you know that Llan really means a sacred space, a space set aside? That realisation led the community at Llansôr Mill in the Monmouthshire countryside to create an environmentally friendly (and strikingly beautiful) poustinia in their grounds. Originally a Russian Orthodox tradition, a poustinia is a simple cabin for solitary fasting and praying in the presence of God. Llansôr Mill's **Stephen Ashton** describes the process:

“ Here at Llansôr, we aim to be surrounded, enclosed, embraced, by simplicity, paradox, inclusivity, and connection ... So let's suppose that at Llansôr Mill you have wonderful land, beautiful (if small) rectangular buildings, a son who has just qualified as an architect, and the need for more space to accommodate visitors. And no money to speak of.

What do you do? ... The young architect in question is commissioned to come up with a structure that non-professionals could create, would represent in physical terms our values, offer space for our visitors, and be a delight to look at. You can judge how close we got!

The chosen spot was high on our land, with commanding views over the hills, with a woodland as it back and fields and sky at its front. It is circular in shape: it has no corners (inclusivity). It's made of straw bales from local fields, and covered with clay dug from our local hillside (simplicity). The roof is self-supporting with each beam supporting the one before it, and the last supporting the first, from wherever you start counting (paradox). The roof is grass covered with a central circular oculus window that looks up to the sky (connection) ... and it's covered in bluebells in the spring too, an added bonus not in the project design.



A place apart – the finished poustinia hardly needs any heating thanks to straw bale construction

There you have it. Our beautiful circular clay-covered roundhouse creates a Poustinia – a place to go to engage in quiet reflection. You can sleep in it and look out at the sky; groups can meet in it and share their story, gently embraced by the building. Built by our friends, using materials from only yards away, its straw bale construction means it hardly needs any heating. Amazingly, even the fibreglass insulation used under the floor and on the roof came from a factory only 3 miles down the road.

So now, in addition to the magnificent (but with corners) stone and oak built Mill, we have another space in which to carry through our vision of enabling folk to connect in as many ways as we can think of, to the journey of becoming fully connected, fully human.”

This is an extract from Stephen’s fuller account of the thoughtful process by which they arrived at this project design. You can read the whole thing in the PDF version sent out with this newsletter.

Veggie (re)treats

And finally some timely pre-Christmas thoughts from the only retreat centre in the UK with a view of Bethlehem! The Bryndolau and Kite’s Nest centre sits on a Welsh hilltop ridge and, from their beautiful garden you can see over the Towy Valley to the tiny Carmarthenshire village of Bethlehem.

*Owners **David** and **Ros Steel** responded to our question about retreat centres considering the green implications of serving meat dishes. While the Steels’ concerns are primarily ethical they also see the value of tempting people to enjoy more vegetarian food as an alternative to meat eating. Ros writes:*

“ Here, at the Bryndolau Retreat House in the Brecon Beacons, we are both lifelong (pretty much) vegetarians and would never dream of dishing up anything other than vegetarian fare on our Retreat Days and to those who bed and breakfast with us. The latter are presented with a splendid home-made selection at breakfast time which we



entitle a "wholefood continental breakfast".

Suffice to say that we have many returning visitors and some of those attending Retreat Days have admitted that, part of the reason they come, is the promise of a tasty vegetarian lunch at mid-day: hardly a good enough spiritual reason we suspect, but a reason nevertheless. Many go home with recipes in their bags....

For couples staying in our self-catering accommodation, Kites' Nest, we would never prescribe what they eat and cook themselves. That is completely up to them. However, we always hope that the sight of our little flock of five friendly and gentle "rescued" sheep - yes, with names - might give them pause to reflect on what they might be putting on their plates.

Our own reasons for being vegetarian are purely ethical and we would find it hard to countenance eating what we would call our "friends" whom we respect and care for. Some of these have been rescued, have lived with us and learned to trust us. However, in this regard, we would never wish to proselytise to others, as we recognise only too clearly that we, ourselves, still have much further to travel."

Thanks!

We're really grateful to Ros at Bryndolau, Stephen at Llansôr Mill, Matt from Scargill, Geoff at Minsteracres and Lee Abbey's Andrew and Rachel for taking the time to write in. We hope their contributions have been both interesting and inspiring. If you have an eco story of your own we'd love to be able to share it in a future edition, and we'd also love to get any feedback or suggestions to make this as useful as possible. Do send any comments, queries, thoughts or stories to us at:

Tony.benjamin@arcworld.org or victoria@arcworld.org

Till the next time!

Tony & Vicky