



Llangattock Green Valleys newsletter

Issue 119
August 2021

<http://www.llangattockgreenvalleys.org/>

LIVING WITH MICRO HYDRO

By Bill Cave – *One of our wonderful hydro volunteers.*



When Judy and I got married, we went to Scotland for our honeymoon, travelling up to Glasgow on the over-night sleeper from Kings Cross. On arrival, we picked up an Avis rent-a-car to set off for Oban, but before doing so, I had to buy a bottle of Glenfiddich. No, it wasn't that our first night together on the train had been disastrous, rather that I needed, before we left Glasgow, to deliver a thank-you present to a gentleman at the MacFarlane Engineering works.

We had got engaged only a few months before, in Uganda, where I was doing a gap year as a doctor at Kisiizi Hospital. The hospital was off the beaten track and off-grid but it had power from its own 8 kW [turgo turbine](#) driving a MacFarlane brushless alternator. I say it had power but when I arrived, the turbine was dead; it was through the kindness of the MacFarlane man who sent out, for free, a replacement voltage regulator board that it was brought back to life. Thus started a lifelong interest in micro hydro that was to become the warp and weft of our married life; not a holiday passed without a water powered installation being sought out and visited. A bit of a surprise then that we are still together!

When I got a job at Nevill Hall Hospital, we bought a property on Llanwenarth Breast. Perched on the hillside, it had 6 acres of grass and woodland, and crucially, although at the time of moving here the import of this had not dawned on me, it had a stream marking the western boundary.

Having lived and breathed micro hydro for 16 years when we came here, mostly stemming from a continued involvement with Kisiizi, I still can't quite understand why it took me another 16 years to realise that the place might be suitable to develop a micro hydro of my own. I suppose it was the busyness of work that prevented the idea germinating; anyway, only with retirement in prospect did time become available to start measuring flows and heads, and I could begin to see that something might be possible, but possible only if an extremely small type of turbine could be found.

In the end, it wasn't the stream but the spring-fed water supply to the house that was to be the option with the greatest promise. It had more head, more constancy, but less volume. But how to harness it? Only grid connection fulfilled my hope of integrating neatly into house electricity demand for any power that might be generated; was there a grid connectable turbine anywhere in the world which could work on under 3litres/sec, at a head of 56m?

Enter Keith Powell (no introduction needed I'm sure). Keith had recently come back from New Zealand with a Powerspout in his rucksack. And the rest, as they say, is history.



Running since autumn 2013, my Powerspout Pelton runs all year, even in the driest months. Its max output is 920 W (22 kWh /day) going down to 100 W at the driest times. With 3.2kWp of solar installed on a barn roof, it has meant our take from the grid is only about 2000 kWh per year; for a house which is electric only (+ wood heating) and a Nissan Leaf car, I'm well pleased we're doing our bit to save the planet.

It was reading Big George's piece in the last newsletter that has minded me to write this reminiscence; in his piece George said of his planting a wood that it was "one of the most worthwhile things he had ever done". I knew what he meant. It's what I feel having installed my own micro hydro.

Further info:

[Glenburnie hydro blog](#)

[Kisiizi Hospital Power Company](#)

[Kisiizi: a history of its hospital and its waterfall](#)

HYDRO SCHEMES UPDATE

By Steve Sharp

Very little rain has fallen during the past quarter and most schemes have struggled to start generating any electricity at all, as is often the case during the summer months.



BUSY, BUSY!

By Jackie Charlton



Since getting back into full swing with our workdays we have increased the number of LCW volunteers and done an amazing 1400 hours of volunteering this year!! We have lots of pictures for this edition to try and capture all that LCW has achieved since the last newsletter.

LCW now make fantastic **bird and bat boxes** and two types of **owl boxes** for both Barn Owls and Tawny Owls. Orders taken by contacting me at

jackiecharlton@gv@gmail.com

Our **tree nursery** is looking very healthy.

We couldn't plant the whips when they arrived in November from the Woodland Trust because of lockdown but they will be ready to go in this autumn. LCW have planted some oaks courtesy of Stump Up for Trees and MuddyCare, a group which focuses on health and wellbeing. MuddyCare used our site to learn about the benefits of bee keeping and tree planting.



The first **orchid** in the meadow which was so pleasing to see in June this year made it through the grass. The yellow rattle planted as an experiment in August 2019 has also been really successful this year and we will measure the impact on the rye grass next spring.

LCW has become 'corporate'!! Every volunteer is now offered a **proper t-shirt** with our logo on and that of our partners Canal & River Trust and

Woodland Trust Cymru. We have similar objectives to improve the environment and maintain biodiversity in a woodland setting.



The perennial problem of Himalayan Balsam returns every year on our site and across the Brecon Beacons National Park. LCW has been **Balsam Bashing** for a couple of years and it is beginning to decrease. Just a few hours pulling out the plant, which is really easy to do, can be quite satisfying. The bees apparently love the nectar but it isn't a good plant to have on our site and LCW are committed to maintaining a clearance policy on the Himalayan Balsam.



BOB'S BEE NOTES

As we come out of our local Covid lockdown our bees are having to cope with their own restrictions by keeping out of the rain and live with lower temperatures than normal for early August. As I am writing this it is raining outside with a temperature of about 17C, so very little bee activity again today. The bees at the allotments and woodlands have not done particularly well this summer; in fact, they have only just survived because we have fed them at times when the weather has been cool.

My own bees had a very hard time last year with my being away until August and although they survived the winter, the inclement weather earlier this year made sure they didn't make it through to the spring and summer nectar flow from trees and flowers. I have had reports from other local beekeepers about colony losses in the area so we are asking yet again, "Is it the weather, chemicals in the environment, or perhaps the way we are keeping our bees?" I think the best thing we can do now is try to make sure there are lots of young winter bees produced during the autumn laying season and those bees have sufficient winter stores to see them through the early part of next year. This is easier said than done because, as we all know, every year is different; from September onwards until the Queens stop their laying (usually sometime in November, depending on temperature drop), the bee larvae are fed more protein so their anatomy is slightly different from summer bees, enabling them to live a lot longer - usually about 4 or 5 months.

One new thing I am doing this year is using one of my very small, lightweight mating hives stocked with a cup full of young worker bees and a newly emerged Virgin Queen to see if she can be mated when she flies from it. If we are lucky, we may see the Queen returning with her "mating sign", that is



the remains of the Drone that was successful in mating with her on one of the nuptial flights that she takes during the first few weeks of her life. The hive has been in place next to a window for a week now and although we have seen "her majesty" walking on the landing platform, we haven't yet seen her in flight or returning from one. Drones have been seen making their flights from the platform so we are still hoping she has or will manage to get aloft soon.

I have seen a forecast of hot weather for the end of August so there may still be a chance of honey if the bees can get out to the heather flowers and the Himalayan Balsam that are both in flower this month. Perhaps we will, after all, be able to give Christmas presents of honey from our bees this year.



Good Beekeeping, Bee Bob



LCW Trustees are justly proud of the commitment and enthusiasm of all our volunteers. We meet regularly every Tuesday and you can find information on where and when we meet on our website www.lcwg.btck.co.uk. If you are interested in environmental management, green wood crafts or bee keeping then please do get in touch. Please email Eric Gower eric.gower@gmail.com for a membership form.

LACAS

By Sue Cartlidge

Although allotmenters have been keenly growing their own, sadly this last 18 months the social side of the allotment society has been lacking. There was no wassailing nor the non-fireworks bonfire night, no Big Lunch or theatrical events and, last but certainly not least, we have not been able to hold our Summer Show and Dog Show for the last two years. Last year we did stage a Socially-Distanced Allotment Show whereby allotmenters displayed their produce on a table on their own plots and visitors strolled around the site. We also awarded prizes for the best kept plots and best newcomers – we hope to do the same again this year.



This year we are going to join in with **Crickhowell Garden Society's Open Gardens**, held on **Saturday 25th September** between **11.00am and 5.00pm** – do drop in! Visitors will be free to wander around the plots and marvel at the labours of some of our members. We also have a few “temporary wildlife areas” to admire. Our members have been invited to enter the Crickhowell Garden Society's Show, to be held in the Clarence Hall on the same day.

At present the allotment site is fully occupied and we do have a waiting list. However, should you wish to get in touch with the Committee for any reason, the email is: llangattockallotments@gmail.com and there is also a Facebook page: Llangattock Allotments – LACAS.

LGV VOLUNTEERS NEEDED PLEASE! CAN YOU HELP?

We are looking for a number of people who would like to get involved at Director and non-Director level. Please get in touch with Simon Walter if you would like to explore the ways in which you can help: admin@llangattockgreenvalleys.org. You can meet our Board of Directors [here](#).

We'd also like to get a few more volunteers involved in monitoring the hydro schemes and taking readings. This would only take around an hour or so once every 6–9 weeks. If you are interested in helping, please contact Simon Walter using the email below: admin@llangattockgreenvalleys.org

