Welcome to our first newsletter

Since we get asked regularly “what’s happening up at Pwllpeiran?” we thought a newsletter would be an easy way to keep everyone updated.

Visitors also welcome

Of course photos and captions aren’t really a substitute for seeing things in person, and we are happy to host group visits to see some or all of the activities underway. We also have our first Open Day coming up May, where we will have a range of experts on site to tell you more about our project work.

Q: Who do we contact to arrange a visit?
A: John Davies, the Resource Manager. Phone number: 01970 823163

Q: How long does a tour take?
A: It usually takes around two hours to tour the complete site.

Q: Can I also use Pwllpeiran as a venue for my meeting?
A: Yes, we have a conference room which can accommodate up to 30 people.

New faces

Daniel Forster is a Bangor Uni graduate who began a PhD studentship investigating soil/plant/animal interactions within the long-term Brignant plots at the start of February.

Prof Mike Wilkinson is the new Chair of Upland Agroecology. Mike was Director of the Institute of Biological Sciences at Aber Uni before emigrating to Adelaide in 2011. He specializes in plant genetics and was one of the scientists leading the Barcode Wales project.

Hannah Vallin has joined the Pwllpeiran team as a Research Assistant and will be coordinating the field and lab work for the Yellow Gold daffodil project. She is already involved in different IBERS initiatives to improve public and school engagement with science.
Project updates

The three different miscanthus varieties sown in spring 2015 have all established well. There was a clear difference between the newer cross and the traditional *M. giganteus* in the timing of senescence, with the new crosses dying back much earlier.

The 26 tonnes of daffodil bulbs planted last autumn have been emerging over the past few months. Harvesting happens when the plants reach the goose-neck stage (flowers at 45° angle, just before flowering), which varies depending on altitude and exposure.

Milder temperatures than the seasonal norm meant the small grass/clover variety testing plots continued to grow through most of the winter months. They have now been topped ready for the new growing season.

Data from the met stations at Brignant and Tyn Bryn Mountain have highlighted how different climatic conditions can be for upland sites only 3.5 miles apart. Further monitoring is planned to explore this weather gradient in greater detail.

For more updates...

Follow us on Twitter: @upland resources (Mariecia Fraser); @bproberts4 (Ben Roberts); @HannahVallin (Hannah Vallin); @passmeanother (Daniel Forster)

Or follow our new blog: www.pwllpeiran.org
Pwllpeiran is now a Farming Connect Innovation Site

Related activities will include:

- New experimental plots
- Monitoring of the Young Entrants
- Open days

New plots at Brignant

As part of our Farming Connect activities three additional blocks of three new treatments will be created on grassland next to the Brignant long-term extensification plots.

Previous research at IGER Bronydd Mawr demonstrated that withdrawal of fertiliser inputs can have a profoundly negative effect on the productivity of grazed pasture after only a few years, with both sown and unsown grass species being replaced by moss and litter. The grassland around the Brignant plots has had no fertiliser inputs for at least 7 years.

Two new sustainable intensification treatments will test the effectiveness of alternative renovation techniques. The first will involve treatment with a regeneration harrow and the reintroduction of fertiliser applications to restore optimum soil indices (light blue on map). The second treatment will have the same renovation techniques applied but will also be slot-seeded with a mixture of different white clovers, red clovers and lotus (dark blue on map). The varieties and lines of each used will be specially selected based on results from ongoing research by the plant breeders at IBERS. They will include types specifically selected for their ability to establish in marginal soils and grazing tolerance.

The third set of smaller plots (yellow) will be left unmanaged after the turf has been removed. Together with the discard area within the original plots, these will provide insight into abandonment and the potential of woodland reversion from natural seed sources.

Proposed location of the new plots. The original plots can be seen in the centre of this aerial view as a long thin block and a squarer block on the left hand side of the road, and a more irregular third block on the right hand side of the road. The orange perimeter marks the boundary of the Brignant experimental site. The grassland on either side is part of the Young Entrant holding.
New publications

Papers
Diversification and use of bioenergy to maintain future grasslands. Donnison, I.S. & Fraser, M.D. Food and Energy Security, 2016, DOI: 10.1002/fes3.75

Read more here: onlinelibrary.wiley.com/doi/10.1002/fes3.75/abstract


Read more here: www.nature.com/articles/srep17915

Conferences
Posters on 'Miscanthus as a bedding source: a Welsh case study' (by McCalmont, Davies, Clifton-Brown, Holder & Fraser) and 'The benefits of cattle in upland grazing systems' (by Fraser, Vale & Evans) received lots of interest at the SRUC/SEPA Biennial Conference - Agriculture and the Environment XI What future for our farming systems?: held in Edinburgh at the beginning of March.

OPEN DAY

The theme for our first Open Day is:

’Sustainable Intensification in the Uplands’

Date: Tues 17th May

Time: 11 am - 15.30 pm

Refreshments will be available on-site

The Brignant plots are now part of a network of sites being sampled as part of the U-GRASS Soil Security Programme.

More information on the programme is available here:

www.soilsecurity.org/u-grass/