



Cronfa Amaethyddol Ewrop ar gyfer Datblygu Gwledig:
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European Agricultural Fund for Rural Development:
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BRICs – Building Resilience in Catchments



What is BRICs?

BRICs is a project that will:

- Improve water, nutrient and habitat management on farms
- Reduce the level of nutrients entering the Milford Haven Waterway
- Create a nutrient trading scheme
- Give potential for future investment opportunities in Pembrokeshire

The project will benefit farms, economically as well as environmentally, creating a business leader culture.

Visit to Bolton Hill Water Treatment Works

Farmers from the Pelcomb Brook and Winterton Marsh river catchments enjoyed a very informative visit to Bolton Hill Water Treatment Works.

Dwr Cymru Welsh Water want to work in partnership with farmers to improve raw drinking water quality. Therefore, working in conjunction with the BRICs project, to help achieve this goal, all farmers in Pelcomb Brook and Winterton Marsh river catchment areas were invited to visit their Bolton Hill Water Treatment Works.

Knowledgeable operational staff accompanied farmers around the site. They explained all the different stages in the treatment process from raw water abstraction through to fully treated water for distribution to both domestic and commercial consumers. Attendees knowledge of chemistry and physics was put to the test but all left much better informed with an improved understanding of how some agricultural practices can impact upon the treatment process and make it

more difficult to turn water from drinking water rivers into perfect drinking water.

BRICs is a research project that is taking an innovative approach to managing natural resources in the area, benefitting both communities and businesses in the locality.

The project partners include supply chain, land managers, industry, conservation organisations, farming unions, Welsh Water, farming cooperatives, authorities, Natural Resources Wales and communities working together to build resilience into farm businesses. At the same time the project will be contributing to sustainable economic development.



Nutrient soil sampling

Working in partnership with CCF (Clunderwen and Cardiganshire Farmers Ltd) and Agrovista, targeted nutrient soil sampling has commenced on participating farms across the three BRICs sub-catchments.

Where it has been identified as beneficial to trial the application of nutrients more accurately, Agrovista will undertake soil conductivity testing and grid sampling of soil from agreed fields. They will measure pH, P, K and Mg as well as soil conductivity (soil type). The farmer will then be provided with the results of the soil analysis and a bespoke variable rate fertiliser spreading plan, taking into account crop and manure/slurry applications. Agrovista will provide the bespoke variable rate spreading plan to the farmer for the next four years.

Where required to assist with the application of nutrients in accordance with the variable rate fertiliser spreading plans, the project will assist by working with another of its project partners, PMR (Pembrokeshire Machinery Ring), to allow the trial use of precision application equipment to complete the job.

We are still hoping new farmers will come forward to work with us to improve water, nutrient and habitat management. To encourage new project participants Clunderwen and Cardiganshire Farmers (CCF)

undertook a mailshot to their members in all three BRICs sub-catchments.



Raising awareness of healthy soils

The BRICs Project, in conjunction with Puffin Produce two soil health and cultivation workshops took place in the Winterton Marsh catchment area.

Mark Stalham, a renowned soil health and potato agronomy expert from NIAB Cambridge University Farm, led two detailed and highly engaging practical workshops. Farmers attending were offered advice on how to assess the health of their soils and were also able to benefit from Mark's wide breadth of knowledge and experience on ways to improve their soil through better cultivation. There was plenty of opportunity for discussion about rooting, waterlogging, nutrient uptake, and soil water holding capacity.

Thanks go to R E Evans Farms Ltd and J Llewellyn and Co. who kindly hosted the workshops.



BRICs Project Development

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Taking action to improve Farm resilience provides economic benefit to farmers, cleaner water and investment opportunity. Towards this goal BRICs will provide:

- Free expert advice
- Farm resilience plans
- Help to secure funding towards nutrient soil mapping, precision farming and where appropriate following recommendation up to 10 constructed wetlands

We are working with 3 volunteer farmers who have kindly agreed to help develop and test how visits from the Project Officer and experts from NRW and ADAS will work in practice. This early participation is invaluable to ensure relevant information is gathered, discussion and advice provided is pertinent and useful and the format of the farm resilience report will be relevant and presented in a user friendly format. Their cooperation and that of 3 other key farmers, who have given their time to assist the Project Officer at this early stage, is helping to shape and develop the project.

Water quality monitoring

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Welsh Water is a partner on the BRICs Project Steering Group and is actively involved in contributing to both Workstreams. Welsh Water's matchfunding to the project is to monitor and share water quality data from the Pelcomb Brook and Llys y Fran sub-catchments. Two Sondes have been deployed in the Pelcomb Brook sub-catchment and an adjacent sub-catchment (Control) to measure various parameters including nutrients (ammonia), turbidity and pH.

The water in the Milford Haven Waterway and the surrounding Pembrokeshire Marine Special Area of Conservation contains too much nitrogen and phosphorus. This means it fails to meet statutory water quality standards and the nutrient enrichment threatens important and protected wildlife and their habitats.

It also means that the waterway is considered "full" with no capacity to accept any additional input of nutrients, which is a potential barrier to any future development.

The BRICS approach is about preventing pollution from getting into watercourses rather than relying on 'end of pipe' solutions, like water treatment, while delivering other benefits for the economy and

environment.

BRICS takes a wider view of the environment and considers relationships between the environment and the people managing it. This is an example of Sustainable Management of Natural Resources (SMNR).

Building resilience into catchments and the way they are managed means they will be better able to stand the effects of a changing climate and increased pressure and demands on land and river management.

The project will benefit farms, economically as well as environmentally, creating a business leader culture.

If you are a farmer or land owner and want to find out more, please get in touch with Emma Taylor, BRICs Project Officer on 01834 860965 or emmat@planed.org.uk.

If you are interested or think you may like to participate in a nutrient trading scheme, please contact Paul Renfro, BRICs Project Officer on 01646 405693 or paul.renfro@pembrokeshirecoastforum.org.uk



Assisting the SWEPT project

BRICs Project Officers joined the Pembrokeshire Marine Special Area of Conservation Officer and SWEPT project volunteers canoeing down the Cleddau on a remarkably perfect – weatherwise – January day! The SWEPT volunteer project has recruited volunteers to collect and test freshwater samples for nitrates and phosphates within the Milford Haven Waterway ([link to SWEPT project website](#)) It was interesting, enjoyable and helpful to see how the SWEPT project is using canoes for volunteers to reach and sample less accessible freshwater inputs running into the estuary. Analysis of the data collected will be of interest to the BRICs project.

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We are focussing on three areas across Pembrokeshire:

- Pelcomb Brook
- Winterton Marsh, and
- Llys y Fran

Working in these 3 diverse river sub-catchments, the project will test a voluntary approach to deliver nutrient focused pollution prevention advisory plans, highlighting opportunities and recommending actions to improve water and soil management on farms.

The project partners include supply chain, land managers, industry, conservation organisations, farming unions, Welsh Water, farming cooperatives, authorities, Natural Resources Wales and communities working together to build resilience into farm businesses. At the same time, the project will be contributing to sustainable economic development.

BRICS was developed and is funded through the Sustainable Management Scheme which is part of the Welsh Government Rural Communities – Rural Development Programme 2014-2020, funded by the European Agricultural Fund for Rural Development and the Welsh Government.

If you are a farmer or land owner in one of the sub-catchments listed above and want to find out more, please get in touch with Emma Taylor, BRICs Project Officer on 01834 860965 or emmat@planned.org.uk.

If you are interested or think you may like to participate in a nutrient trading scheme, please contact Paul Renfro, BRICs Project Officer on 01646 405693 or paul.renfro@pembrokeshirecoastalforum.org.uk