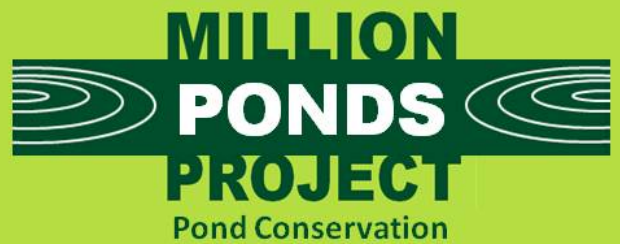


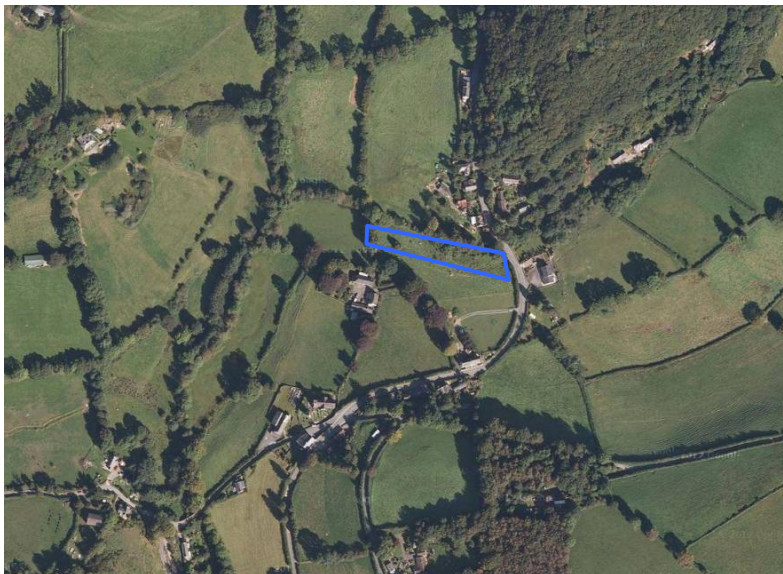
# Floodplain ponds in Ceredigion, Wales



A 50-YEAR PROJECT TO CREATE A NETWORK OF CLEAN WATER PONDS FOR FRESHWATER WILDLIFE

## Background

- The aim of the project was to create ponds on the floodplain of the Afon Clettwr stream to provide a habitat for otter – a named feature of this SSSI. Ponds provide a refuge for otter cubs at time of high flow, and amphibians are a good source of food for both young and adult otters.
- The six ponds were created on private land that is lightly grazed by the landowners' ponies.
- The project was collaboration between private landowners and the Teifi Rivers Trust, and was supported by CCW and the Million Ponds Project.



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## Key Points

This project demonstrates how the creation of floodplain ponds can:

- Improve floodplain heterogeneity
- Provide a habitat for otter
- Be a straightforward process



Otter (*Lutra lutra*)

Amphibians in ponds can provide a valuable food source for otter.

**Figure 1.** An aerial photo of the area in Ceredigion showing a low intensity, agricultural setting. In this area this is mostly livestock grazing and production of hay and silage. The project area is outlined in blue.

## Meeting the Million Ponds Project criteria

- **Clean water** – the ponds are located in a low intensity catchment free from agricultural chemicals and fertiliser. The stream floods only on rare occasions.
- **Nothing added** – no plants, water or topsoil was added to the ponds and the ponds were left to colonise naturally.
- **Free from disturbance** – the ponds are located on private land with no public access.
- **Design principles** – the ponds were designed to be small and shallow to provide good breeding habitat for amphibians – and so good source of food for otter.

## Sketch map

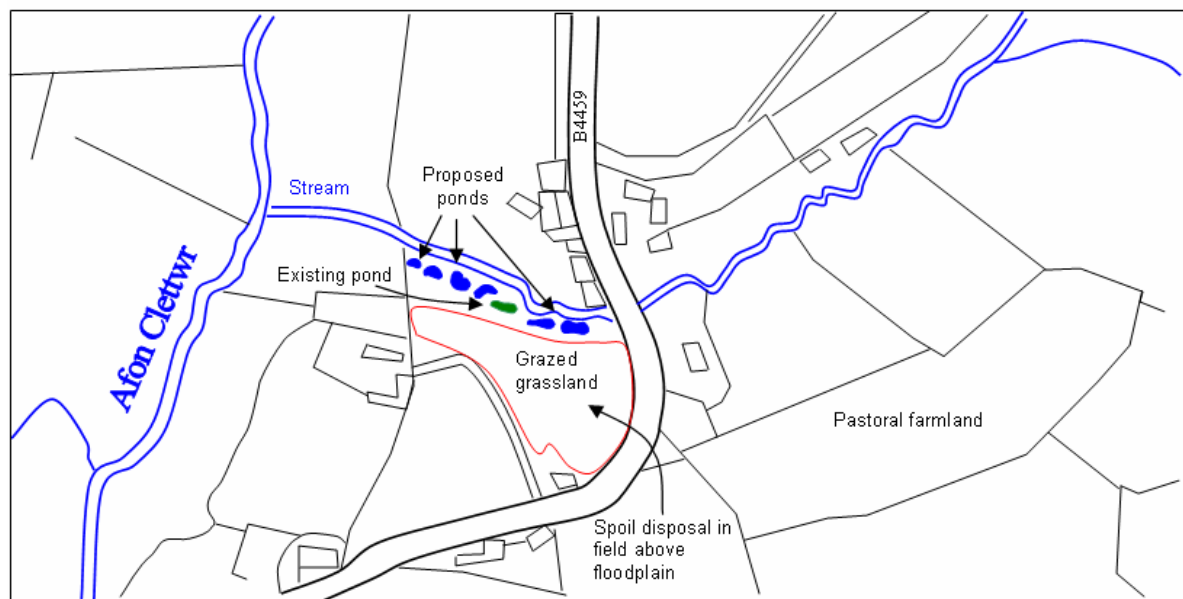


Figure 2. Sketch map of the area

## Planning and preparation

- An existing, unlined pond created by the landowner held water all year around, suggesting that the new ponds would also hold water.
- As the ponds were located on floodplain the spoil could not be spread in the immediate vicinity. Instead it was thinly spread and deposited above the floodplain on an adjacent grazed field owned by the landowner. Keeping the spoil on site was more straightforward and cost effective than obtaining a license from the Environment Agency to remove it elsewhere.
- The county ecologist checked for the presence of any existing biological interest which is an important pre-site check.

## Construction

- Digging and spreading of spoil took 5 days to complete in September 2011.
- An 8 tonne, long reach, tracked excavator was used. This was so that minimal damage was made to the surrounding area and to assist in getting spoil into the dumper for removal to the adjacent field.
- An otter holt was also constructed by the landowner to be placed next to the most isolated pond to encourage the species. This pond was also fenced off from livestock to reduce disturbance and encourage otter.

Pond	Depth (m)	Length (m)	Width (m)	Surface area (m <sup>2</sup> )
1	1.00	10	8	64
2	1.00	8	4	26
3	0.75	9	5	36
4	0.50	4	4	13
5	0.40	9	5	36
6	0.30	5	4	16





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**Figure 3. Left: Tracked digger constructing ponds and dumper being used to take spoil away. Right: Spoil was spread in a depression in the adjacent field used for grazing small numbers of livestock.**

## Cost and funding

- The total time for preparation and supervision of excavation work by a Pond Officer was 3 days in addition to 4 days by a conservationist from Teifi River's Trust
- The excavation of the six ponds and spoil disposal cost a total of £3,360 including VAT, i.e. £560 per pond – which is about the national average for the Million Ponds Project.
- Excavation costs were covered by a grant from Biffaward through the Million Ponds Project's Pond Digging Fund.

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**Figure 4. Left: Constructed ponds in line with the Nant Eion (blue line). Right: The pictures show ponds holding water a few months after creation. Small size and shallow depth was important for attracting breeding amphibians.**

## Problems and solutions

The project was well planned and no problems were encountered during its delivery.

## Outcome and monitoring

- The project was successful in meeting its aims: amphibians were breeding in the ponds just a few months after construction. By February, over 100 clumps of frog spawn were counted in the new ponds!
- The landowners are very pleased with the ponds and are actively recording the amphibians and dragonflies that have colonised the ponds.
- The otter holt will also be monitored by the landowners and they are hoping to install an infra-red wildlife camera.
- The ponds will be used as a demonstration site for a schools' wildlife education project run by the Teifi River's Trust (<http://www.teifiriverstrust.com/>).



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**Figure 5. Artificial otter holt constructed by the landowner to encourage nesting otter. Inside are separate chambers which the otter uses for breeding**

## Future management

- No management is required at the site except for some light grazing by the landowners' livestock to prevent scrub encroachment.

For further information about the Million Ponds Project and to consult other factsheets in the Pond Creation Toolkit, please visit [www.pondconservation.org.uk/millionponds](http://www.pondconservation.org.uk/millionponds) or email enquiries to [info@pondconservation.org.uk](mailto:info@pondconservation.org.uk)



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