



## Case Study: Adaptation - new woodland planting in Pontbren

Forestry Commission Wales, through the *Better Woodlands for Wales* (BWW) grant scheme, have supported farmers who are working together to help address the effects of climate change through woodland creation and management.

The Pontbren Group consists of ten neighbouring families who farm 1000 hectares in the catchment of the Pontbren stream in North Powys. When they first came together in 1997 their primary objective was to improve the viability of the farms by reducing costs, and they began to restore hedgerows and common boundaries to keep hardier breeds of sheep outdoors. Then, as this process gathered momentum, the aim to restore the catchment of the Pontbren stream developed and has subsequently involved planting woodland, shelterbelts and hedgerows, and making water management more sustainable by reviving and re-establishing traditional farm ponds.

Since they began, more than 120,000 trees have been planted, nearly 20 hectares of native woodland have been

created and a further 10 hectares regenerated. In addition, nearly 5km of hedgerow have been planted and 12 ponds have been established covering a total of 2.3 hectares. The initial work was funded by the farmers themselves, however, they have since attracted funding from a range of sources including Scottish Power, Enfys (a lottery funded programme), and Forestry Commission Wales through BWW.

The scheme at Pontbren has attracted interest from across the UK and abroad. The effects of the work and changes in management practices are being monitored by scientists from a number of universities. The Welsh Assembly Government is also supporting this project and monitoring its financial consequences.

Research has demonstrated that small scale strategically planted hedgerows and shelterbelts can significantly reduce runoff and sediment movement, and improve water quality. Tree planting can reduce peak water flows, intercepting rain in the canopy and holding back water

in the soil thereby helping to reduce flooding. A number of hydrology gauges and measures are in place across the Pontbren catchment and a report published by the Flood Risk Management Research Consortium has shown that strategically placed tree belts were found to reduce peak water flow by 29%.

The trees also produce a renewable supply of biomass, which can be chipped and used as animal bedding or firewood. Locally produced products such as these have a lower carbon footprint than those transported over longer distances. Furthermore, the woodlands provide shelter for livestock, habitats for wildlife and soak up carbon dioxide from the atmosphere, thus helping to mitigate climate change.

The Pontbren scheme points the way to a more integrated approach to land management which is a Welsh Assembly Government objective. By creating stronger links between woodland management and other land uses, especially agriculture, more benefits can be delivered for everyone.