



Natural Flood Management in the Cadoxton catchment

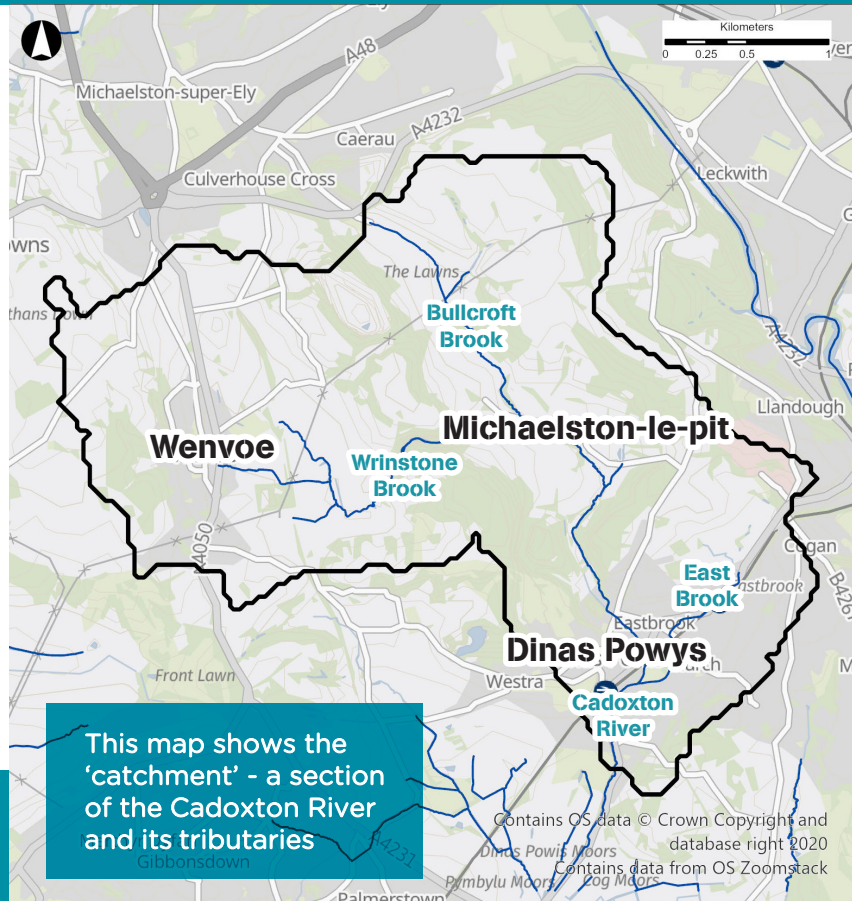
Periods of heavy rainfall over recent years have showed us the impacts of flooding on many communities in Wales, including Dinas Powys.

NRW is exploring ways to reduce flood risk and the impacts of climate change to the Dinas Powys area through natural flood management (NFM) in the Cadoxton catchment.

What is NFM?

'Natural flood management' is working with natural processes to reduce the risk of flooding, through restoring natural features, storing water temporarily, increasing the amount of water that can be infiltrated in the soil or intercepted to help slow down and reduce the flow of water into the brooks and rivers.







We are exploring NFM that incorporates many benefits, and we also remain open to appropriate small-scale engineered solutions which can work alongside natural processes. It does not include using traditional flood defence infrastructure such as flood embankments or walls.



NFM benefits:

- **reduces** effects of heavy rainfall on soil loss
- **improves** water quality, soil health, animal health, and resilience to drought
- **enhances** biodiversity, supports wildlife habitat, and community wellbeing
- **reduces** impact of flooding to communities downstream
- **supports** productivity of the land
- **enables** farm diversification
- **stores** carbon and helps adapt to climate change

NFM opportunities in the Cadoxton catchment

Opportunities	<p>Storing water</p> <p>Ponds, scrapes, bunds and swales can temporarily store water, reduce water entering rivers and slow the flow of water overland.</p>	<p>Large woody debris in river channels</p> <p>This slows the flow by encouraging floodwater to temporarily spill onto the floodplain where suitable.</p>	<p>Restoring floodplains, wetlands and meanders</p> <p>Large volumes of water can be stored, slowing the flow by temporarily allowing floodwater to spill naturally onto land.</p>	<p>Restoring hedgerows and trees</p> <p>This intercepts rainfall, water evaporates from leaves, and less water reaches the ground. Helps soil hold more water.</p>	<p>Planting next to rivers and across slopes</p> <p>Shrubs, grass buffers, or trees can slow the flow, help soil soak up more water, and help stabilise river banks.</p>	<p>Soil and land management</p> <p>Managing soil compaction, crop and livestock rotations.</p>
Examples						
Other key benefits	<ul style="list-style-type: none"> • retain water in times of drought • land productivity • less soil loss • soil health • supports invertebrate and plant species • water quality 	<ul style="list-style-type: none"> • soil health • land productivity • diversity of river habitat features • biodiversity • improves channel structure • traps sediment, improving water quality 	<ul style="list-style-type: none"> • soil health • land productivity • diversity of river habitat features • biodiversity • water quality • improves channel structure • allows more natural lower energy flooding, stabilising river banks • drains back into the river naturally 	<ul style="list-style-type: none"> • shelter and shade for animals • slows surface water • traps and filters runoff, stops loss of fertilisers, sediment and pesticides • soil health • biodiversity • water quality • absorbs and stores carbon 	<ul style="list-style-type: none"> • stabilise river banks • less erosion • shelter and shade for animals • traps and filters runoff, stops loss of fertilisers, sediment and pesticides • biodiversity and habitat • water quality • absorbs and stores carbon 	<ul style="list-style-type: none"> • less soil loss • soil health • less waterlogged areas • retain water in times of drought • biodiversity • water quality • slows flow of water



Next Steps

Working closely with the local community, particularly property and landowners, is key in implementing NFM and reducing flood risk.

We are currently meeting with local farmers, landowners, and tenants to explore the opportunities. Please get in touch to discuss your ideas and share your knowledge and concerns.

Contact Details

The team can be contacted via email or phone.

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 bit.ly/natural-flood-management-cadoxton-catchment