

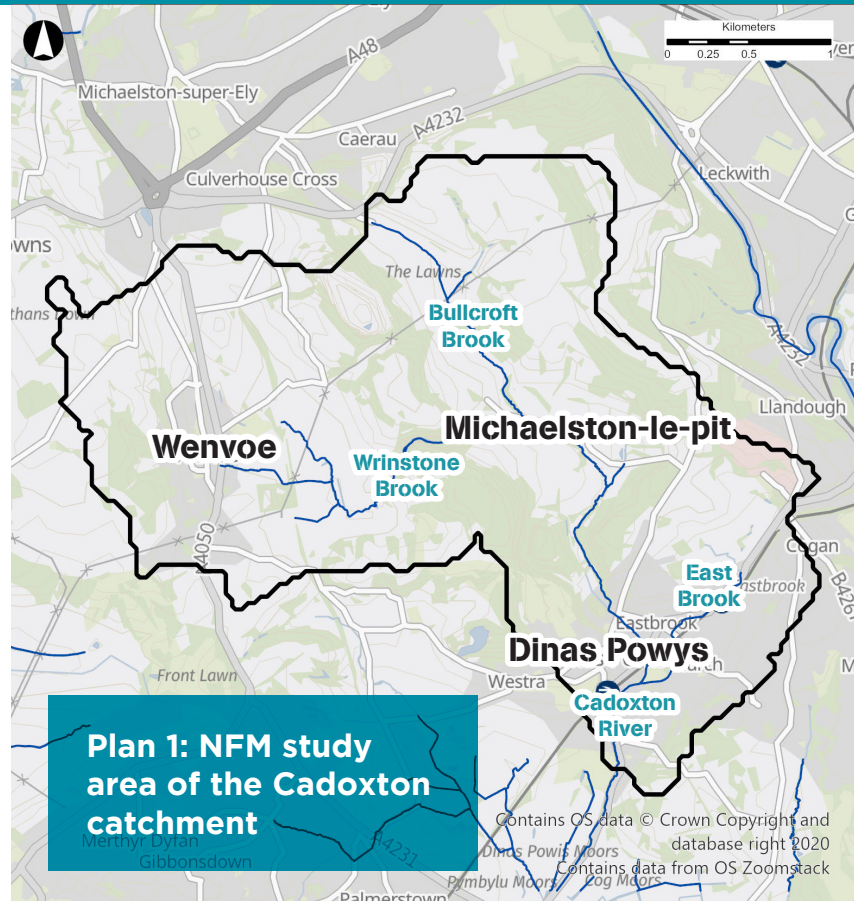


# Natural Flood Management+ in the Cadoxton catchment

**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.

The study area is shown in Plan 1 and covers the catchment of the Cadoxton River and East Brook, including their tributaries.



## What is NFM+?




NFM stands for 'natural flood management' and involves working with natural processes to reduce the risk of flooding, restoring natural features, and enhancing characteristics to slow down and reduce the flow of water into the brooks and rivers.

It does not include using traditional flood defence infrastructure such as flood embankments or walls. For this project, we are exploring 'NFM+' that incorporates wider benefits, and we also remain open to appropriate, viable engineered solutions.

## NFM+ wider benefits:

- **improves** water quality, drought resilience, and soil nutrients
- **enhances** biodiversity, habitats, and community wellbeing
- **reduces** flood risk
- **supports** land productivity
- **enables** farm diversification
- **adapts** to the effects of climate change
- **mitigates** the causes of climate change

# NFM+ opportunities in the Cadoxton catchment

Opportunities	<h2>Runoff Attenuation Features</h2> <p>This can reduce peak flows from entering watercourses by slowing flow overland.</p>	<h2>Large woody debris in river channels</h2> <p>This can encourage out-of-bank spill-over and backing-up of flood water.</p>	<h2>Restoration or optimisation of floodplains</h2> <p>This can store large volumes of water to reduce flood risk.</p>	<h2>Increasing tree cover</h2> <p>This intercepts the water on the tree canopy and increases soil's ability to hold water. Evapotranspiration from mature trees can also be significant.</p>	<h2>Planting buffer strips adjacent to watercourses</h2> <p>This will include shrubs/ bushes or grass buffers, can slow runoff.</p>	<h2>Contour ploughing</h2> <p>This is a farming practice that involves ploughing / planting across a slope, following its natural contour lines. The ridges help to store runoff and therefore reduce flood risk.</p>
Examples						
Benefits	<ul style="list-style-type: none"> <li>• reduces flood risk</li> <li>• supports land productivity</li> <li>• supports specialist invertebrate and plant species</li> <li>• adapts to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• improves soil nutrients and condition</li> <li>• reduces flood risk</li> <li>• supports land productivity</li> <li>• improves diversity of river habitat and aquatic biodiversity</li> <li>• improves channel structure</li> <li>• improves water quality</li> <li>• adapts for climate change</li> </ul>	<ul style="list-style-type: none"> <li>• improves aquatic biodiversity and habitat, water quality, soil nutrients and soil condition</li> <li>• supports land productivity</li> <li>• reduces flood risk</li> <li>• improves channel structure</li> <li>• adapts to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• slows surface run off</li> <li>• promotes soil infiltration</li> <li>• improves soil nutrients and condition</li> <li>• improves biodiversity</li> <li>• improves water quality</li> <li>• adapts to climate change</li> <li>• mitigates climate change through carbon dioxide absorption and carbon storage</li> </ul>	<ul style="list-style-type: none"> <li>• improves effective water infiltration</li> <li>• slows surface flows</li> <li>• improves biodiversity</li> <li>• improves water quality</li> <li>• adapts to climate change</li> <li>• mitigates climate change through carbon dioxide absorption and carbon storage</li> </ul>	<ul style="list-style-type: none"> <li>• reduces soil and nutrient losses</li> <li>• helps conserve water</li> <li>• reduces flood risk</li> <li>• improves biodiversity</li> <li>• improves water quality</li> <li>• adapts to climate change</li> </ul>



## 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 landowners and agents to explore potential opportunities.

We encourage all those with an interest in the project to share their local knowledge, ideas, and concerns.

## Contact Details

The team can be contacted via email or phone.

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