

Stalybridge NFM-Protect project

Along the western fringe of the Pennines, the Environment Agency has identified 22 communities at risk of flooding. One of these is at Stalybridge, and to help reduce the flood risk to this community, the Environment Agency, is working through Moors for the Future Partnership and with the University of Manchester to restore Peatland, in order to slow the flow of water and reduce flood risk downstream. The Peatland restoration comes under the DEFRA-funded Moor Carbon project, and ten large stone dams, 143 peat dams, 29 small stone dams, and 20 timber dams were installed by Moors for the Future Partnership with funding from the DEFRA Catchment Scale Natural Flood Management Fund. The project is innovating through the construction of the ten large stone “leaky dams” and ten experimental “leaky” piped-peat dams. These interventions have apertures and pipes to allow base flow to pass forward; they are sized to target the flood peaks and attenuate them, thus delaying (and reducing) the flood peak downstream. Together the restoration measures and dams attenuate 2,105 m³ of floodwater.

Monitoring of the interventions is part of a full-scale research project (Protect-NFM) being led by the University of Manchester.

Intensive monitoring of rainfall, runoff, and water tables for the year prior to installation of the measures has established a baseline so that we can analyse the impact of the range of NFM measures in a Before-After-Control-Intervention framework. This approach has previously been successfully used to demonstrate NFM impacts of peatland restoration work on Kinder Scout. The team are also monitoring the performance of individual interventions. We now have monitoring data for just over a year post-intervention. Initial results show that the NFM optimised approaches with pass through pipes significantly enhance the available storage and work is ongoing to determine the optimum size of the pass-through apertures. We expect to report results from the BACI analysis towards the end of 2021.

Brownie DB08 pre- and post-blocking



Large Stone Dam



Piped peat dams



Timber slot dams

