# PROTECT-NFM
# NEWSLETTER

Issue 01 | Feb 2018

Welcome to our first project newsletter!

Partnership is central to making Protect-NFM work and there are lots of ways that we will be engaging with you, including stakeholder and steering group meetings, as well as operational meetings with partners for particular work packages. However, we also want to provide you with a digestible update on progress so that you can share within your organisations and so we will be sending these newsletters out approximately monthly. I hope they are useful. Do provide us with feedback on what you want to see and hear about!

Martin Evans and the Protect team

## PROJECT OVERVIEW

**Natural flood management** (NFM) is the practice of managing flood risk by protecting and restoring the natural regulation function of river catchments. It has the potential to provide environmentally sensitive ways to reduce flood risk and protect areas where hard flood defences are not feasible.

The **extensive landscape restoration** work across the **UK uplands** is currently funded outside flood defence budgets and is not always accounted for in existing understanding of catchment NFM assets, but there is clear opportunity to enhance NFM delivery through optimisation of these works for runoff regulation.

**Protect-NFM** (*Optimising Natural Flood Management in Headwater catchments to Protect Downstream Communities)*, is an innovative £1.2 million project that aims to demonstrate how moorland restoration could be a low-cost way to reduce the risk of flooding in vulnerable rural communities near steep upland streams and rivers. It is one of three projects to be **granted funding by NERC** as part of their *Understanding the Effectiveness of Natural Flood Management* programme.

Previous research by the project team has shown that upland restoration can have a substantial impact on the flow of water during storms. Following revegetation and damming of erosional gullies, surface roughness is increased which **slows the flow** of water entering streams, producing storm hydrographs with significantly longer lag times and reduced peak flows.

We will build on our previous research to **optimise gully block design** and investigate the **re-establishment of *Sphagnum*** and **woodland planting** on channel delivery and storm discharge. We will also derive empirical evidence of the impact of gully blocking and re-vegetation as these systems mature.

This will allow us to build a conceptually sophisticated **user-friendly model** to spatially optimise and predict the impact of NFM measures at the catchment scale. The model will be used to test the impact of NFM intervention scenarios for 21 communities at risk of flooding in the Greater Manchester area. The ultimate goal of the project is to provide **practical and policy guidance** on the implementation of headwater NFM interventions across the UK.

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## PROGRESS TO DATE

The project officially began on 1st November 2017. The pre-Christmas period was spent meeting our key project partners, Moors for the Future Partnership and GMMC Environment Agency, to audit our existing resources and discuss new monitoring sites. We also set up our social media presence with the other projects funded through NERC's NFM programme. If you're on Twitter, you can follow us @NERC_NFM and #ProtectNFM.

In January, we welcomed Martin Kay to the team as our field technician. His first day was spent on a rather soggy Bleaklow Plateau visiting some of our existing field sites. January also gave us a chance to get the full team together to discuss how we are going to manage and coordinate the various work packages. Martin, Tim and Emma also attended a meeting in London organised by NERC to get all of the project teams together to discuss common messages and outputs.

We've not been spending all of our time in meetings! We've also been busy pulling together our existing datasets, identifying suitable sites for the gully blocking work, arranging permissions and ordering kit, with the aim of having some of our new sites up and running by the end of March. We should have lots more to report in the next newsletter!

## MEET THE TEAM

**Martin Evans** is Professor of Geomorphology and Head of the School of Environment, Education and Development at the University of Manchester. He has 20 years' experience of research on peatland hydrology, erosion, restoration and ecosystem services.

**Joseph Holden** is Professor of Physical Geography and Pro-Dean for Research for the Faculty of Environment at the University of Leeds. He is the founding Director of water@leeds and has 19 years of experience in peatland hydrology, combining field & modelling studies.

**Tim Allott** is Professor of Physical Geography at the University of Manchester. He has edited two major volumes on peatland systems and is currently leading the IUCN UK Peatland Programme inquiry on peatland hydrology.

**David Milledge** is a Lecturer in Physical Geography at Durham University with expertise in hydrology and geomorphology and 10 years' experience of model development, and a strong track record of working with stakeholders to co-produce user-friendly tools.

**Emma Shuttleworth** is a Research Associate at the University of Manchester. She has worked on peatland restoration for nine years and has a strong track record of public engagement and science communication activities.

**Martin Kay** is the Field Technician for Protect-NFM based at the University of Manchester. He has six years' experience of working in peatland environments and is currently working towards his PhD at Manchester Metropolitan University.