

# Innovative ecological scheme to reduce flooding in Leicestershire

Work starts this week at Narborough Bogs Nature Reserve to test natural ways of managing flood waters.

The Environment Agency have teamed up with Leicestershire and Rutland Wildlife Trust, Natural England and Heriot-Watt University to pilot innovative Natural Flood Management (NFM) measures to slow and store water at Narborough Bogs Nature Reserve in Leicestershire.

As part of the works, and in keeping with the regular woodland management on site 10 trees will be felled to create openings in the woodland canopy. The wood will be orientated across the woodland floor in a way that it blocks the flow route of flood water from the River Soar and holds it in the wet woodland area for longer. Wood piles will be used to block up old withy beds that transfer water through the woodland and a wooden bund will be created at the end of an old oxbow lake. All features have been designed to have the maximum ecological benefit and compliment the nature reserve setting.

The project is part of a £15 million national NFM programme which in addition to delivering flood risk and environmental enhancements, aims to contribute to the growing evidence base for NFM.

As these natural flood management techniques are relatively new there will also be a PhD opportunity at Heriot-Watt University to evidence the effectiveness and also to help develop guidance on how larger NFM schemes can be designed and optimised.

Narborough Bogs is one of four sites in the Leicester area where this approach is being piloted. At the other sites ponds are being created to store water and tree planting used to slow overland flows. Each site will be monitored with changes in water levels and ecology closely scrutinised to see how effective the NFM measures are.

Environment Agency Project Manager, Alex McDonald said:

This is a great opportunity to pilot natural flood management and to really understand the multiple benefits it can deliver. We've been working closely with our partners to make sure our designs marry with the ethos of the nature reserve and we hope that we will be able to show through our monitoring that we have been able to benefit the ecology of the reserve as well as reducing flood risk downstream.

Leicestershire & Rutland Wildlife Trust Conservation Officer Ben Devine said:

As a result of historic changes in hydrology and pressures from surrounding development such as roads and railway lines, Narborough Bog has dried-up significantly over the years. We are delighted to be working with the Environment Agency and others to improve the watercourse for the benefit of wetland wildlife and local communities downstream.

Natural England Freshwater Advisor Martin Banham said:

Narborough Bog Site of Special Scientific Interest (SSSI) contains some amazing wet woodland and reed-bed. Wild, transient, boggy and rare – wet woodlands are now some of our least common wooded habitats. This project is helping the wet woodlands thrive by absorbing more water, whilst keeping the sensitive flower meadows free of fertile river mud.

Atkins Project Manager Ian Morrissey said:

We're very excited about this project as it will allow us to apply learning and innovation from previous NFM schemes to deliver multiple benefits that align with the landowner's needs.

Heriot-Watt Associate Professor in Physical Geography, Dr Ian Pattison said:

Although becoming increasingly popular, NFM is still a fairly new approach, and we are pleased to be working with the Environment Agency and its partners on the Soar NFM project, to build up the evidence for the effectiveness of different types of NFM interventions. Furthermore, we hope to develop models which can be used to bring more strategy and design to the approach when applied at the catchment scale.