

Slowing the Flow in Pickering and Sinnington

What is the project?

It is a two-year pilot partnership project in the Pickering and Sinnington areas to show that **land management** can help to reduce the risk of flooding and also bring other benefits for water quality, wildlife and soil protection.

Forest Research is leading the project in partnership with Environment Agency, Forestry Commission, Natural England, Durham University and North York Moors National Park Authority and other supporting partners.

What do we mean by land management?

This approach means making changes to the way the land is managed, such as;

- changing the type of vegetation growing on the land to reduce run off, or
- increase water storage in the river catchment.

We want to increase the time it takes from rain falling on the upper catchment to flood waters arriving in the watercourses flowing through Pickering and Sinnington.

This means everyone making small changes to the way the land is managed to make a large combined impact.

How will this be done?

This will be done by slowing down water in the top of the river catchment and storing some of it in the middle of the river catchment.



This project involves breaking down the catchment into different land use types where we will use different land management techniques for forestry, moorland, farmland and flood storage.

Forestry work

We will look at the planting of additional trees and creation of some woody debris dams to slow water down in the upper river catchment.



Example of newly planted floodplain woodland (Forest Research)

Floodplain woodland can act as a physical barrier to slow down the flow of water. This is done by improving the soil structure to prevent erosion and increase water absorption into the ground.

A collection of natural woody debris material in smaller tributaries can function as dams to trap sediment and reduce the flow of water.

Moorland management

Blocked gullies on the moorland could also help to slow down the flow of water. Some of these moorland gullies are man made and others are natural but both types reduce the amount of time that water remains on the land and as a result will increase flood risk.



A potential location where sediment and water runoff could be reduced (North York Moors National Park Authority)

Over the years these gullies have eroded which has caused silt to be washed into rivers and deposited. Blocking these drainage channels will help to slow down the water and erosion.

Farmland management

We will look for the creation of buffer strips on field margins to improve soil management and create areas for water storage.

Buffer strips involve leaving up to six metres of river bank unmanaged which allows the grass and vegetation to trap sediment and reduce water flow.



An example of a buffer strip

Flood storage

We have been investigating the idea of creating low level bunds to store floodwater upstream of Pickering, which for short periods of time, during high

river flow conditions, would retain water behind them.

A recent report by Durham University and the Ryedale Flood Research Group proposed building bunds upstream of Pickering to temporarily store excess flood water within Newtondale.

Durham University are working with us to develop this into a solution that is safe, legal and affordable.

How to find out more?

A drop in season is being held in Pickering Memorial Hall on **Monday 28 September between 2 pm and 7:30 pm**.

Displays will be set up to explain more about the project and the project team will be available to answer questions and provide further detail.

Informal presentations giving an introduction to the project will be run at 3 pm and 7 pm.

Community Involvement

Your involvement is key to the success of this innovative project and we want you to be involved.

We are keen to find out on 28 September if you are interested in being involved in this project and how we can best do this.

Contact us

We hope to see you on 28 September. In the meantime if you have any comments or questions about the work in Pickering and Sinnington, please let us know.

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