Yorkshire Dales Rivers Trust

Delivering Natural Flood Management in an Upland Catchment

Upper Wharfedale

www.yorkshiredalesriverstrust.co

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Yorkshire Dales Rivers Trust

Where is Upper Wharfedale?

Flooding on the River Wharfe

2015 Floods:

Over 150 properties flooded, including 79 in Tadcaster. More than 20 other communities across the catchment were affected.

River Wharfe, Tadcaster
2015 Floods

Naturally Resilient

Otley Flooding

What is the solution?

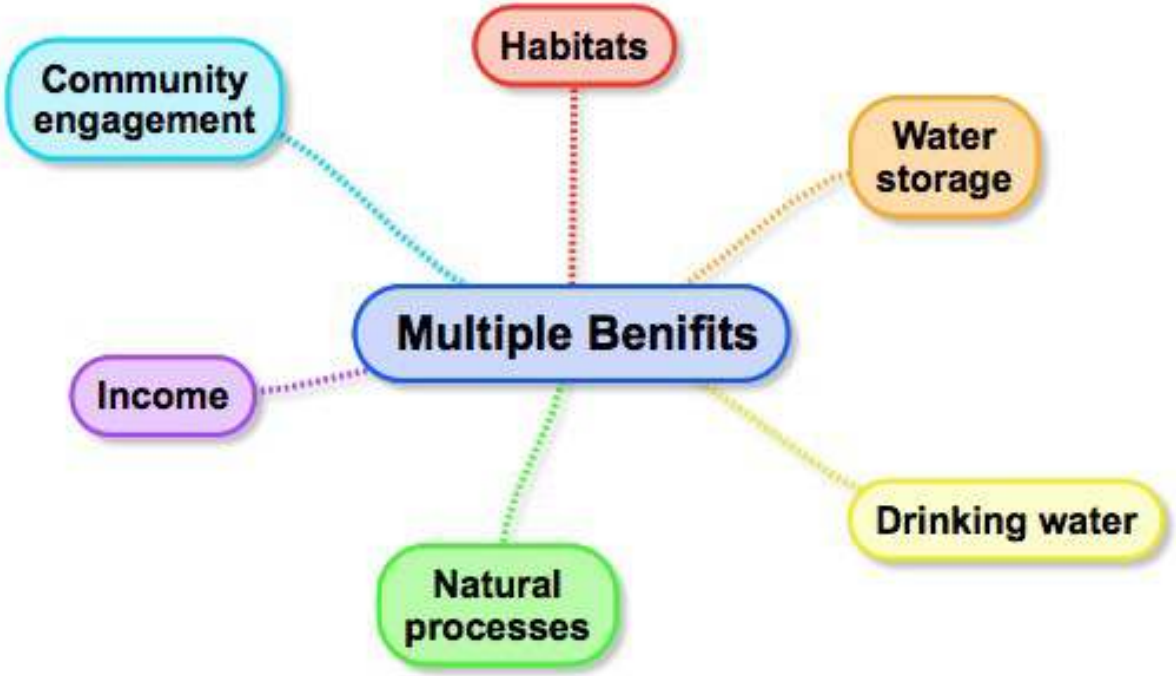
Can we continue to build our way out of flooding?

Could we consider other approaches?

What is NFM?

Why NFM?

It delivers more than just reducing flood risk



Some simple NFM techniques?

Dams replica
l features hel
e movement

Wetlands help to store water in the catchment

Riparian Buffers strips increase roughness and slow the movement of water

What are we doing in Wharfedale?

The Wharfe Flood Partnership

The partnership was formed in 2016.

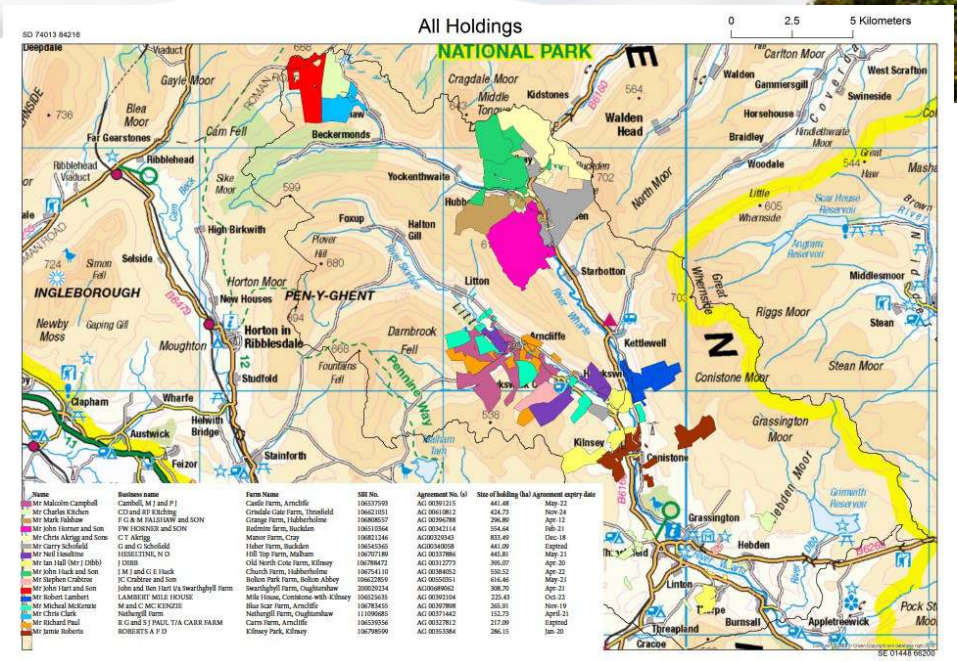
Upper Wharfedale became the focus for NFM

Interreg
North Sea Region
WaterCoG
European Regional Development Fund
EUROPEAN UNION

Natural Flood Management
The delivery mechanism

- Countryside Stewardship Flood Facilitation Fund
- Naturally Resilient
- Yorkshire Water BAF, other projects through multiple benefits, Upper Wharfe Catchment Partnership
- ICASP and working with University Researchers

Countryside Stewardship Flood Facilitation Fund- CSFFF



CSFFF Wharfedale

Supports people and organisations that bring farmers, foresters, and other land managers together to improve the local natural environment at a landscape scale. This group's focus is Natural Flood Management

16 farmers covering over 6000 ha

YORKSHIRE DALES National Park Authority

defra Department for Environment Food and Rural Affairs

Naturally Resilient

Countryside Stewardship Flood Facilitation Fund- CSFFF

What are we doing:

Running Training Events: Soil health workshop, Installation of NFM demonstrations (Leaky Dams), Stewardship workshops

School Visits: Getting in to local primary and secondary schools

Demonstration trials: Aeration trials to reduce compaction.

YORKSHIRE DALES National Park Authority

defra Department for Environment Food and Rural Affairs

Naturally Resilient

Naturally Resilient

"Help local communities and farm business in Wensleydale and Wharfedale to tackle reducing flood risk."

What are we doing:

Providing one to one support through Natural Flood Management Farm Plans.

Setting up demonstration sites

Connecting flood effect communities with farmers and landowners reducing flood risk.

Modelling to help direct and priorities work.

Funded by Princes Countryside Fund

THE PRINCE'S COUNTRYSIDE FUND

Naturally Resilient

Wensleydale Countryside Stewardship Flood Facilitation Fund

The Countryside Stewardship (CS) facilitation fund supports people and organisations that bring farmers, foresters, and other land managers together to improve the local natural environment at a landscape scale. This landscape scale approach can cover land under existing agri-environment and forestry/woodland agreements, common land and land not currently covered by a scheme. It builds on the principles of partnership working to deliver environmental benefits, as demonstrated by various initiatives, including farm clusters and the farmer-led Nature Improvement Area. The Wenslyedale group specifically focusses on Natural Flood Management.

For more information, please contact: Tarja Wilson.
Tarja.Wilson@yorkshiredales.org.uk

9. Funding

This section should highlight who could help and what funding opportunities there are.

Yorkshire Dales Millennium Trust (YDMT): Woodland Creation

Grant funding is available through the YDMT for woodland creation schemes that can demonstrate that it significantly conserves, enhances or adds to the natural heritage, accessible to the general public or be clearly visible from a public right of way, and be supported by the local community.

More information: http://www.ydmt.org/news-details-cash-available-for-woodland-creation-24720
Contact: Carol Douglas, carol.douglas@ydmt.org

Yorkshire Dales National Park Authority (YDNPA): Woodland Creation

The YDNPA have access to several funding pots and can advise what and how to apply for different woodland creation grant schemes, such as, Woodland creation under the new Countryside Stewardship which includes options for Large Woody Material.

More information: https://www.forestry.gov.uk/england-countrystewardship
Contact: Geoff Garrett,

Natural England: Catchment Sensitive Farming (CSF)-

This project is run by Natural England and aims to raise awareness of diffuse water pollution from agriculture (DWPA). Catchment Sensitive Farming is now working with farmers in selected areas to provide Countryside Stewardship grants. Funding to improve water quality is now available through the Countryside Stewardship Mid Tier application process. This project targets specific priority areas and therefore accessibility to grants should be checked.

More information: https://www.gov.uk/guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution
Contact: Jane LeCocq, jane.lecocq@yorkshiredales.org.uk

Yorkshire Dales Rivers Trust: Natural Flood Management

The YDRT do have access to some funding opportunities to deliver NFM within Bishopdale Catchment. This project is currently been developed and monies should be available towards the end of 2017.

More Information: http://www.yorkshiredalesriverstrust.com/naturally-resilient/
Contact: Dan Turner, dan.turner@yorkshiredalesriverstrust.com

THE PRINCE'S COUNTRYSIDE FUND

Naturally Resilient

IMAGE © YDNPA

Planting and managing hedgerows

Hedgerows are an intrinsic part of the landscape within many areas of the National Park and owe their existence to the need to divide grassland into conveniently-sized grazing pastures for livestock.

Hedgerows provide excellent natural weather barriers and ideal habitat for farmland birds and wildlife species, but also perform a natural flood management function by trapping and slowing water flow.

Natural flood management purpose

Hedgerows reduce the volume of runoff by promoting rainfall infiltration into the soil and reducing the rate of runoff .

They remove water faster from the soil than crops during periods of excessive rainfall through increased evapotranspiration.

They trap sediment and reduce sediment flow into watercourse.

Agricultural benefits

Hedgerows create areas of shelter and shade for livestock.

They trap and filter runoff, preventing loss of fertilisers, sediment and pesticides.

Animal health may also be improved through reductions in standing water from increased infiltration rates.

Hedgerows provide a barrier to the spread of disease, reducing animal-to-animal contact.

They provide habitat for farmland birds and beneficial insects.

Construction dimensions

New planting: plant a double staggered row hedge using 4-6 plants per metre, with a distance between the rows of 1-1.5m, and plant a varied row of trees between these rows. Use tree tubes (0.7m tall) to protect young plants from rabbit damage. Protect both sides of a new hedge with a stock proof fence, erected at least 1m from the centre of the hedge.

Considerations

Planting should be carried out between November and March.

Up to 75% of the species can be thorns – for example, hawthorn and blackthorn.

Consider a mix of shrub species, including hazel, guelder rose, rowan and holly, to enhance hedgerow for wildlife.

Level of maintenance

High

Newly planted hedges will require annual maintenance until at least 1.5m tall, particularly with regard to weed control, cutting every two years from then on to ensure life of hedgerow. Cutting to a box shape will increase benefits for wildlife, as well as shelter for stock. The laying of hedge every 12-15 years will increase wildlife benefits and the overall health of the hedge.

Key locations

Consider planting a new hedge across a slope where runoff occurs or perpendicular to the river in a floodplain.

Where hedgerows have been lost from an area or the network is very fragmented.

Restoration and management in areas where there are good networks of hedgerows.

Costs

Set-up	Medium
Maintenance	Low

Funding

Countryside Stewardship (CS) scheme capital grants – mid and higher tier, hedgerows and boundaries grant.

Yorkshire Dales Millennium Trust (YDMT) Woodland Grant Programme.

Woodland Trust (WT).

Yorkshire Dales National Park Authority (YDNPA), in certain project areas.

Additional information

Countryside Stewardship (CS) scheme
www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management

Small grants for woodlands
www.ydmt.org/news-details-%c2%a3250k-for-new-woodlands-21695

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Interreg
North Sea Region
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FUND
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Capital funding

Funding

Yorkshire Water Biodiversity Action Fund

River Wharfe SSSI restoration project

Working with partners: YDNPA, multiple benefits.

Working with Universities

ICASP:

“to generate impacts worth more than £50M to the regional economy by using existing research to generate economic, societal and environmental benefits in rural and urban areas of Yorkshire.”

- Improve responses and long-term resilience to floods and droughts in urban and rural areas

Phd student

Monitoring the effect of Woody material in upland catchments