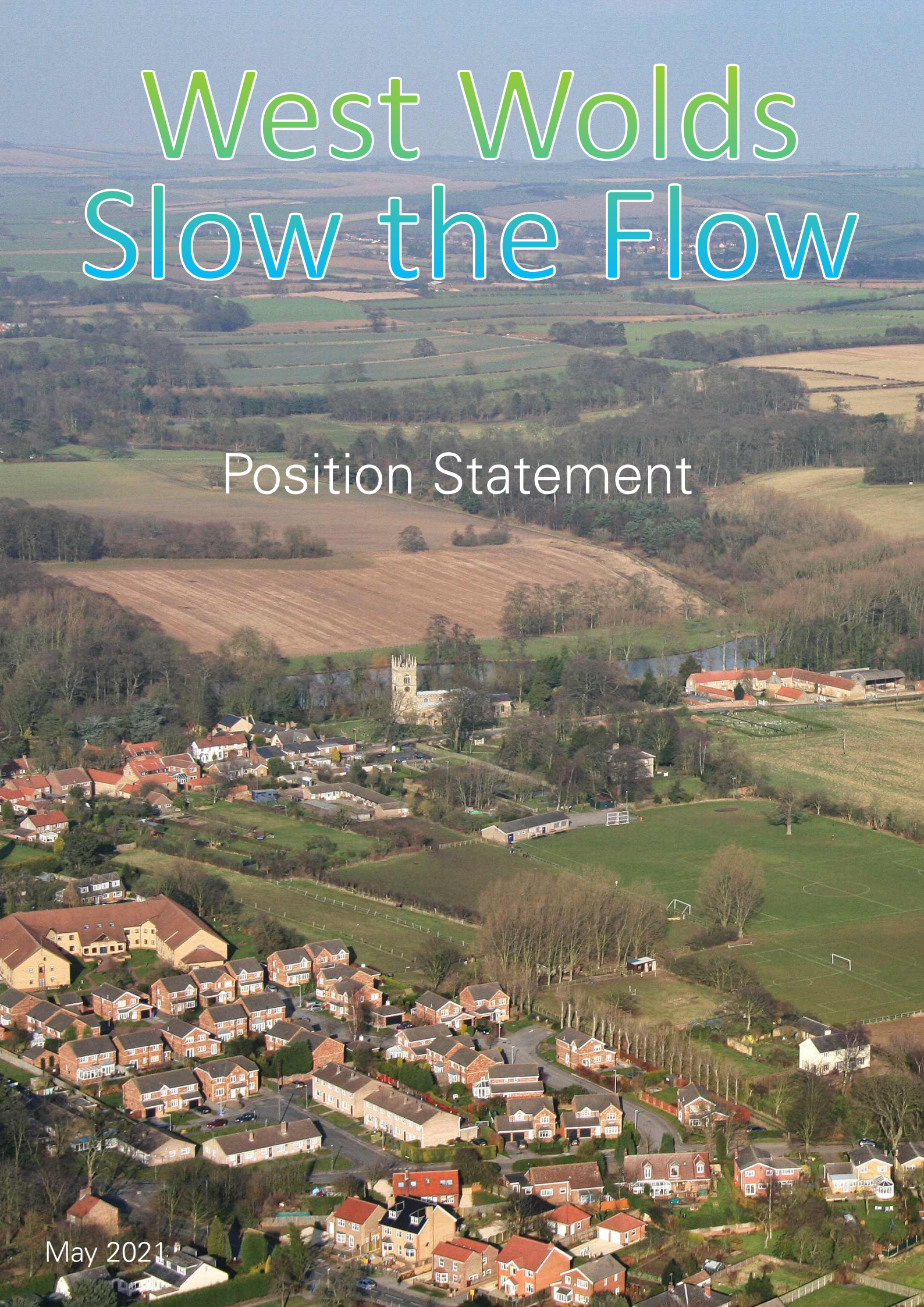
West Wolds Slow the Flow

Position Statement



May 2021

Preface

West Wolds Slow the Flow is a new organisation, adapting to the needs of the community and responding to the contributions of its partners and friends.

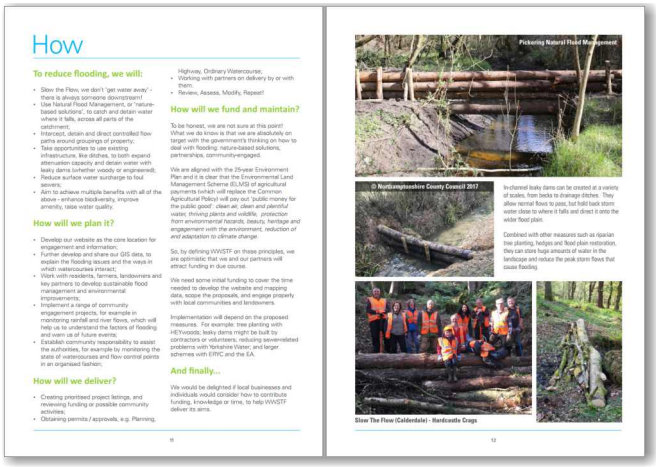
This document, starting life in early 2021, is not intended to record a fixed position, but to set out where we stand at present and where we believe we are heading. It is hoped that, through continuing input from many sources, this will continue to be a 'live', responsive and up-to-date document.

To that end, if there is anything you read with which you disagree, or if you think that we are missing an opportunity, or should be in contact with some individual or organisation who could help, or - heaven forbid - you know of a source of funding or assistance which will help us to achieve our aims... please let us know:

www.WestWoldsSlowTheFlow.org.uk

info@WestWoldsSlowTheFlow.org.uk

If you are able to read this document with two pages side-by-side, the images on the right will help to explain the text on the left.



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Case Studies - to follow

Case studies and potential projects will be a key part of developing WWSTF. These will be featured as separate documents on the WWSTF website and linked to from this document when available.

Front cover: Newbald, Hotham and North Cave (2008) - a connected landscape and catchment

West Wolds Slow The Flow

What

WWSTF is an informal partnership, of like-minded individuals and organisations, which aims to reduce flooding in the West Wolds villages and surrounding areas using nature-based solutions to Slow the Flow, whilst achieving multiple benefits, such as improvements to biodiversity, amenity and water quality.

We aim to create a resilient landscape as well as resilient properties. This will help to reduce the burden on properties by lowering peak flood levels, whilst generating green infrastructure benefits.

Why

The communities represented by WWSTF are experiencing increasingly severe and frequent flooding due to climate change. In addition, there is a biodiversity crisis; and low-level (or 'diffuse') pollution, including soil and riverbank erosion, is an ever-present threat.

Only nature-based solutions have the answers to these connected problems. We need to make our communities both more resilient and more sustainable.

Where

Geographically, we cover the East Riding parishes of Newbald, Hotham, North Cave, South Cave, Ellerker and Brantingham, which roughly correspond with the 'Mill Beck Catchment'.

Who

WWSTF was initiated from the community. It is led by local Landscape Architects who stress the need for a catchment-based approach and partnership working with: local residents and businesses, landowners and farmers, parish and county councillors. We work with officers of the Flood Risk agencies: East Riding Flood Risk Management, Environment Agency, Yorkshire Water and the Ouse and Humber Internal Drainage Board. We are working with the East Yorkshire Rivers Trust and are affiliated with the Hull and East Riding Catchment Partnership. Other partners are listed on the 'Who' page.

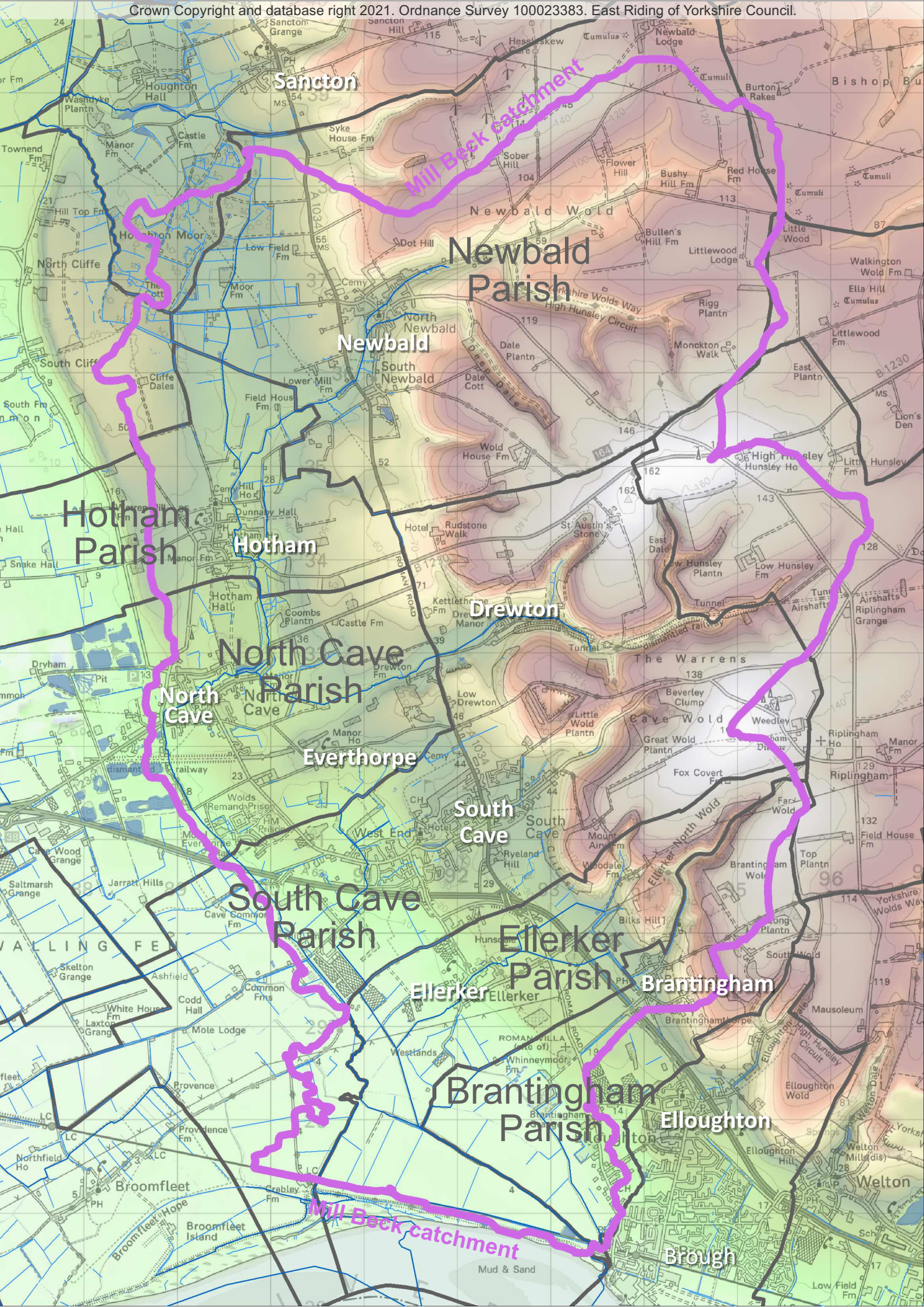
How

By working with our partners to identify the issues, map them and set about mitigating them. We recognise that National Policy, such as the 25 Year Environment Plan, and Funding, such as 'ELM', will increasingly be directed towards nature-based solutions and public benefits.

We will look to promote education and wide participation, with schools, voluntary organisations and individuals - for example setting up a network of river/rain gauges to help warn about and measure flood events. We will also engage with the planning process wherever possible.

When

Having experienced notable flooding in 2007 and 2019, WWSTF was initiated in 2020. In 2021 we will be fact-finding and planning. As soon as we can, we will seek early wins, but landscape-scale change is not a quick fix. We anticipate wider implementation over the next 5-10 years - as soon as policy and funding catch up with us!



Why

Flooding, climate and sustainability

On 25 June 2007, the community of North Cave experienced an unprecedented volume of floodwater passing through it. South Cave and Ellerker experienced a similar deluge. Since then, there has been notable flooding in 2012, 2014 and 2019. Other areas of the country have experienced unprecedented flooding in other years, such as the Boxing Day 2015 floods in Calderdale.

The consequence of climate change is that it is no longer if - but when - our communities will be flooded again.

In response to climate change, and the related biodiversity crisis and threats from 'diffuse' (low-level but pervasive) pollution, big answers are needed. These cannot rely on the ultimately unsustainable practice of building higher walls and deeper channels.

Real resilience

WWSTF recognises the need to make our community both more resilient and more sustainable. Property Flood Resilience (PFR) is an important individual response to flooding, one which is encouraged by WWSTF.

Arguably of greater importance is the resilience of our landscape to adapt to climate change and help us deal with its consequences - keeping us cooler in heatwaves, keeping our air, water and soil clean and healthy, and holding back water to reduce the severe peaks of flood-water that occur in times of severe storms or prolonged rainfall. By looking for answers at the landscape scale, we not only create a healthier landscape but also reduce the burden on individual house and business owners - not all of whom may be able to afford expensive property improvements.

Only sustainable, nature-based solutions can deliver answers at a sufficient scale to deal with these connected problems.

A community-based partnership

WWSTF seeks effective partnership because this makes all of the partners:

- better aware of the issues,
- better-informed as to the answers,
- more effective in implementation,

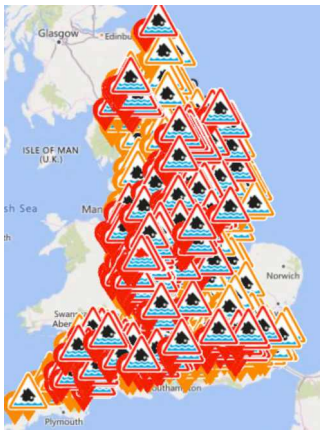
and delivers better value than any organisation can in isolation.

Whilst accepting the statutory duties of the Flood Risk Agencies and the pressures associated with these, WWSTF takes the view that they will ultimately be better able to deliver upon their duties by working in partnership.

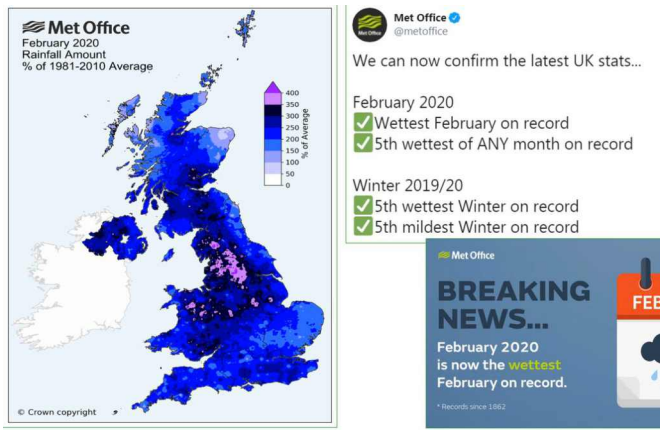
WWSTF also strongly echoes the view of the National Flood Forum (NFF): *local people are experts on their local area.*

This expertise, combined with the technical and professional expertise of the agencies, generates a deep understanding of the issues and solutions to flooding and wider environmental concerns.

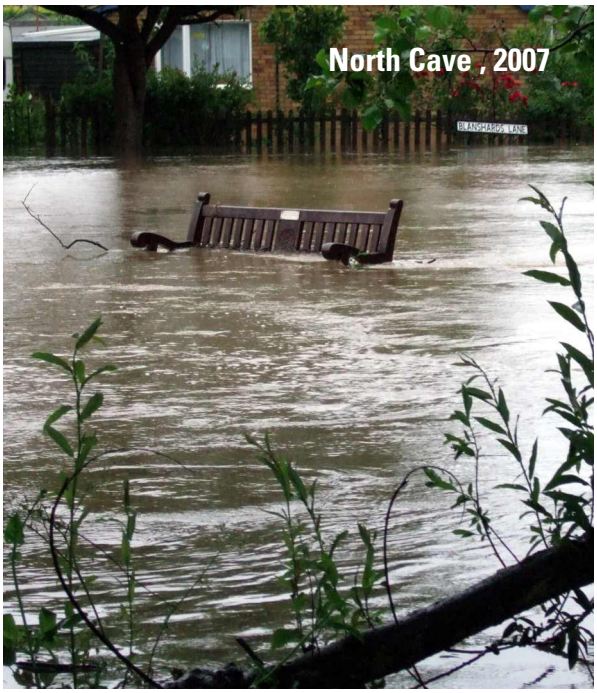
The Dec 2019 issue of Village Link asked 'When next?' The answer was: February 2020.

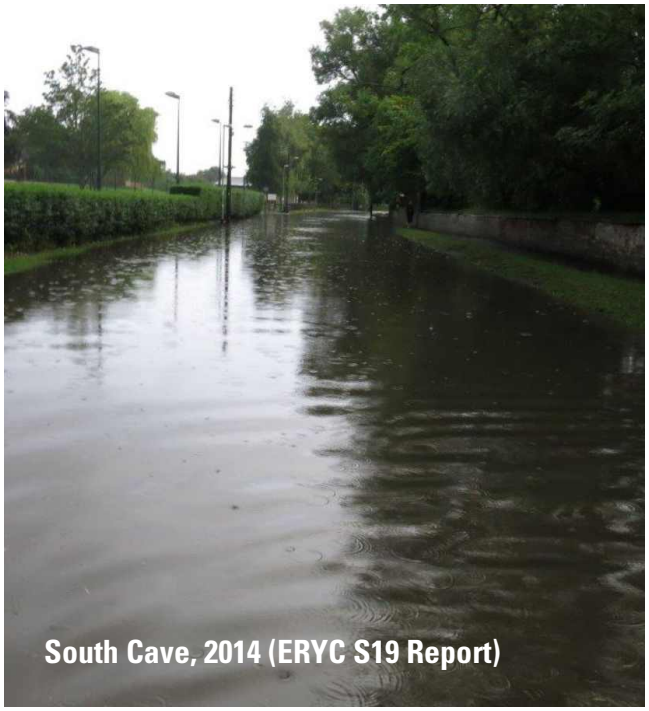


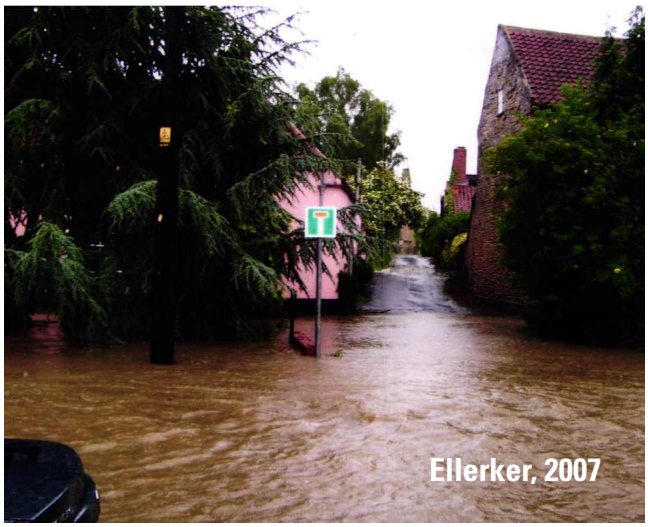
The Flood Warning Map for Storm Ciara, February 2020 - not a 'rare event'.



This Met Office Data confirms that climate extremes are with us. Business as usual is not an option.







Where

Mill Beck Catchment

The 'Mill Beck Catchment' comprises the following becks:

Ings - Hotham - North Cave - Drewton - Ferry - South Cave - Mires - Mill - Brantingham - Ellerker (see opposite).

As such, the area contains some of the most northerly examples in the UK of a globally very rare habitat: chalk streams. These are streams fed by water which has passed through the chalk bedrock of the Yorkshire Wolds and which surfaces in springs along the western edge of the Wolds. These often correspond with villages - which 'sprung-up' for obvious reasons.

Parishes

The parishes, which correspond to the Mill Beck catchment villages, are: Newbald, Hotham, North Cave, South Cave, Ellerker, Brantingham.

Newbald

Newbald is the most northerly village. It has a substantial catchment in its own right and sits at the confluence of a number of chalk streams. These, together with ageing sewage infrastructure, result in sewer overflows in times of flood. How Newbald deals with its water has a significant effect on the rest of the catchment.

Hotham

To some extent, Hotham is not built so much around its beck, as alongside it. To that extent, it often avoids the worst effects of flooding, but again, has a significant role to play in what happens downstream.

North Cave

North Cave sits at the confluence of Drewton and Hotham Becks. Together, these two becks have the potential to deliver enormous amounts of water in times of severe flood. North Cave is very much at the mercy of what happens upstream - no amount of beck and drain clearance can 'get water away' fast enough to account for the severity of climate change.

Everthorpe

This hamlet is a good example of a residential areas affected by surface water (pluvial) flooding - which has nothing directly to do with (fluvial) flooding in the becks, but also happens in times of severe rainfall. There are many places across the catchment where surface water flooding happens in very small localised sub-catchments.

South Cave

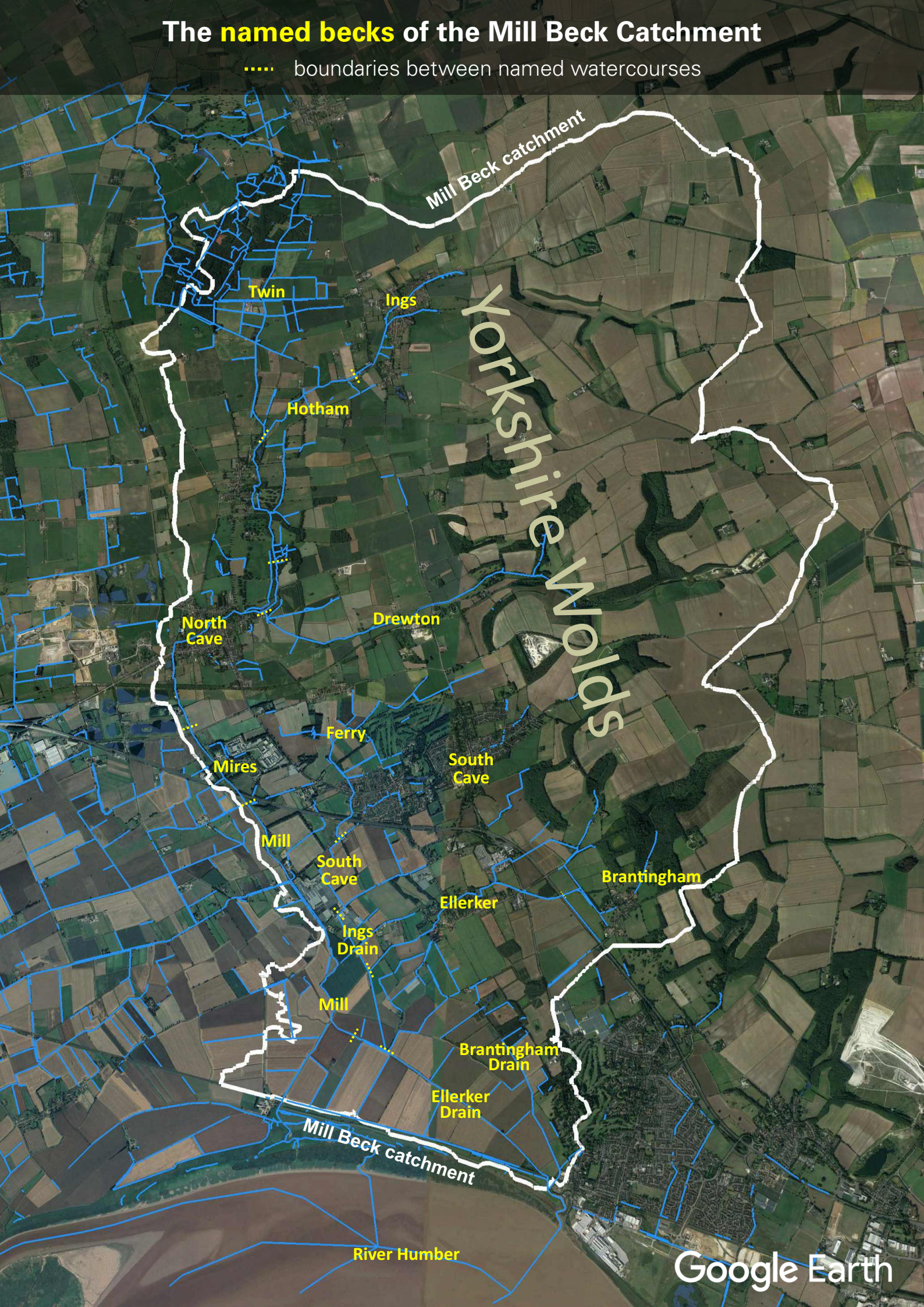
South Cave sits at the base of a substantial chalk valley. It has been subject to extensive development over and around its beck and suffered severe flooding in 2007, 2014 and 2019/20.

Ellerker and Brantingham

Water from South Cave and Brantingham flows past or through Ellerker. Like many other villages which are made delightful by the presence of the beck, Ellerker is also threatened by extremes of weather. Ellerker Parish houses the Water Treatment Works for the catchment, which is frequently overloaded. Mill Beck flows west of Ellerker and takes water from North Cave and upstream. When Mill Beck is at or over capacity, Ellerker's flooding is worse.

An exemplary area?

The Mill Beck Catchment is relatively small, only 67.5km² in area and 15km in length, from rising to reaching the Humber. It is also the home of WWSTF. As such, it has the potential to set an example and locally pioneer techniques which other areas may find helpful in their fight to deal with flooding, climate change and biodiversity loss, using sustainable, nature-based approaches.


The named becks of the Mill Beck Catchment
boundaries between named watercourses
Mill Beck catchment
Twin
Ings
Hotham
Yorkshire Wolds
North Cave
Drewton
Ferry
Mires
South Cave
Mill
South Cave
Brantingham
Ellerker
Ings Drain
Mill
Brantingham Drain
Ellerker Drain
Mill Beck catchment
River Humber
Google Earth

Who

Initiation

WWSTF was initiated by local landscape architects, 2B Landscape Consultancy. The approach is based on their experience of effective partnership working, the principles of sustainable drainage and natural flood management, and consideration of issues at a 'landscape scale'. In the case of flooding, this translates to the 'catchment scale'.

The original Slow the Flow...

...was established in 2016 as 'Slow the Flow' in Calderdale, West Yorkshire. It is a successful and well-regarded flood action group and charity. 2B has worked with Slow The Flow on several projects.

Parish Councils

Parish Councils are critically important because they are the voice of democracy at the most local level, and because they are made up of people who care about their community and who have a high level of local knowledge. All of the active parish councils in the area provide representatives who attend regular meetings to suggest and develop ideas.

Flood Risk Agencies

The statutory flood risk agencies - East Riding Flood Risk Team, Environment Agency (Humber Team) and Yorkshire Water - are valued partners in WWSTF. Each of these organisations brings skills and knowledge to WWSTF. The Ouse and Humber Drainage Board covers a small part of the catchment, but receives Mill Beck water in the lower reaches.

Other Partners

WWSTF has connected with relevant organisations working in the region:

East Yorkshire Rivers Trust (EYRT) is a charity whose agenda is very close to that of WWSTF. Having previously focussed on the Rivers Hull and Derwent, they are keen to work with us in this area. As a charity, they are able to act as our 'accountable body'.

Hull and East Riding Catchment Partnership (HERCP) forms an important link to many other organisations working through the Water Framework Directive for the improvement of our water environment. These include Yorkshire Wildlife Trust (YWT), Natural England and the East and North Yorkshire Waterways Partnership.

The **Hull and East Yorkshire Woodland Initiative (HEYwoods)** is managing large-scale tree planting through the Northern Forest, Trees for Climate Fund and other initiatives. HEYwoods stands by to assist WWSTF wherever tree planting will help, for example in the creation of riparian (river-edge) and wet woodlands.

Living with Water (LWW) is a multi-agency partnership (led by Yorkshire Water, with Hull City Council, East Riding Council and the Environment Agency), which was created to help deal with Hull's flooding issues. As LWW expands from Hull into the East Riding, we hope to work with it and benefit from its education programmes.

The PATT Foundation (PATT) is a local charity focussed on the mental health, training and employment of veterans via their subsidiary the Green Task Force (GTF). WWSTF is working with them to explore the role they could have in the construction and maintenance of natural flood management features, such as leaky dams and tree planting.

Education and outreach

We are keen to work with local schools. We would like to develop a network of river/rain gauges with local residents to help warn about and measure flood events. We also hope to work with the Flood Innovation Centre (FLIC) at the University of Hull.

National Flood Forum

WWSTF is registered as a flood group with the National Flood Forum, from which we obtain much useful information and encouragement.

Environment Agency

SLOW THE FLOW

EAST RIDING OF YORKSHIRE COUNCIL

BRANTINGHAM PARISH COUNCIL

YorkshireWater

NEWBALD PARISH COUNCIL

Ouse and Humber Drainage Board

North Cave Parish Council

Yorkshire Wildlife Trust

HULL AND EAST RIDING LIVING with WATER

EAST YORKSHIRE RIVERS TRUST

Ellerker Parish

a village community in the East Riding of Yorkshire

National Flood Forum

Flood Innovation Centre

PATT Foundation

2B Landscape Consultancy Ltd

assessment - design - visualisation - realisation

If viewing the PDF, click on the logos above to link to our partners' websites

How

To reduce flooding, we will:

- Slow the Flow! We don't 'get water away' - there is always someone downstream!
- Use Natural Flood Management, or 'nature-based solutions', to catch and detain water where it falls, across all parts of the catchment;
- Intercept, detain and direct controlled flow paths around groupings of property;
- Take opportunities to use existing infrastructure, like ditches, to both expand attenuation capacity and detain water with leaky dams (whether woody or engineered);
- Reduce surface water surcharge to foul sewers;
- Aim to achieve multiple benefits with all of the above - enhance biodiversity, improve amenity, raise water quality.

How will we plan it?

- Develop our website as the core location for engagement and information;
- Further develop and share our GIS data, to explain the flooding issues and the ways in which watercourses interact;
- Work with residents, farmers, landowners and key partners to develop sustainable flood management and environmental improvements;
- Implement a range of community engagement projects, for example in monitoring rainfall and river flows, which will help us to understand the factors of flooding and warn us of future events;
- Establish community responsibility to assist the authorities, for example by monitoring the state of watercourses and flow control points in an organised fashion.

How will we deliver?

- Creating prioritised project listings, and reviewing funding or possible community activities;
- Obtaining permits / approvals, e.g. Planning, Highway, Ordinary Watercourse;
- Working with partners on delivery by or with them.
- Review, Assess, Modify, Repeat!

How will we fund and maintain?

To be honest, we are not sure at this point! What we do know is that we are absolutely on target with the government's thinking on how to deal with flooding: nature-based solutions, partnerships, community-engaged.

We are aligned with the 25-year Environment Plan and it is clear that the Environmental Land Management scheme (ELM) of agricultural payments (which will replace the Common Agricultural Policy) will pay out 'public money for the public good': *clean air, clean and plentiful water, thriving plants and wildlife, protection from environmental hazards, beauty, heritage and engagement with the environment, reduction of and adaptation to climate change.*

So, by defining WWSTF on these principles, we are optimistic that we and our partners will attract funding in due course.

We need some initial funding to cover the time needed to develop the website and mapping data, scope the proposals, and engage properly with local communities and landowners.

Implementation will depend on the proposed measures. For example: tree planting with HEYwoods; leaky dams might be built by volunteers or other partners; reducing sewer-related problems with Yorkshire Water; and larger schemes with ERYC and the EA.

And finally...

We would be delighted if local businesses and individuals could consider how to contribute funding, knowledge or time, to help WWSTF deliver its aims.

In-channel leaky dams can be created at a variety of scales, from becks to drainage ditches. They allow normal flows to pass, but hold back storm water close to where it falls and direct it onto the wider flood plain.

Combined with other measures such as riparian tree planting, hedges and flood plain restoration, they can store huge amounts of water in the landscape and reduce the peak storm flows that cause flooding.

Slow The Flow (Calderdale) - Hardcastle Crags leaky dams project

When

Flooding 2007-2019

As noted under 'Why', our area has experienced notable flooding on several occasions between 2007 and 2019.

WWSTF

This lead to the setting up of what was initially called 'North Cave Catchment Partnership'. But, of course, North Cave is not a complete catchment, and interest from the other Parishes resulted in expansion of the brief to consider the full Mill Beck Catchment. 'West Wolds Slow The Flow' was initiated in 2020.

Planning

We cannot run before we can walk. In 2021 we will be fact-finding and planning. This will involve working with our partners, communities, businesses and land-owners to establish the issues and to reach consensus as to how to deal with the them sustainably.

Implementation

As soon as we can, we will seek early wins. For example, some instances of localised surface water flooding might be dealt with by relatively simple, small-scale earthworks and leaky dams, which nonetheless could offer significant benefits to many properties currently under threat of flooding. With sufficient support, these types of actions could be implemented over the next few years.

Thinking Big

As a result of climate change and the predictions for a warming atmosphere, we can expect significant changes in rainfall patterns. What we currently consider to be extreme and unprecedented will become normal and more frequent, including droughts, heatwaves, stronger winds and more intense rainfall. The response needs to measure up to the threat, and we need to look at the landscape scale to create truly resilient places to live, work and play.

Landscape-scale change is not a quick fix, but we urgently need to make a start. We anticipate wider implementation over the next 5-10 years - as soon as policy and funding catch up with us!

ELM

ELM (The Environmental Land Management scheme: public money for public goods) was mentioned under 'How'. ELM is actively under development by DEFRA and its partners, with roll-out expected in 4-5 years (from 2020).

This should literally change the landscape - that is its aim - by, for example, enabling the creation and maintenance of water attenuation features in becks and on farmland.

It is not right that farmers should have to pay the cost of reducing flooding elsewhere. One of the aims of ELM will be to make sure that farmers / landowners are fairly paid for the important services they can offer through the design and management of land.

Ahead of our time?

WWSTF is, to some extent, a little ahead of its time. Many people still think of flood defences as happening around properties or through the creation of massive, carbon-intensive flood alleviation schemes. However, in the field of environmental design, the principles of using the landscape to hold back water is already well established: Sponge Cities, Sustainable Drainage and Natural Flood Management are commonplace terms. But they are not commonplace in their implementation - and they need to be.

WWSTF is ready to start talking, planning, developing ideas, so that when funding becomes available and ELM is standard practice, we are not only ready, but leading the way.

An example:

Drewton Beck delivers around 25% of the water which flows through the centre of North Cave during a flood. If this, and other becks, could hold back their storm peaks, using the simple techniques on the previous page, the worst effects of storms could be managed in the landscape.

Drewton Beck is around 4km long and has a shallow, frequently wooded or scrubby valley, which would be well-suited to this approach.

Further Information

This Position Statement outlines some of the possibilities of Natural Flood Management in the West Wolds, but is not a 'how-to' guide. There is a huge amount of published information available, of which some good examples are listed below. See also the Links on the 'Who' page for further information on our partner organisations.

If you have any suggestions as to other important sources of local or national information, please let us know.

West Wolds Slow the Flow website

Includes a more detailed map of the watercourses, flood issues and proposals for the area, as well as meeting notes and other information on WWSTF.
https://www.westwoldsslowtheflow.org.uk/

Slow The Flow (Calderdale) website

A wealth of information is provided in the Case Studies and Blogs of this excellent site.
http://slowtheflow.net/

Slowing the Flow at Pickering

A summary of pioneering work upstream of Pickering, on the edge of the North York Moors
https://www.forestresearch.gov.uk/research/slowing-the-flow-at-pickering/

Calderdale: Natural Flood Management - What consents and approvals do I need?

A useful reminder that it is not as simple as just getting stuck in - there are rules!
https://eyeoncalderdale.com/Media/Default/NFM/Natural-Flood-Management-Guide-2020.pdf

Lowland Natural Flood Management Measures – a practical guide for farmers

A detailed guide to different levels of NFM interventions, their costs and benefits.
https://catchmentbasedapproach.org/wp-content/uploads/2019/10/12261_DVRN_lowland_NFM.pdf

Natural Flood Management Toolbox: a 7 step guide to developing NFM schemes

https://catchmentbasedapproach.org/learn/natural-flood-management-toolbox-a-7-step-guide-to-developing-a-nfm-scheme/

Northamptonshire County Council Flood Toolkit

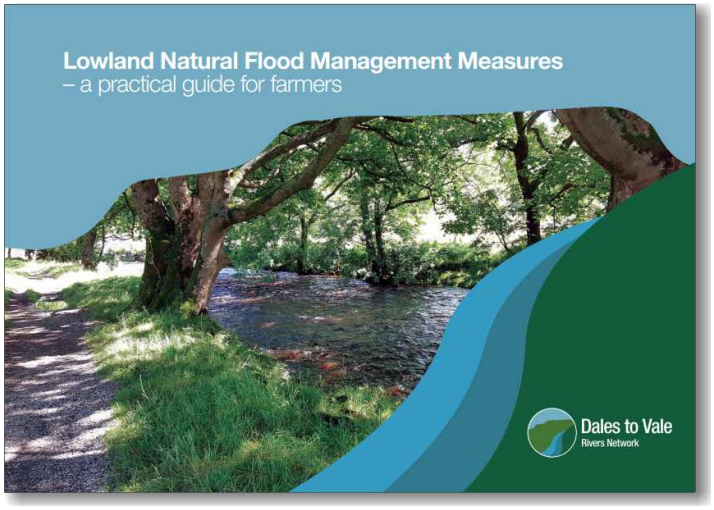
An impressive resource of information by a pioneering Lead Local Flood Authority (LLFA), including a library of guidance documents.
https://www.floodtoolkit.com/

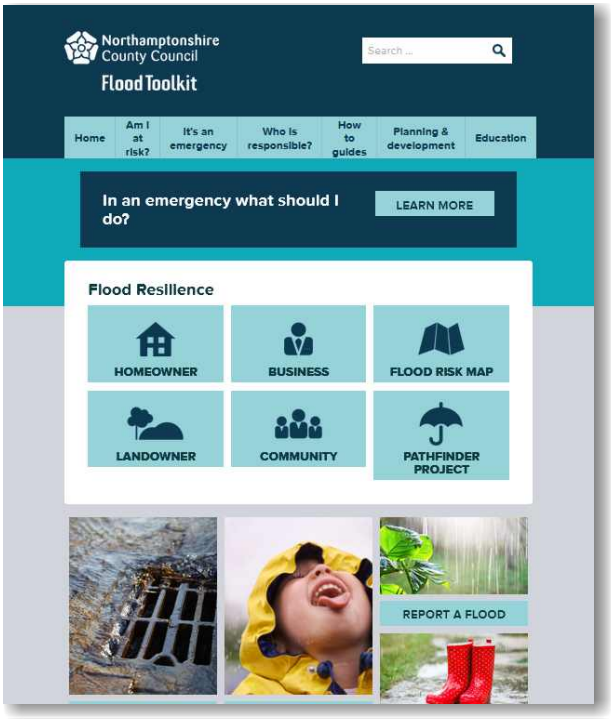
UK Government: River maintenance, flooding and coastal erosion

https://www.gov.uk/environment/river-maintenance-flooding-coastal-erosion

The Environmental Land Management scheme: an overview

https://www.gov.uk/government/publications/the-environmental-land-management-scheme-an-overview


Lowland Natural Flood Management Measures
– a practical guide for farmers
Dales to Vale
Rivers Network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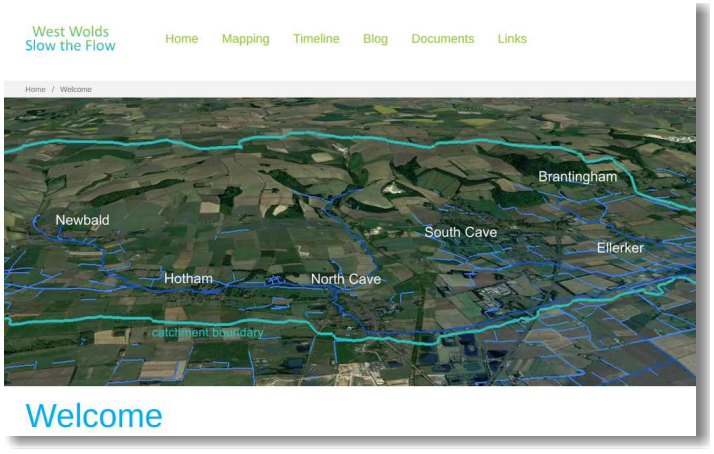
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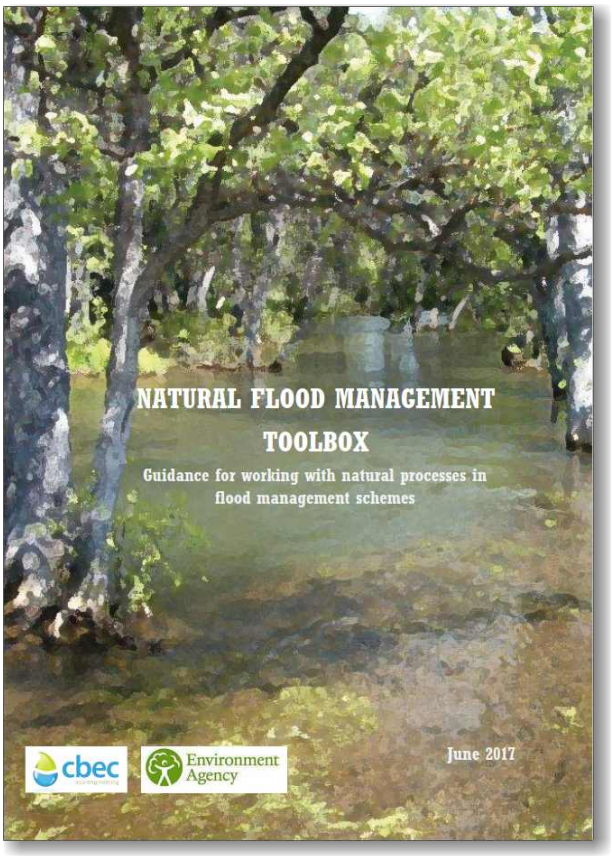
catchment boundary
Welcome


NATURAL FLOOD MANAGEMENT
TOOLBOX
Guidance for working with natural processes in flood management schemes
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Environment Agency
June 2017