



**Robin Gray,  
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[www.slowtheflow.net](http://www.slowtheflow.net)





BBC



The Calder Valley suffered the most significant flooding event in recent times. 2,781 homes and 4,416 businesses were flooded all along the Calder Valley causing unparalleled and significant damage.



# Education : Some mixed messages.....locally!

Great awareness of flooding events – but do we really understand flood risk.



**What really happens in a flood ?**



**Thursday 18th December 2014 2:45 to 3:45 pm**  
Alternative Technology Centre , Victoria Works, HX7 8LN

A practical demonstration of what happens in a flood scenario with  
Jeremy Benn of Jeremy Benn Associates with their demonstration flume.

Booking essential—For further details :  
Contact [robin.gray@pennineprospects.co.uk](mailto:robin.gray@pennineprospects.co.uk) 07582 101 319

PS: This is an outdoor event—wrap up warm.



**HEBDEN BRIDGE TIMES**  
**WOFS AND WELLIES WALK PHOTO SPECIAL**  
PAGES 24 & 25

**Flood campaigner insists urgent action must be taken with the Calder**

# DREDGE RIVER NOW

By AARON QUAYSON  
A flood prevention campaigner has called on the Environment Agency (EA) to carry out a 'full and urgent dredging of the River Calder' following MP Eric Pickles' criticism of the Government department.

Barry Greenwood, of The Upper Calder Valley Flood Prevention Action Group (UCV-FAG), said that the EA should start work now to protect homes, businesses and lives. His comments come in the wake of Mr Pickles' statement that the Government 'made a mistake' in not dredging the flood-hit Somerset Levels.

Mr Greenwood, who marched on Downing Street last year to hand in a petition to David Cameron demanding urgent flood prevention action, said: 'We're now 20 months down the line and no further forward. Hopefully, after the statement made by Eric Pickles, resources will be found to enable the river system and the waterways to be dredged.'

'In the past the Environment Agency has said this would make little or no difference whereas now a Government Minister has said it will. We know that there are extraordinary weather conditions and what we're not doing is preparing to deal with that issue. We need to be dredging rivers now to protect people's homes, businesses and lives.'

Mr Greenwood, who has again written to the Prime Minister calling for urgent dredging to be undertaken, also said that he believes the EA should be taken off flood alleviation works and instead left to focus on wildlife protection.

But the EA, which has £3 million of funding to carry out flood alleviation works across Calderdale, has said that it only undertakes dredging if it is the 'most effective use of the funds available'.

A spokesperson for the Environment Agency said: 'In order to meet Government policy and to ensure good value for money the Environment Agency focuses on its work where it delivers the greatest flood risk benefit. The Environment Agency is already maintaining defences, some crop blockages, and pumping water from flooded land to find the most effective use of the funds available.'

TURN TO PAGE 2 →

Barry Greenwood (far left) with the petition he handed in to David Cameron last year calling for urgent flood prevention works to be undertaken

Some really mixed messages.....*nationally*

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## Flooding

Opinion

### This flood was not only foretold - it was publicly subsidised

George Monbiot



The government pays grouse moor owners to drain their glorified outdoor chicken runs. Meanwhile it's the proles downstream who get a soaking

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## Hopeless quango gripped by green dog

### The savage floods have exposed the chronic ineptitude of the Environment Agency, writes LEO MCKINSTRY

By LEO MCKINSTRY FOR THE DAILY MAIL

PUBLISHED: 01:29, 30 December 2015 | UPDATED: 11:36, 30 December 2015

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## UK flooding: How a Yorkshire town worked with nature to stay dry

Pickering pulled off protection by embracing the very opposite of what passes for conventional wisdom

Geoffrey lean | Saturday 2 January 2016 | 130 comments



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## 'Working with nature' didn't save Pickering from the floods - it just didn't rain much

So-called natural flood defence schemes are an attractive idea, but they would be powerless in the face of extreme weather



## December 2015 Floods : What changed

- Thinking on a catchment scale rather than an individual 'town' scale.
- Recognition of how working with natural systems elsewhere in the country had mitigated impact of flooding.
- A greater desire to understand.
- Communities and individuals wanting to get involved.



# WATERMARK

## CALDERDALE

A community-led fund to protect from future flooding

### WHAT IS WATERMARK?

Watermark Calderdale is a campaign to build a resilience fund for our towns for future flooding. Our aim is to build a pot of money that can be accessed by businesses & households immediately when future floods hit (because they will – it may be 5 years time or it may be next week!).

Shops or businesses sell a WATERMARK product, and a percentage (or all) the profits go into a fund. The fund is managed by the Community Foundation for Calderdale (the people who raised over £3 million for our communities in the Boxing Day 2015 floods) who will then distribute the money if floods hit Calderdale again.



Paul Salvesson



Calderdale MDC



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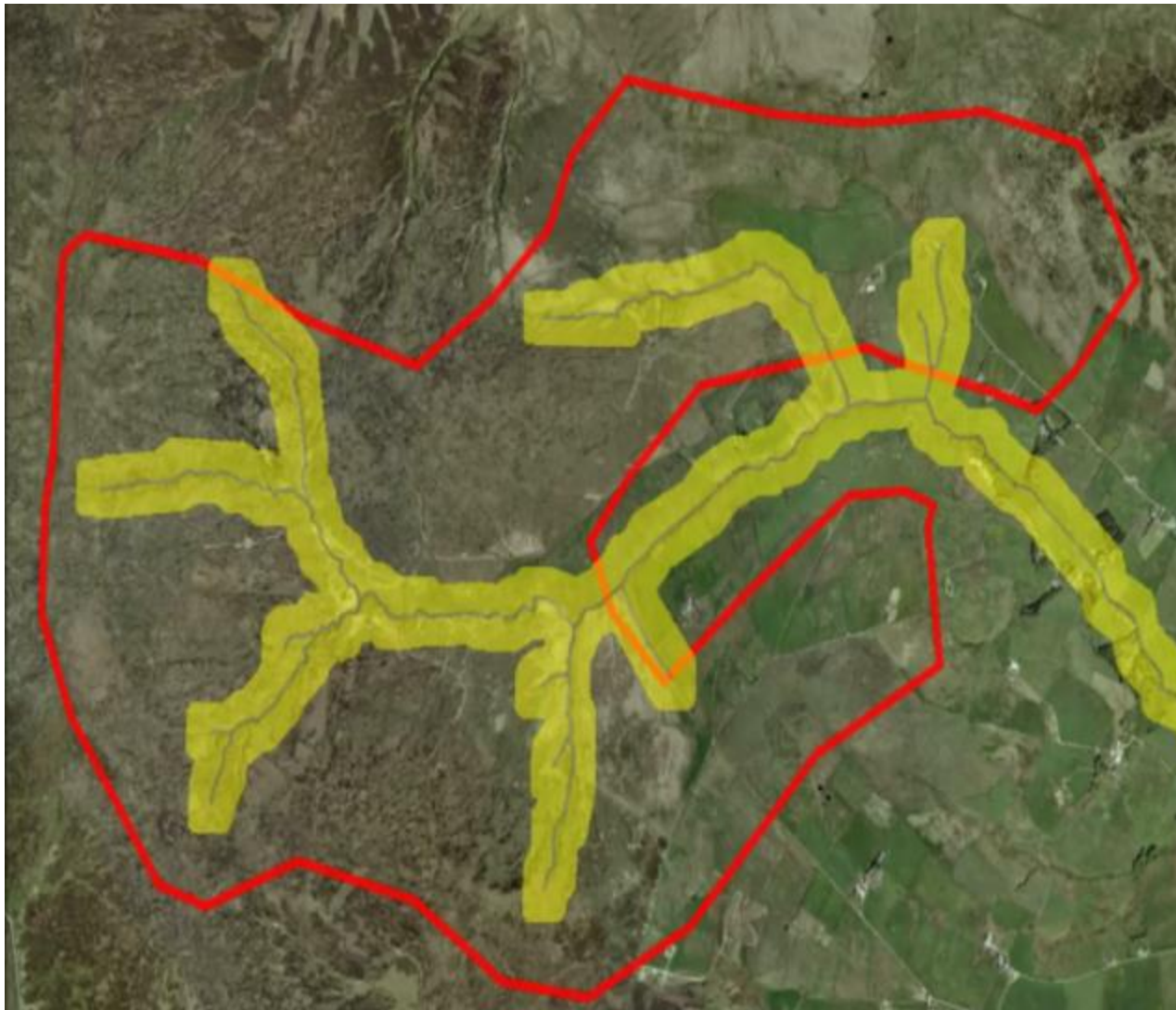
**SLOW THE FLOW**  
CALDERDALE

## Reducing floods using nature

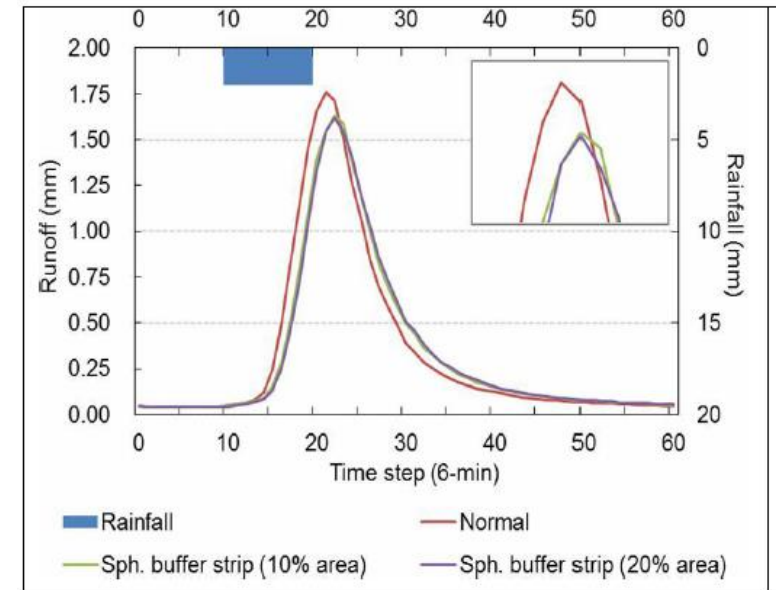


*A new UK map and catalogue of schemes that use natural processes in flood management highlights the need to evaluate the*





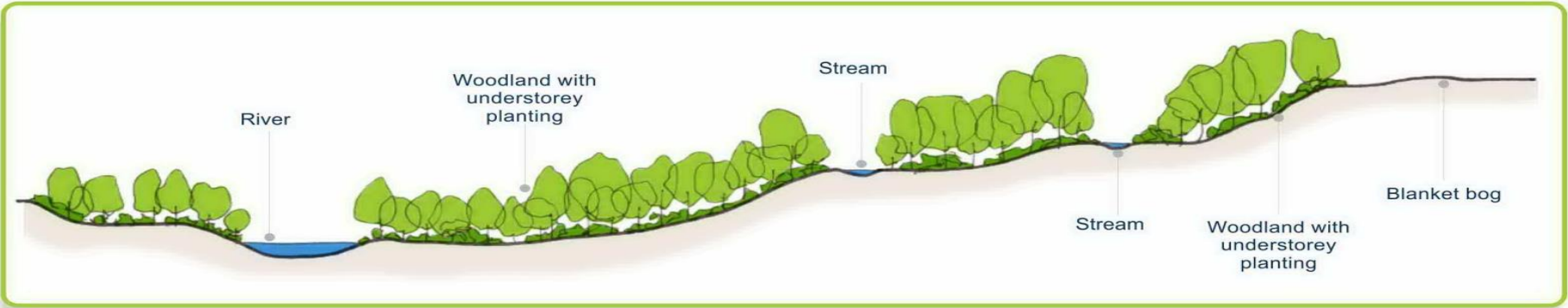
If 10% Sphagnum cover was present in riparian buffer strips the flood peak is reduced by 7.4% also the flood peak is reduced by one time step ie 6 minutes, compared with normal conditions.



# You Can Slow The Flow! SuDs (Sustainable Drainage systems)

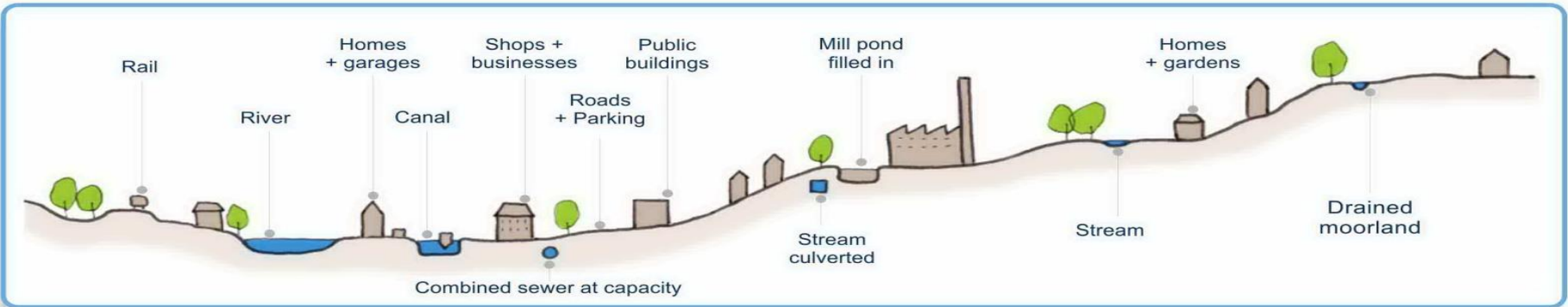
## If our valley was **Natural**

it would maintain a balance of water circulation through the processes of rainfall, evaporation, leaf interception and **absorption by plants**, surface runoff, and **infiltration to free draining ground**.



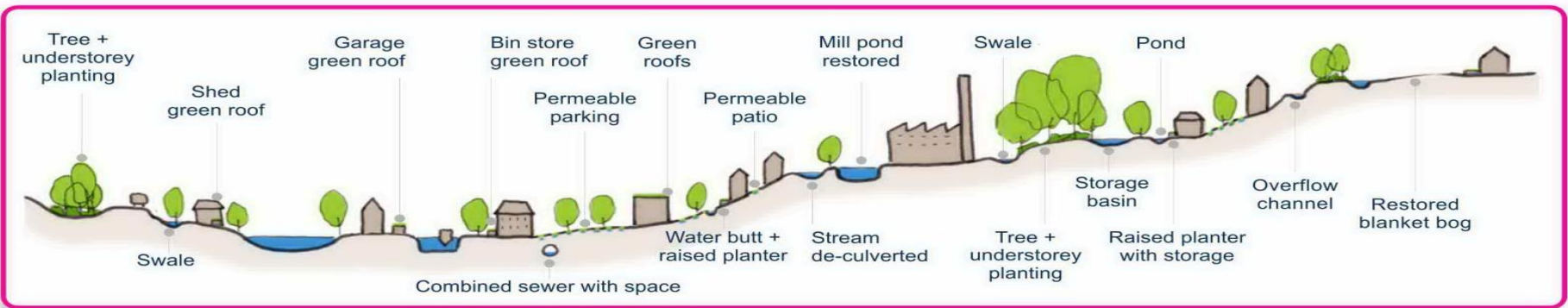
## Due to human **Development**

replacing plants and soils with **hard surfaces** such as roofs, roads, patios and car parking, **rainfall runs off much more quickly**, causing surface water and combined sewer flooding, and higher river levels.



## Using SuDS to **Slow The Flow**

in our urban areas, as well as upstream, we can **mimic natural water management**. Many small changes can have a big combined effect on **reducing flood water quantity and quality**.



# Who are we ?



[www.slowtheflow.net](http://www.slowtheflow.net)



# What do we do?

- We carry out river surveys to support modelling by universities and the Environment Agency.
- We communicate through workshops.
- We disseminate and champion Natural Flood Management and Sustainable Urban Drainage.
- We implement 'Natural Flood Management' schemes with willing landowners ( Hardcastle Crags Pilot Project working with the National Trust).



# What have we done ?



From humble beginnings.....

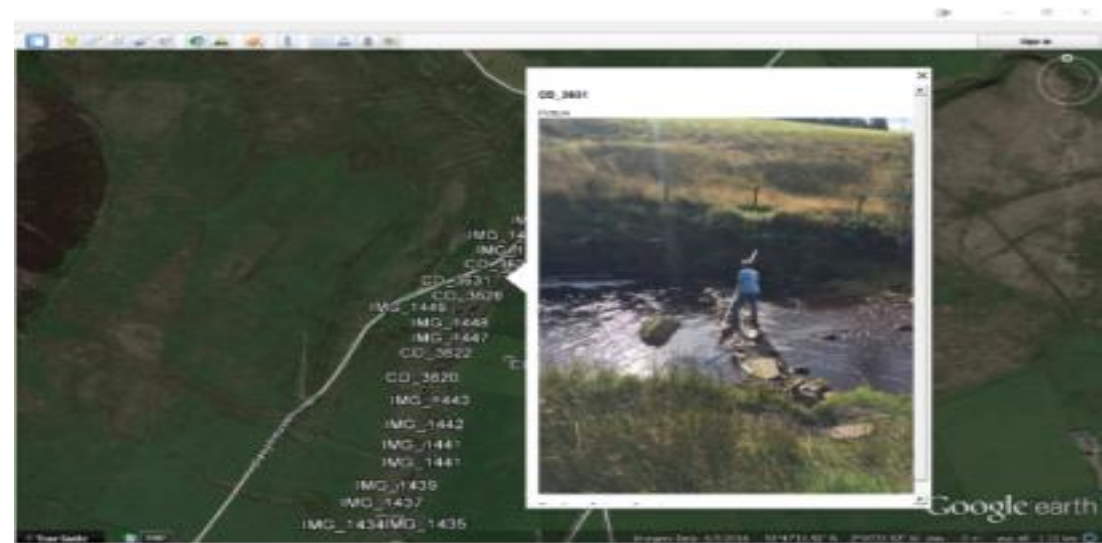


# Experimental Plate Weirs



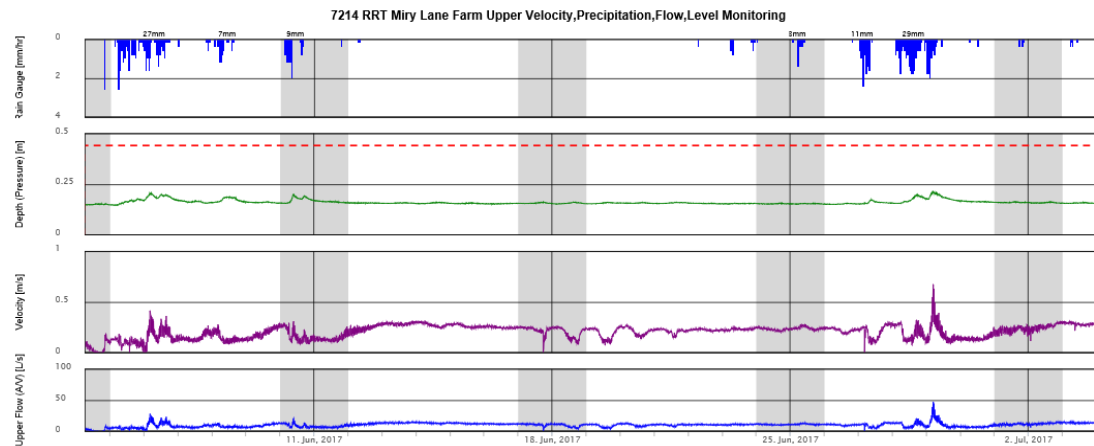
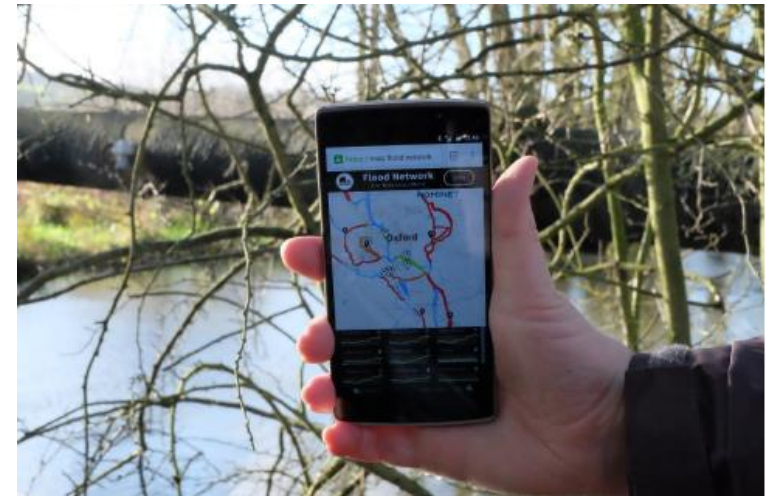
# River Surveys

- Started in March 2016 River Calder
- Now have nearly 20 volunteer surveyors
- Almost completed Hebden Water, Crimsworth Beck and Cragg Brook
- Measuring depth, width, bed surface and other features every 20 metres
- Volunteers have spent c.1500 hours so far on River Surveys
- All data collated to understand river network better.
- Taken over 2,500 Geotagged photos on Google Earth
- Information to be used by Environment Agency and river modellers
- Advised to pilot one area – Hebden Water / Crimsworth Beck
- Continue with surveys on Cragg Brook and beyond to build data bank
- 2017 – Implementation of leaky dams / log jams / attenuation ponds and gully filling



# Monitoring

Success is achieved through developing simple tools for data collecting and processing communications at different levels for different audiences to advance public awareness of the issues and making the results demonstrable and measurable



**DETECHRONIC**

Select Sensor(s) to Display

- Depth (Pressure)
- Flow (A/V)
- Rain Gauge
- Velocity

Reference Data

- Pipe Diameter

Date Range to Display

Begin: 2017-06-04 08:00:00 Go

End: 2017-07-04 08:00:00

Data is available in the following time period:  
2016-08-01 10:18:00 to 2017-07-04 05:02:00

Show Entire Range

Activity Log  
[Link to current chart view](#)

Legend

- Depth (Pressure)
- Flow (A/V)
- Rain Gauge
- Velocity

Paging Navigation

Download Data

- Flow
- Level
- Precipitation
- Velocity

File Format: DataCurrent

Download Selected Download All

Options

Show annotations:

Precipitation Display Interval: 1 hour



Oxford Flood Network





# What have we done ?



The Hardcastle Crags Pilot Project .....

# Hardcastle Craggs Pilot Project

- A Natural Flood Management Pilot Project at Hebden Water and Crimsworth Dean Beck, Hardcastle Craggs
- Working with the Environment Agency, the National Trust and neighbouring landowners
- Small working parties to work in Hardcastle Craggs
- Using fallen trees and other natural materials already in situ where possible
- Some tree felling as part of the longer term forestry management plan
- Installation of leaky dams / log jams / re-use of mill ponds and gully stuffing
- Working on brooks, ditches and the main channels
- Lessons from Stroud
- Eight volunteer days with
- On-going Citizen Science monitoring using cameras and photogrammetry

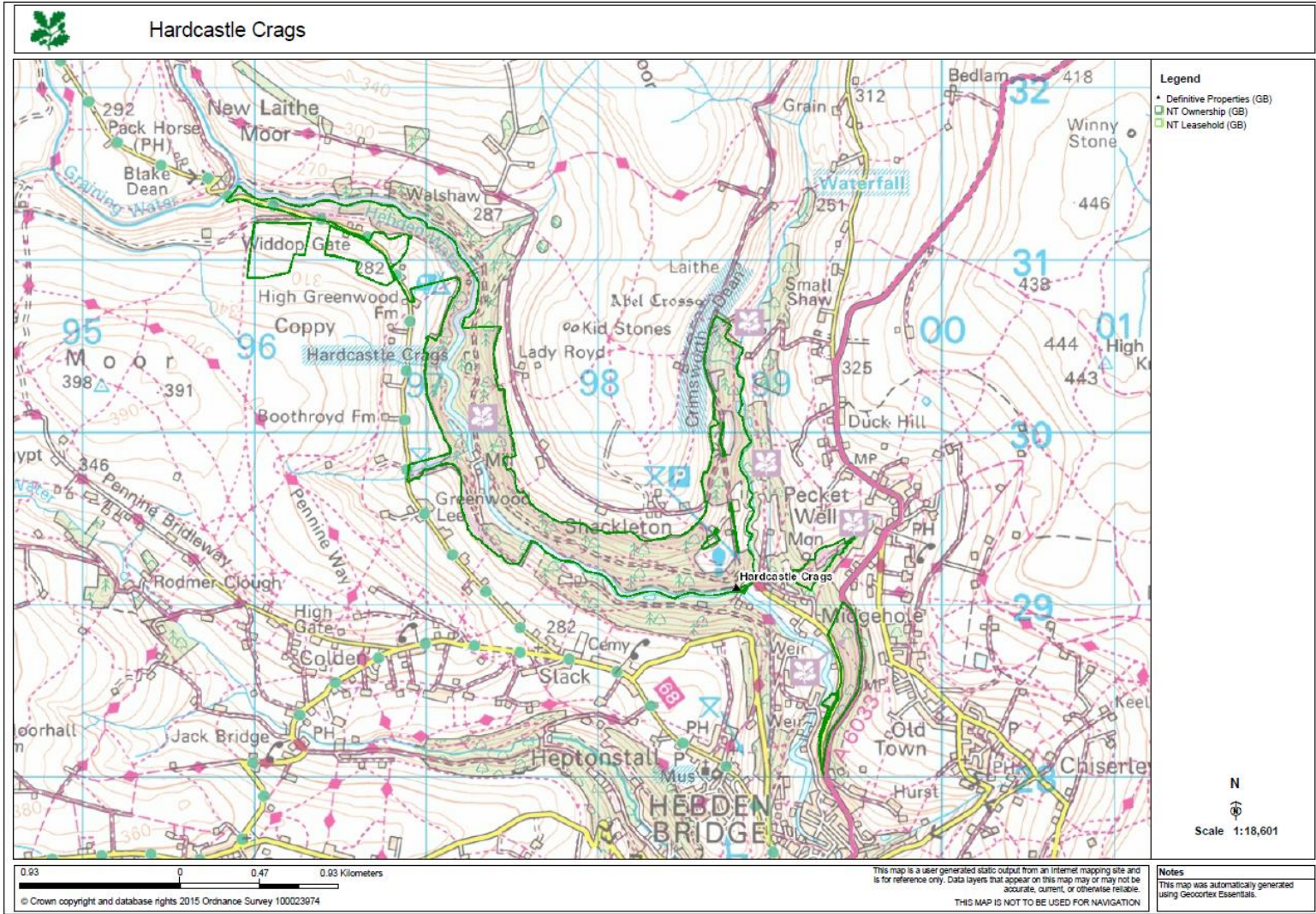


National  
Trust



ENVIRONMENT  
AGENCY





# What have we done ?

- Sign up to receive Environment Agency Flood Warnings (even if you're not in a flood zone)
- Get water butts
- Make water butts into 'mini leaky dams' in winter/potential flood events! Leave the tap open slightly.



## Be a Water Hoarder!

- Alter your actions during flood events to discharge less water into drains (as you might in drought - e.g. shower rather than bath, wait to use the washing machine...)

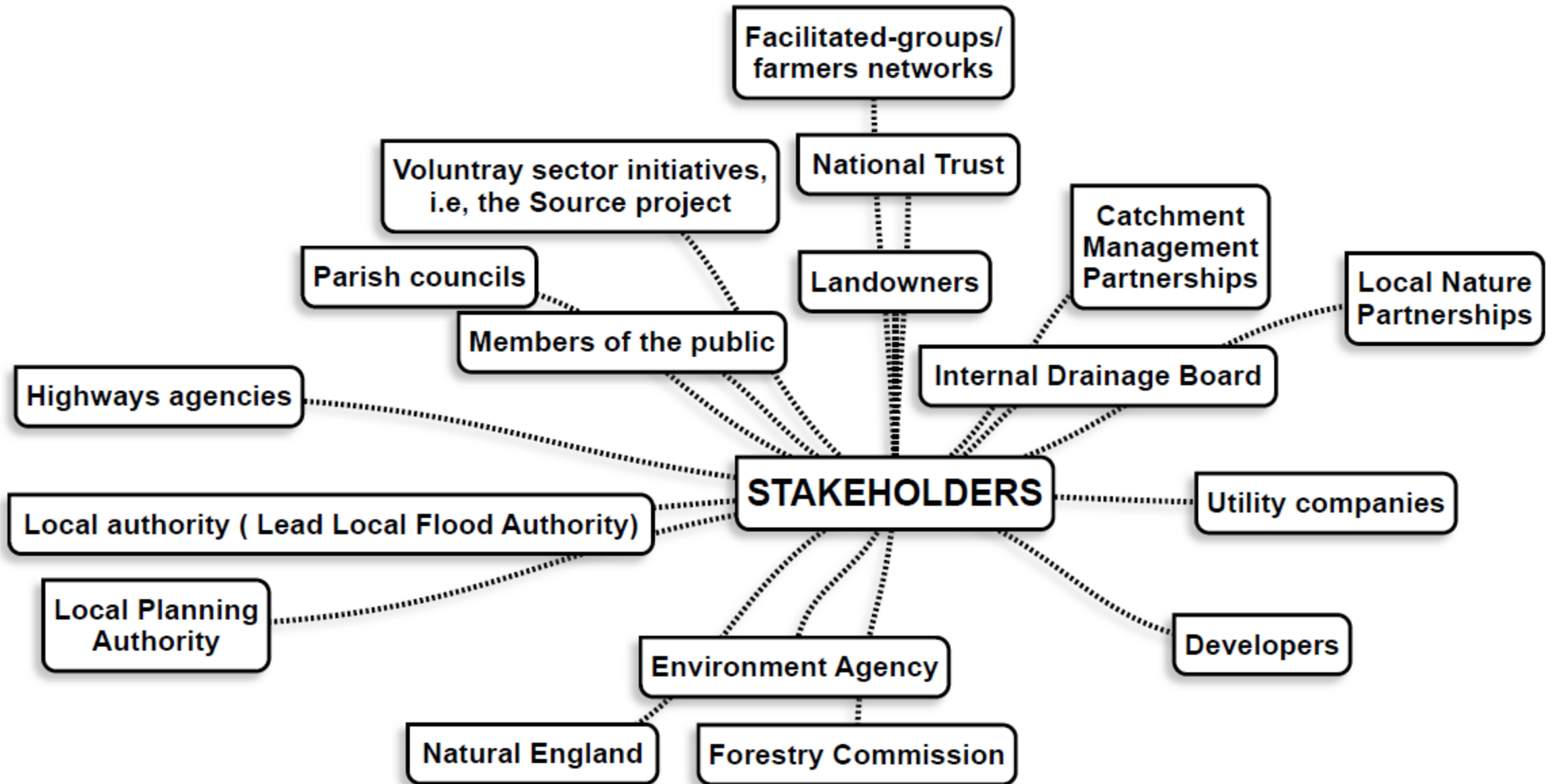




## What have we learnt ?

- A grass-roots approach can add value;
- A volunteer-led organisation can open doors that are not open to statutory services whether these are with landowners or funders;
- Initiatives can support community cohesion and combat a feeling of helplessness in the aftermath of extreme events;
- Support existing initiatives supplying data, labour or know-how;
- However such an approach also presents challenges to existing statutory agencies in terms of identifying roles/ responsibilities, accountability, sharing information and capacity?

It is sometimes hard to engage with the landscape of stakeholders



ITV REPORT 31 July 2017 at 6:00pm

## Local charity uses horse power to help combat flooding in Calderdale



*Nathan has been working in Hardcastle Crag, upstream of Hebden Bridge  
Photo: Slow the Flow*







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