

# Cumbria Floods Partnership:

## Managing flood risk in upland areas

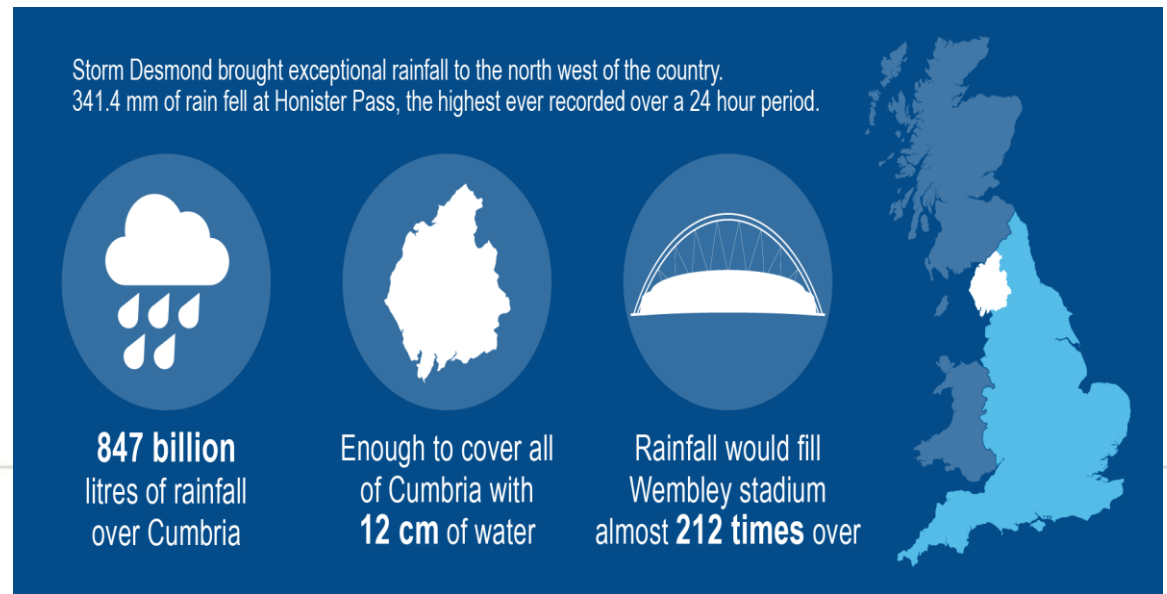
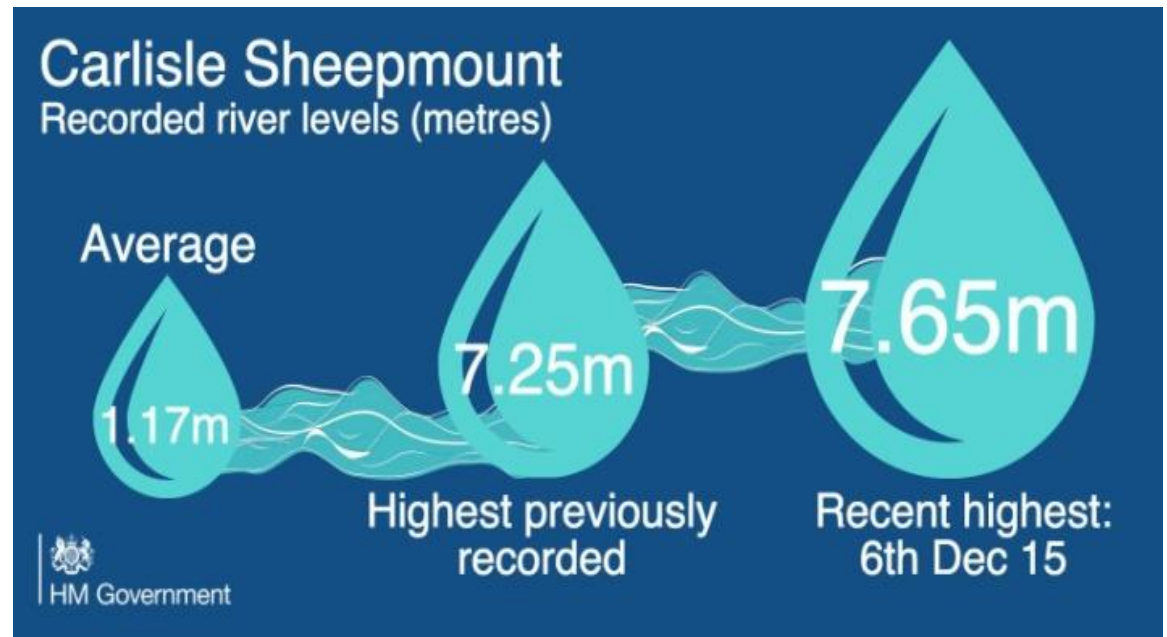
**Jim Ratcliffe**  
**Eden Catchment Director**

**November 2016**



DEPARTURES			
Time	Destination	Plat	Expected
08:08	London Euston via Birmingham	4	Delayed
08:33	Manchester Airport	..	Delayed
08:48	London Euston	4	Delayed
09:01	Edinburgh	M	Cancelled
09:10	Glasgow Central	1	On Time
09:10	London Euston via Birmingham	4	Delayed
09:22	Glasgow Central	1	09:30

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18,000,000 m<sup>3</sup>  
behind defences in Carlisle

=

4.5 x



Image by [london-attractions.info](http://london-attractions.info)

# Cumbria Floods Partnership



- ➔ 1 Collaborative working
- ➔ 2 Catchment approach
- ➔ 3 Integrated solutions
- ➔ 4 Community-focussed decision-making
- ➔ 5 Evolution and learning

Share modelling & performance data

Invest in traditional defences

Non flood risk led catchment work providing multiple benefits and access to wider funding

Community resilience

Channel management

**Pilot catchments**

Review governance

Natural flood management



**Integrated catchment plan for Cumbria**

Reservoir use

Eden modelling competition

Infrastructure

Recovery and preparing for winter 2016

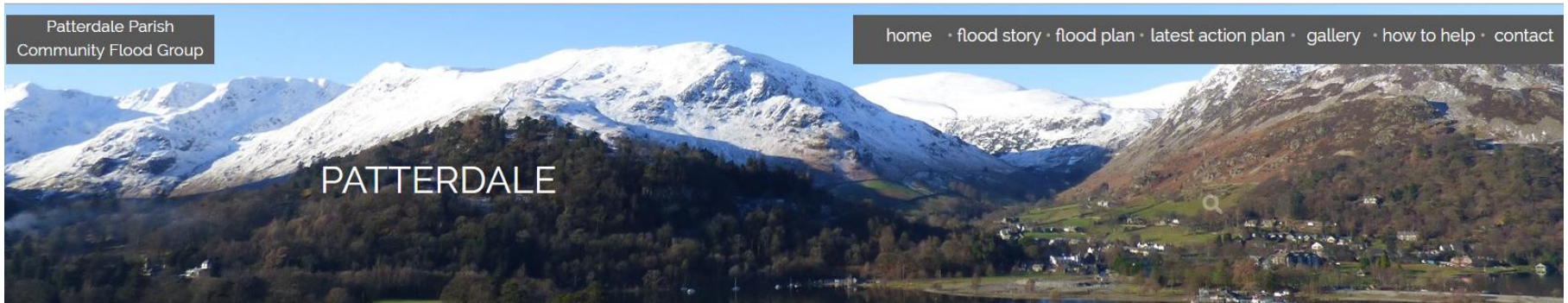
Bridges

**Footpaths: Maintain and repair upland footpaths to reduce erosion and sediment and surface water runoff, improve visual impacts and biodiversity.**

Maintenance

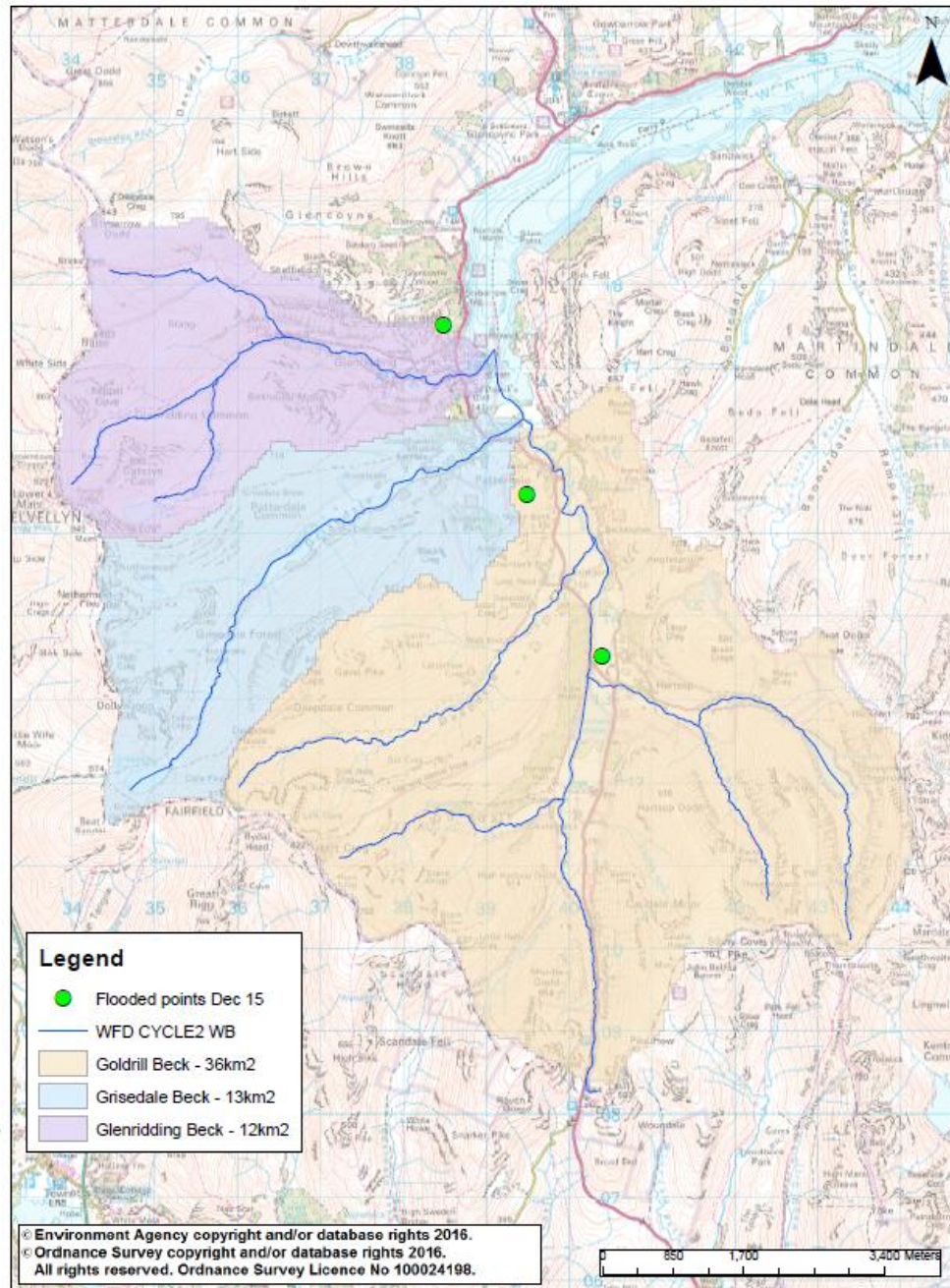
Flood storage basins

# CFP pilot case study



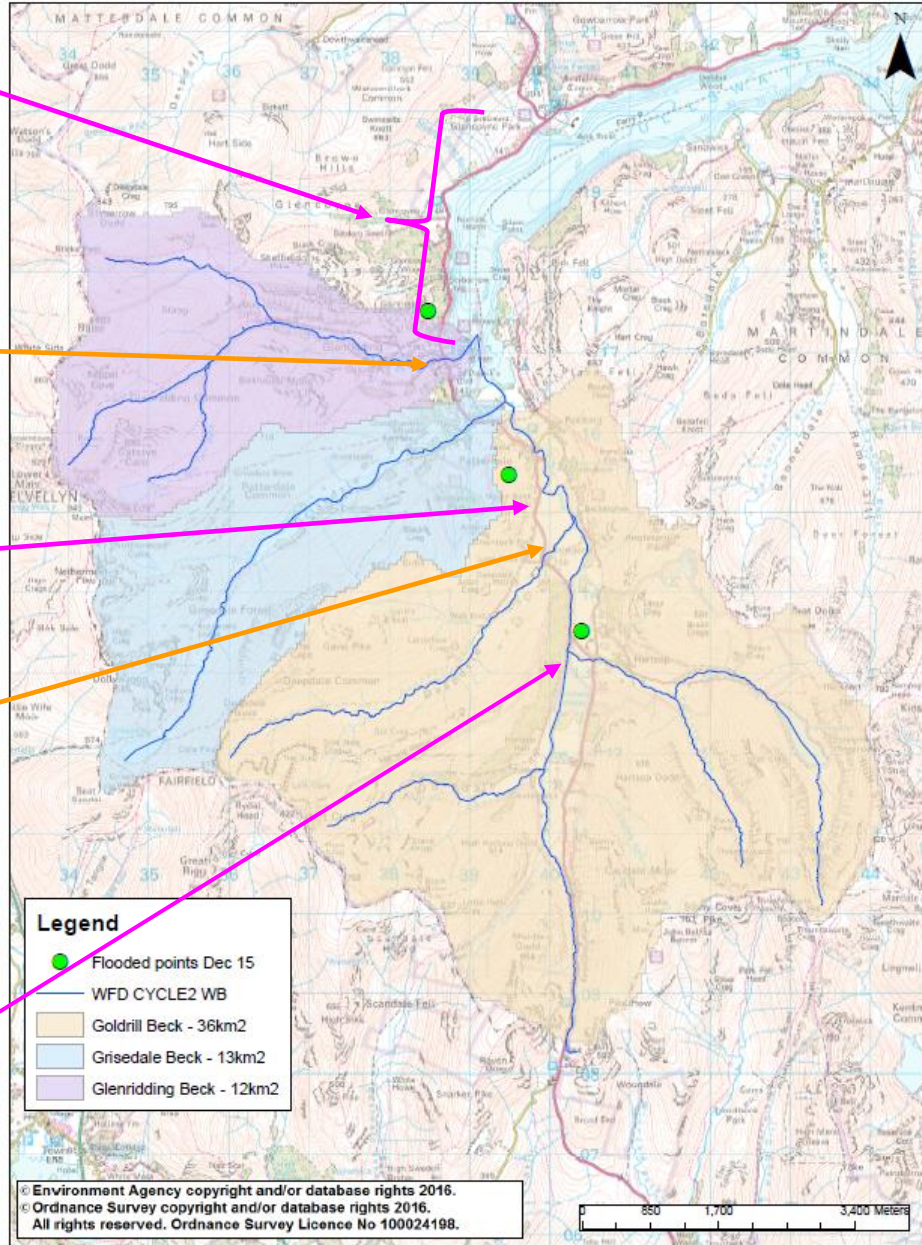
# Cumbria Floods 2015

## Catchments upstream of Glenridding, Patterdale and Hartsop





# Cumbria Floods 2015 Catchments upstream of Glenridding, Patterdale and Hartsop



# Who's involved in the pilot?

- ➔ Patterdale Parish  
Community Flood Group
- ➔ Lake District National Park  
Authority
- ➔ *Eden District Council*
- ➔ *Cumbria County Council*
- ➔ National Trust
- ➔ *Natural England*
- ➔ *Eden Rivers Trust*
- ➔ *Environment Agency*
- ➔ *Forestry Commission*

# Specific aims for Patterdale

- ⇒ Complete and oversee the Patterdale recovery.
- ⇒ To achieve more through collaborative partnership work than working in isolation; and to make it easier for communities to work with agencies.
- ⇒ To demonstrate the opportunities and limitations of natural flood management in mountain catchments.
- ⇒ To help communities better prepare for flooding events, respond to flooding events and recover from flooding events.
- ⇒ Sustainable and affordable approaches that can be repeated at other locations.

Patterdale community

The screenshot shows the website for the Community Flood Group Committee. At the top, there are buttons for 'Contact Us' and 'Latest Actions'. Below this is the 'Community Flood Group Committee' header with 'Chair: Rob Shephard'. The main content is organized into 'Area Flood Groups' with a grid of boxes for each group, including names like Glencoyne, Greenside, Glenridding, Grisedale, Patterdale, Deepdale, and Hartsop. Below the grid are four sections: 'Resilience and Emergency Planning', 'Property Flood Defences and Resilience Grants', 'Maintenance Programme', and 'Upstream Management', each with a list of names and a small icon.

Pilot steering group

Other participants

Outputs

**For winter:** Defences; community action in channel; alerting / warning; emergency response.

**2016 to 2018:** Sustainable catchments; NFM exploration; increased resilience; testing and streamlining approaches

**Supports Pioneer:**

- Connecting people with their environment
- Providing data and tools
- Integration of delivery.

# Upland footpaths and flood risk?



Research suggests:

➔ Significance in paths and tracks accelerating transfer of water.

➔ 'Rock bars', paths and tracks can be associated with landslips

# The importance of slope stability for flood risk management

The negative impacts of increased levels of material in flood waters include:

- ⇒ Reduced channel capacity and conveyance.
- ⇒ Increased blockages.
- ⇒ Increased destructive capacity of flood.
- ⇒ Impact on homes and communications
- ⇒ Increased recovery costs



**The uplands; where  
the catchment  
approach to managing  
flood risk begins**