

Carlisle City Council scrutiny panel meeting:

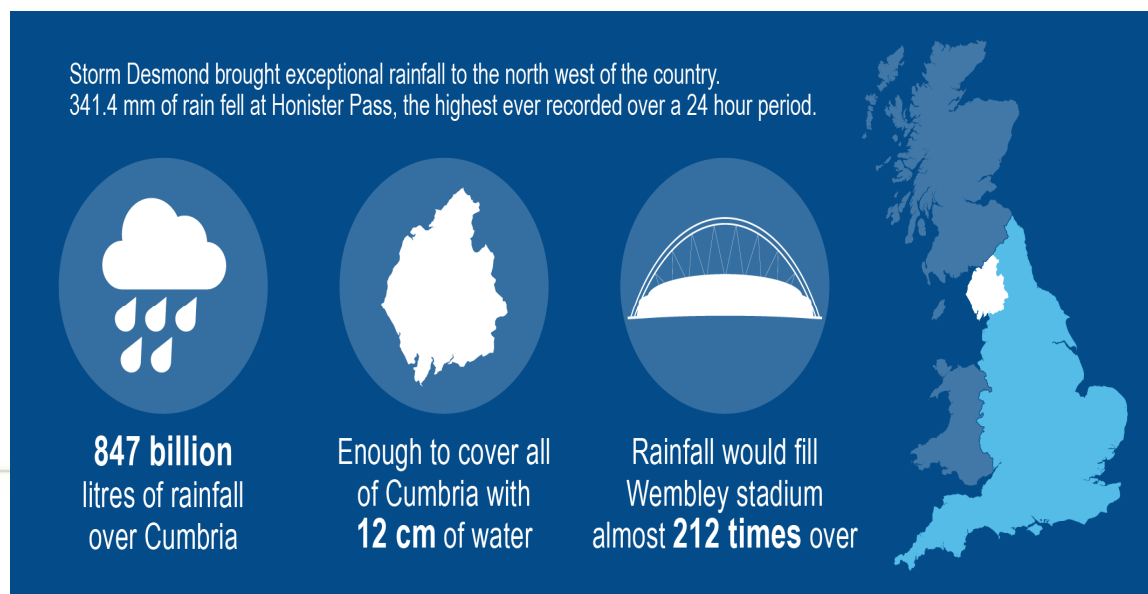
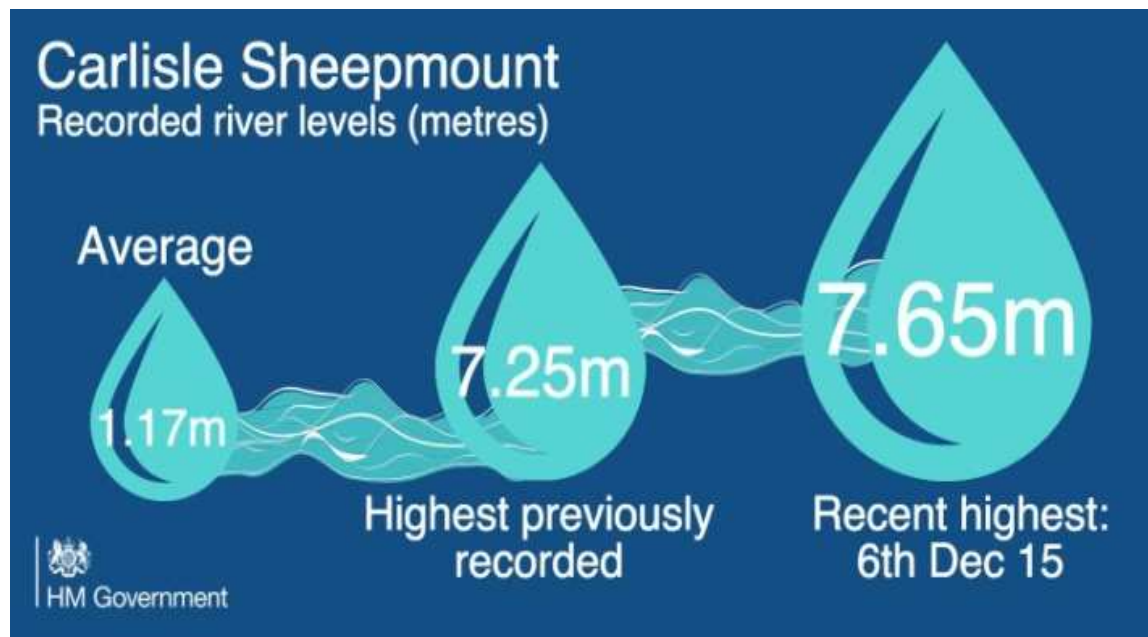
Cumbria Floods Partnership update

Jim Ratcliffe
Eden Catchment Director

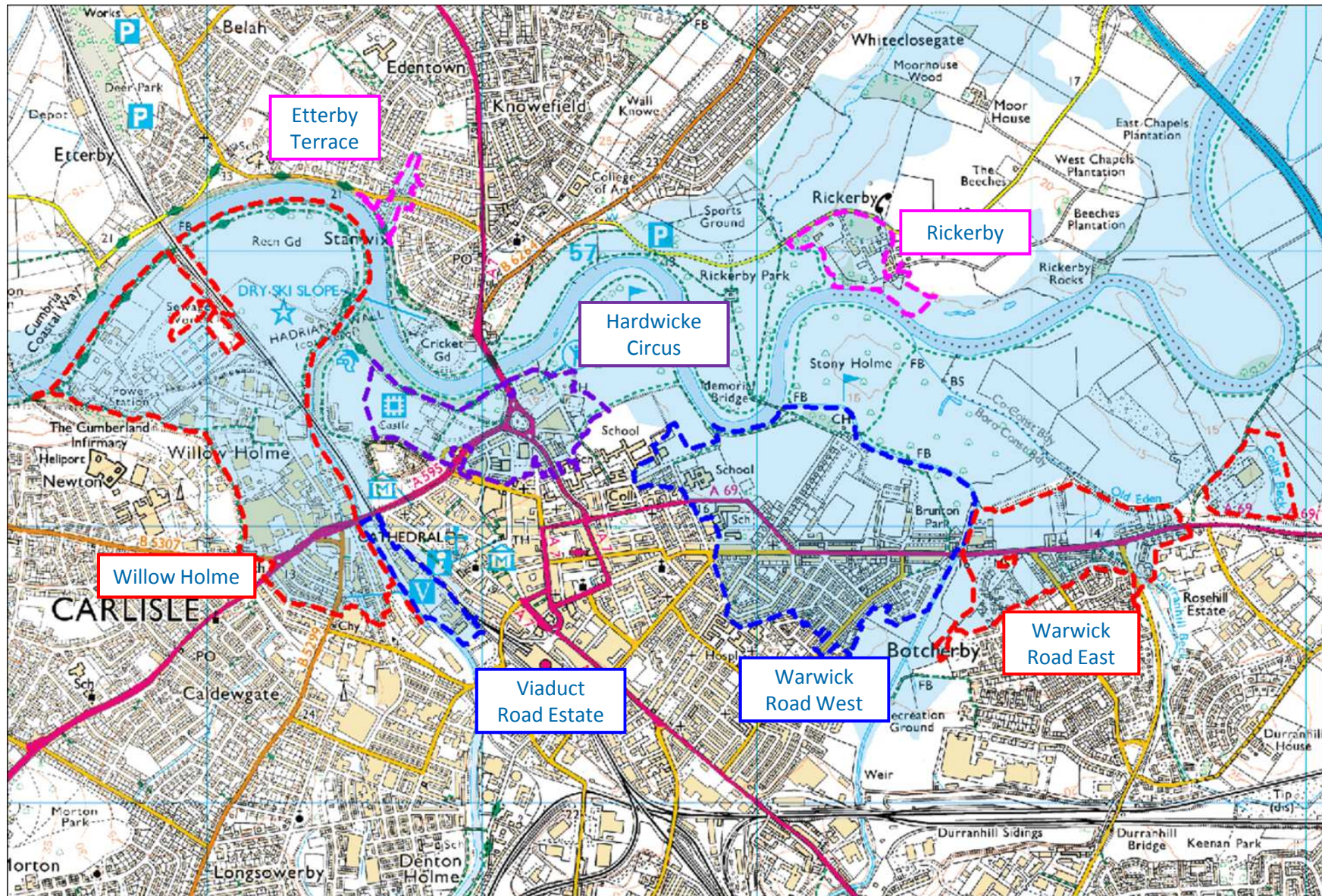
28 July 2016

Roles and responsibilities

Flood source	Environment Agency	Lead Local Flood Authority	District Council	Water Company	Highway Authority
'Main' river	X				
'Ordinary' watercourse		X	X		
Surface water		X			
Highway runoff					X
Sewer flooding				X	
Sea	X				
Groundwater		X			
Reservoirs	X				



Extent of flooding



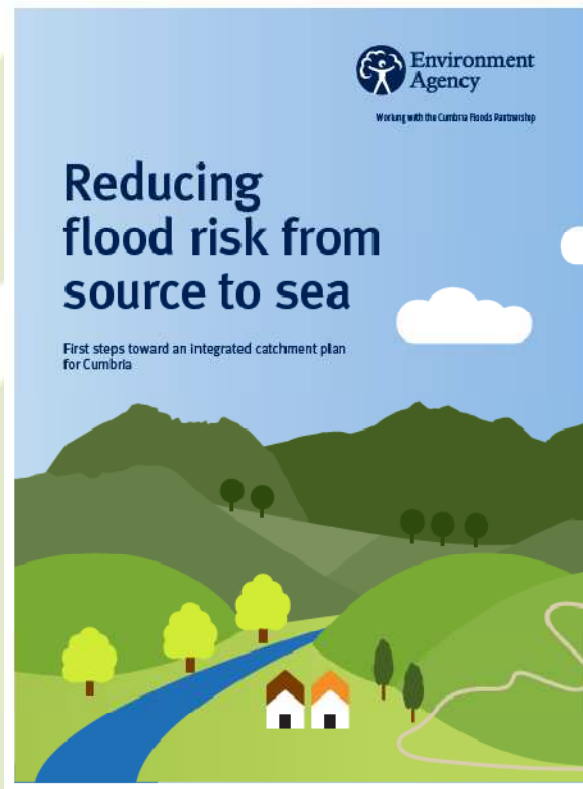
Preparing for winter

(recovery funding stream separate to future flood defence works)

- ➔ Inspected over 3,300 raised defences at cost of over £1m.
- ➔ 159 defences damaged. 75% repaired. 100% by autumn.
- ➔ Repair of drains, walls, bridges(3) and A591.
- ➔ United Utilities looking at Thirlmere, Haweswater and Wet Sleddale for flood storage capability.
- ➔ Will have removed at least 70,000 tonnes of gravel.
- ➔ Increased access to national network of pumps, sandbags and 40km of temporary defences.


Preparation for winter 2016: Carlisle area

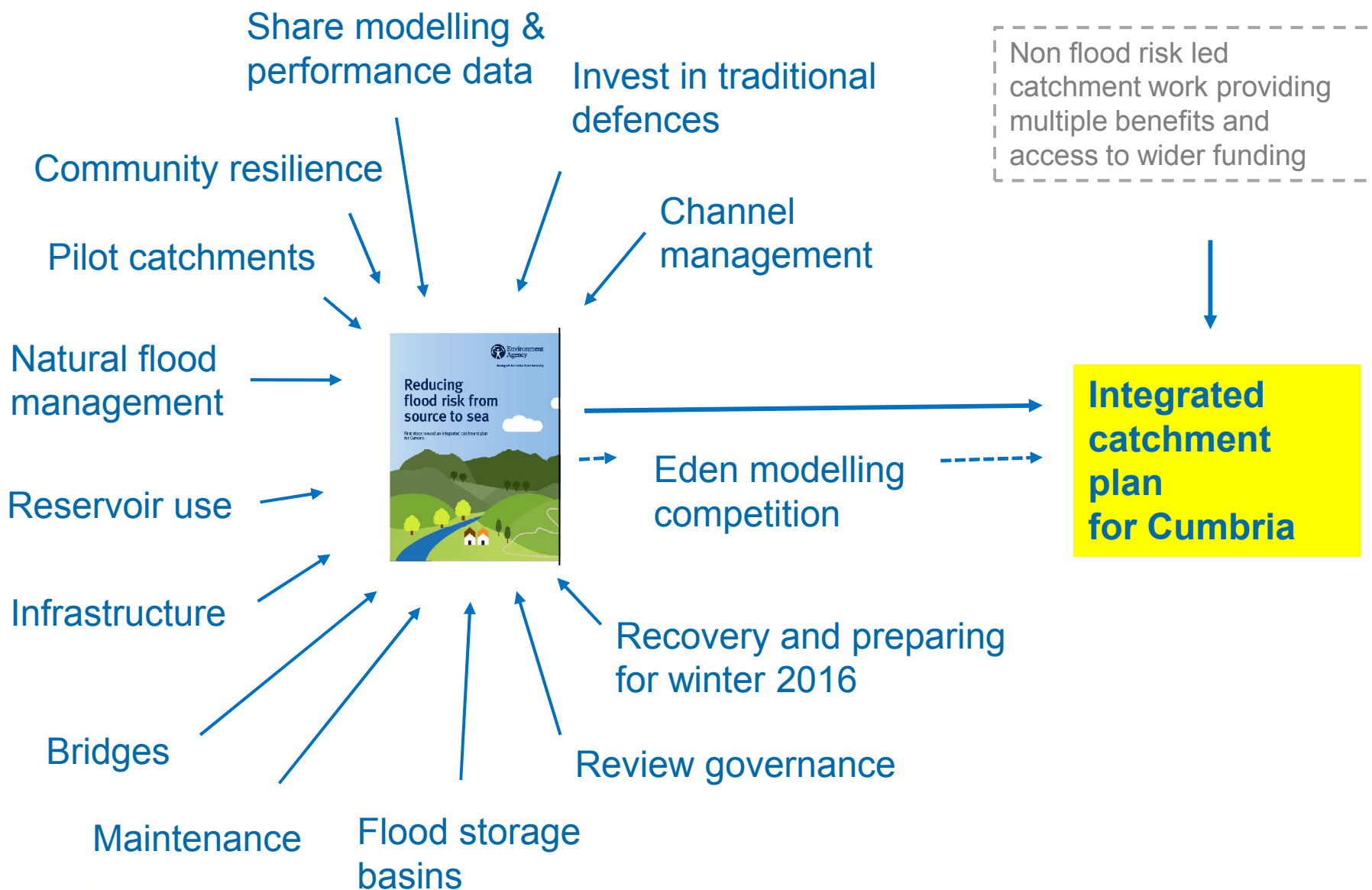
Project name	Description	Status
Carlisle - Willowholme embankment	Repair areas of scour & erosion to flood embankment following overtopping.	Complete
Carlisle, Parham Beck	Repair areas of scour & erosion to flood embankment following overtopping.	Complete
Durranhill storage basin repairs	Embankment forms part of Flood Storage Reservoir. Reinstate Embankment including the installation of a drain down structure.	On-going
Carlisle, Maltings (scour)	Reinstate the ground on the landward toe of the flood defence wall.	Complete
Carlisle Maltings	Replace 'lift – up' flood gates.	By October
Crosby on Eden lower embankment	Re-profile the crest and repair local damage	Complete
Durranhill Pumping Station	Remove damaged surface, relay surface, repair 50m of fencing and replace damaged edge protection markers for public safety	Complete
River Eden	Full river channel assessment and removal of large debris which poses a flood risk.	By October
River Caldew	Full river channel assessment and removal of large debris which poses a flood risk.	By October
Little Caldew	Debris and silt removal	By August
Holme Head Gravel Trap	Remove gravel. Gravel trap prevents excessive gravel accumulation at flood risk locations in Carlisle.	Start September
Botcherby Bridge	Parapet strengthening, followed by gravel removal works	By October
River Petteril	Debris removal (London Road to Melbourne Park)	On-going



Cumbria-wide actions							
Theme	What we are going to do	What this will achieve	Where	When		Who will lead	Who else will be involved
				Deadline	Short-term impact		
1	Repair the damage to flood defences, embankments, gaging stations, pumping stations and other assets as well as removing debris, gravel and large trees. Currently 155 projects underway.	Reduce the risk of flooding and improve recovery time from flooding.	Throughout Cumbria	Autumn 2016	First Year	Environment Agency	
2	Carry out work on watercourse communities by extending the use of temporary defences until 2015.	Reduce the risk of flooding and improve recovery time from flooding.	Throughout Cumbria	Autumn 2016	First Year	Environment Agency	Coventry and Local Resilience Forum
3	Share knowledge and information to better understand the current status and knowledge systems, and develop some ways of managing flooding.	Share practice – improving the way we share knowledge and experience is beneficial.	Throughout Cumbria	Autumn 2016	First Year	Environment Agency	Cumbria Floods Partnership
4	Carry out water and transportation opportunities and facilities for natural flood management projects by working with landowners, communities, and the farming communities to gain the knowledge of the community. These will include soil erosion, source, water data, tree planting and water retention by working with landowners, communities, and the farming communities to use their knowledge of the catchments.	Reduce the risk of flooding and improve recovery time from flooding.	Throughout Cumbria	Autumn 2016	First Year	Environment Agency and Cumbria County Local Flood Authority	Farming Communities, Natural England and Local District National Parks, National Farmers Union, Farming Network, Countryside Landmarks Association, the National Trust, Rivers Trusts and Environmental NGOs.
5	Survey on high priority potential sites and ensure funding to restore 200 hectares of peatland.	Reduce the risk of flooding and improve recovery time from flooding.	Throughout Cumbria	February 2017 - September 2016	First Year	Environment Agency	Cumbria Floods Partnership

Cumbria Flood action plan					
Cumbria community action table			Cumbria better protected		
<p>The purpose of the action table is to highlight the specific actions happening or proposed to support recovery communities.</p> <p>Please find this table in conjunction with Cumbria Flood action plan and Community Engagement.</p> <p>(PDF 100 KB)</p>			<p>Table better protected:</p> <ul style="list-style-type: none"> 21 Dec 2016 (16:15) (17:15) Complete repairs and recovery work Let all properties' electricity and power dependent plans before winter 2016 Complete emergency plans Higher proportion on floodline warnings (10:00) Public and receive flood development report Reduce development on flood risk management improvement work 		
<p>Cumbria's Role</p> <p>Impact of Cumbria's Flood Risk: 1, 100 homes and businesses were flooded</p>			<p>21 Dec 2016 (16:15) (17:15)</p> <ul style="list-style-type: none"> Investigation to flood risk management plans and water courses to improve the flood management report Continue to support training knowledge and best practice through the delivery of Community Action Groups 		
<p>Overview: Cumbria has been a significant place since the last ice age and is currently the largest area in England with a population of over 100,000. The three great rivers in Cumbria are the Ebor, Cumbria and Ribblesdale. 1000 homes and businesses were flooded in December 2015. Key infrastructure including the sewage works and electricity substations are badly located on the 100,000 homes and businesses.</p>			<p>21 Dec 2016 (16:15) (17:15)</p> <ul style="list-style-type: none"> Support opportunities to reduce flood risk management and engineered design options of infrastructure 		

	What's already in place	What we're going to do and what else we're doing	When the work will take place	Who's responsible for this work	How much will it cost? (2016/17)
Strengthen flood defences 	<p>Flooding in Cumbria is reduced by over 100,000 of coastal communities and 100,000 of inland areas. Water retention and other measures manage flood risk through the coast. There are 1,000 coastal defences, no further defences to manage them. 12 defences, 100,000 of coastal communities, 100,000 of inland areas.</p>	<p>Improved defences</p> <p>12,000 of coastal communities, 100,000 of inland areas, 100,00</p>			



Post plan publication:

- ➔ Complete remaining flood investigation reports.
- ➔ Develop local solutions additional bids for funding (including Warwick Bridge and Low Crosby).

Longer term investment:

- ➔ £72 million budget (£14m existing, £58m new).
- ➔ £117 million for roads and bridges.
- ➔ Extra £350 million reserve allocation (England wide)

CFP actions relevant to Carlisle and parishes

What?	When?	Lead
<p>Review the role that bridges play in flood risk and their vulnerability during a flood.</p> <p>Seek funding to reduce this risk.</p> <p>Identify further options for improving the flow of water at bridge crossings and pinch points, including reviewing gravel removal where appropriate.</p>	Assess by September 2016	Cumbria County Council and the Environment Agency
Identify where we can best protect communities by extending the use of 250 national mobile pumps before/during flood incidents.	Autumn 2016	Environment Agency
Identify further land management opportunities and locations for natural flood management projects by working with landowners, commoners, and the farming communities to use their knowledge of the catchments.	Short-list of options by October 2016	Environment Agency and Cumbria County Council as lead local flood authority
Increase the uptake of natural flood management measures through schemes such as Countryside Stewardship and Catchment Sensitive Farming.	From 2016	Natural England and Forestry Commission

CFP actions relevant to Carlisle and parishes

What?	When?	Lead
Identify further locations for building flood storage basins and/or improving storage of flood water upstream of communities.	Started by Autumn 2016	Environment Agency, Lead local flood authority, Natural England, farmers, landowners, land managers, Cumbrian rivers trusts and Wildlife Trust
Develop multi agency flood plans to ensure organisations and local communities are ready for Winter 2016.	Autumn 2016	Cumbria Flood Risk Strategic Partnership, Cumbria County Council, district authorities, Environment Agency
Update long term spatial plans (which are used to decide where housing and other building works can take place) in response to Storm Desmond.	Eden: review by 2021 Carlisle: review by 2017	Eden District Council Carlisle City Council

CFP actions relevant to Carlisle and parishes

What?	When?	Lead
<p>Review the role of Haweswater and Wet Sleddale Reservoirs in contributing to flood risk management.</p> <p>Understand, through modelling, the potential benefit of changing operating regimes as well as the impact on public water supply and dam safety.</p> <p>Work in partnership with the Environment Agency, community groups and other statutory agencies to agree actions.</p>	<p>Scope investigation and agree actions by August 2016</p>	<p>United Utilities</p>
<p>Develop a Carlisle flood plan to ensure organisations and local communities are better prepared.</p>	<p>Autumn 2016</p>	<p>Carlisle City Council</p>
<p>Hold a flood risk management and modelling competition on the Eden catchment.</p>	<p>September 2016</p>	<p>Defra</p>



18,000,000 m³
behind defences in Carlisle

=

4.5 x



Image by london-attractions.info

How could this be scaled up to benefit Carlisle?

Lustrum Beck (proposed) – 50,000 m³ in 1 km

