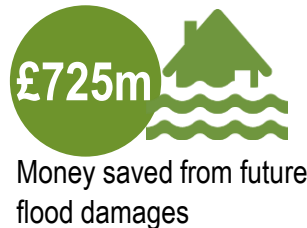




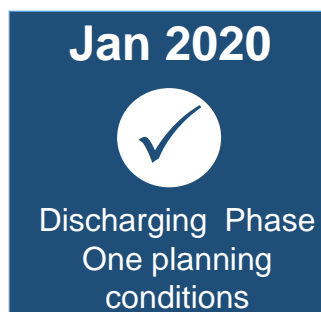
# Kent Catchment Flood Risk Management Scheme Update

## Kendal, Burneside, Staveley, Ings and upstream flood storage

The Environment Agency has proposed a three phase Flood Risk Management Scheme to better protect residential and business properties from flooding in the Kent catchment and improve the local environment and community amenities. Kendal Town is the first phase, starting construction in Summer 2020. Here is a snapshot of some of the benefits being delivered as part of the scheme;



## Key dates



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# Managing flood risk across the Kent catchment

## Site Surveys and Investigations

Before Christmas we started further surveys and site investigations in Kendal and in Spring these will move into Burneside, Staveley, Ings and Kentrigg and Kentmere upstream flood storage areas. These surveys and investigations will inform our detailed design of the scheme to protect communities from flooding throughout the Kent catchment.

The survey work will locate and map utility services and underground features, as well as recording detailed ground levels. In some locations we may need to complete some trial pit surveys. Where these are on private land we will liaise directly with landowners to minimise any inconvenience.

## Natural Flood Management (NFM)

NFM features are most effective on smaller watercourses with the aim to store water in the catchment and slow the rate at which water runs off into rivers.

We have secured £800k to deliver NFM projects within the Kent Catchment which will compliment the linear defences and upstream storage. We are currently developing a number of projects in the catchment with four projects underway or in design.

### Kent catchment uplands



50 hectares of upland peatland restoration providing improved habitat and the ability to hold 26 times its weight in water slowing it down providing increased flood risk benefits.

### Staveley



Consisting of re-connection of flood plains, flow routing, and run-off attenuation features.

### Stockbeck, Kendal



Important opportunity to deliver storage ponds, diversion pathways, long leaky dams and tree planting. Working with landowners, United Utilities and Cumbria Wildlife Trust.

### Town View, Kendal



This central Kendal site provides an opportunity to showcase a variety of NFM including restoration of a culverted watercourse, earth bunds, leaky dams and potential for tree planting whilst providing an opportunity for school groups to understand the benefits through display boards explaining the changes.

**NFM alone will not provide enough flood risk protection to communities throughout the Kent catchment.** NFM is an important complimentary measure to reduce flood risk along with more traditional engineered solutions. We continue to look for opportunities to deliver more NFM projects throughout the catchment. If you are a landowner interested in NFM interventions, please get in touch.



## Phase One - Kendal

We will be opening our new Kendal Scheme Information Hub to the community very shortly where we will have detailed information on the scheme. Keep an eye in the local press for further details of our launch date and location.

We are well on the way to developing the detailed design of the scheme, refining specifications and finishes of the walls, embankments and glass panel sections. This detailed design phase also includes how we will deliver the scheme through the town which we plan to deliver in small sections we term as 'reaches'. The programme and order of the delivery of the reaches will be agreed with South Lakeland District Council as the planning authority. The order of work will be influenced by the complexity of construction and the need to minimise disruption within the town.

It is important that before any construction works start we prepare the site, this means ensuring the environment and community are protected from our works. We will be undertaking some vegetation management as well as the relocation of existing utility services and street furniture such as lamp posts, seating and bins.

We are also working with South Lakeland District Council and Kendal Town Council on improvements to public realm (areas accessible to the public). One such example is to incorporate additional glass panels into the scheme along Aynam Road, subject to further planning approval. This will ensure views of the river and town landscape are retained in key locations.



Over half of the riverside flood defences will be set back to make space for water and retain community accessibility

Wall finishes through Kendal will blend into the local town landscape



## Protecting Kendal's Environment

Kendal has a vibrant environment, the River Kent provides a central corridor for habitat and wildlife. We have undertaken extensive environmental surveys which have identified a variety of different protected species such as otters, white-clawed crayfish, bats and kingfishers.



Overall we want to protect and improve the environment, wildlife and habitats of the River Kent. We want to protect Kendal's habitat and wildlife during the construction works so we are carefully planning a number of measures we will put in place to ensure all construction disturbance to the natural environment is kept to a minimum. We have a team of specialists who will ensure that during construction works, wildlife will have an alternative habitat through planting and the installation of bird and bat boxes in suitable locations. We will also adopt the use of sensitive techniques to ensure we use the best methods to protect the environment in advance of and during our works.

We will also deliver two areas of habitat improvement at Beezon Fields and Mintsfeet, creating an opportunity to bring together enhanced habitat for wildlife with better community access and usability of these areas. We will create new woodland blocks, interspersed with ornamental and ground covering planting to create and support a diverse habitat as well as a much improved community area.







## Phases Two – Burneside, Staveley & Ings and Phase Three – Upstream Storage

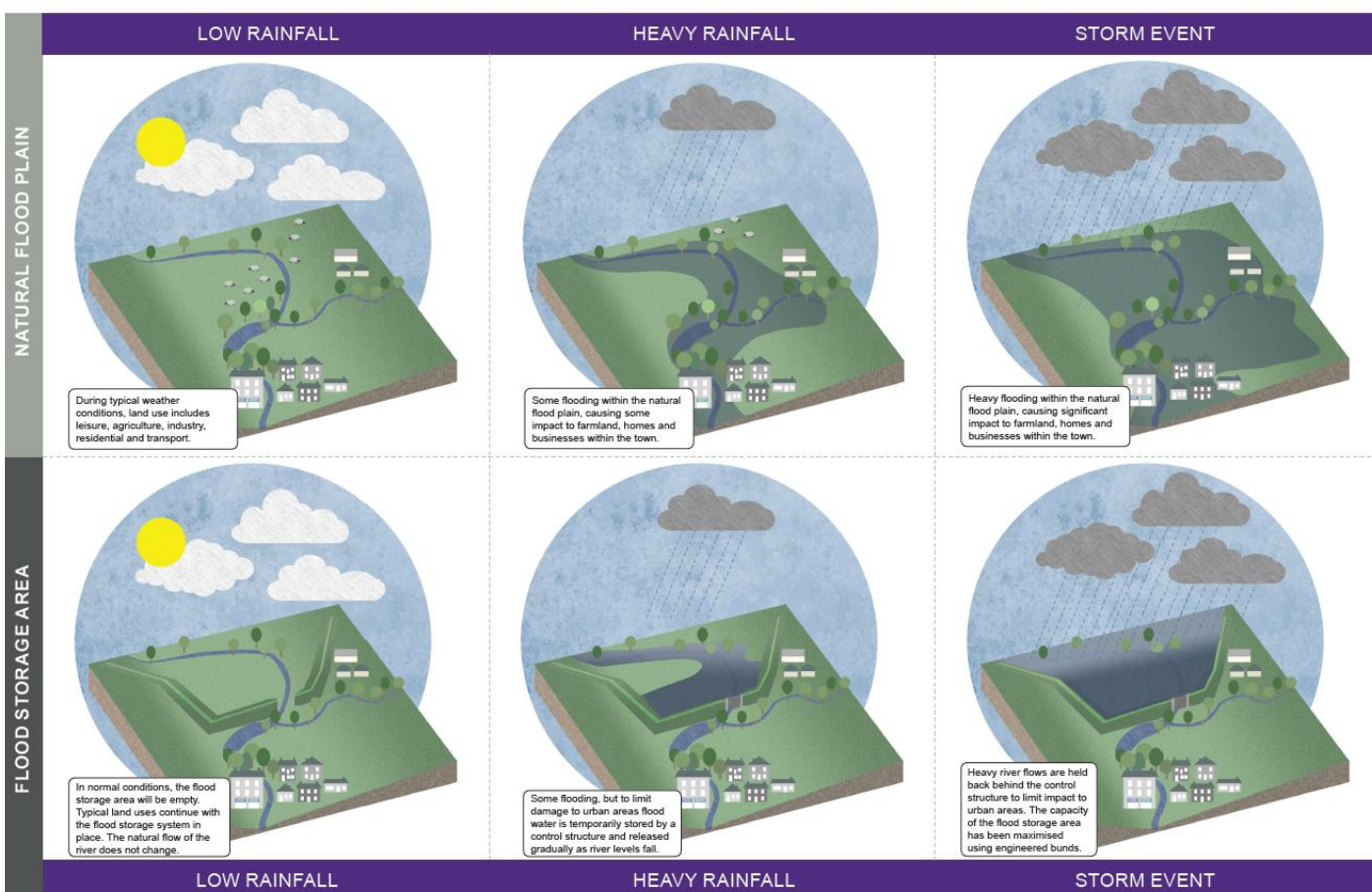
We now have £76million approval to progress with all three phases of the scheme. This enables us to progress with the planning and detailed design work for phases two and three. The survey work and data gathering will continue in Burneside, Staveley, Ings and the Kentrigg and Kentmere flood storage areas. Where surveys are required on private land we will liaise directly with landowners.

We will provide opportunities this summer for residents, businesses and local interest groups to help shape these parts of the scheme ahead of our planning application submission. We are also working with United Utilities on plans for flood defences and sewer improvements in Burneside.

### Upstream flood storage in the River Kent catchment

The natural flood plain is a very important way of storing flood water during periods of prolonged heavy rainfall. To reduce the risk of flooding to homes and businesses we need to build embankments and control structures to maximise these flood storage areas. This allows us to control and limit the river flows during flood conditions, but also allows the continued use of these flood areas during dry conditions. The following sequence of drawings helps explain this process

#### HOW FLOOD STORAGE AREAS WORK



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