Eamont Bridge Flood Risk Management Newsletter

July 2020

Thank you for your ongoing patience and support while we have been exploring options to manage flood risk in Eamont Bridge. Since we presented our shortlisted options to you in January 2018 our focus has been on refining our technical understanding of these options. This work has included detailed hydraulic modelling, engineering and environmental assessments as well as economic appraisals.

Preferred Option

From a technical perspective the only viable option to substantially reduce flood risk in Eamont Bridge is some form of raised defence (such as a wall or embankment) that runs continuously between all residential properties and the river. This would be necessary on both banks of the watercourse and it may not be a universally popular solution. However, before we could present detailed designs for consultation our economic appraisal showed we could not secure the funding required to cover the costs of deisgn and construction.

This means that, at this time, we are unable to continue to develop plans for a flood risk mitigation scheme in Eamont Bridge.

At a flow rate of 100m3/s there is a risk that residential properties in Eamont Bridge will flood.
During Storm Desmond we estimate the peak flow in the River Eamont was nearly 300m3/s.

With an estimated cost of £3.6million to construct a viable Flood Risk Management Scheme we are facing a substantial funding shortfall.

Challenges to managing flood risk in Eamont Bridge

There are a number of factors which make the management of flood risk in Eamont Bridge especially challenging (and therefore expensive). For example, the sheer volume of water conveyed by the River Eamont during a flood. As you will know the River Eamont's mountainous catchment receives some of the largest rainfall totals in England. Much of this flows through Ullswater, the second largest lake in England, before entering the River Eamont. The effect of the lake is to "attenuate" the flood waters. In other words it lowers the peak flood flows in the River Eamont but spreads it out over a longer period of time. This means that the river continues to flow at a high rate for an extended period and the total volumes discharged by it are very large indeed. The effect of this on flood risk management is that vast volumes of water would need to be stored upstream in order to significantly reduce flood risk in the village. **Managing flood risk through providing upstream storage would therefore be significantly more expensive than the construction of local flood defences within the village.**

The village of Eamont Bridge lies astride the River Eamont with low lying residential properties located close to the river on both banks. The result is that there is relatively little space for the river. The capacity of the river channel at is around 75m3/s (in other words 75 tons of water flowing along the river every second), when the flow in the river exceeds this, some gardens will be inundated. At a flow rate of a little over 100m3/s there is a risk that residential properties will begin to flood. Flood flows however can be much larger than this. We estimate that the peak flow in the River Eamont during December 2015 floods was nearly 300m3/s (four times the capacity of the river channel); whereas a flow of 200m3/s we would expect to occur on average once every 50 years (and more often when the effects of climate change are considered). In order to convey such large volumes of water though the village a continuous raised defence (separating the residential areas of the village from the river) is the only realistic solution; however, the space and access constraints would make this challenging and expensive to design and construct.

Increasing the depth of the river by dredging would not provide the capacity needed to significantly reduce flood risk. It would also risk undermining the riverside retaining walls and the bridge as well as exposing and potentially compromising the essential services that cross the river under its bed (including water supply and sewerage). Finally, it would be expensive and occasionally impossible to maintain in a way that provided a reliable standard of protection as the river will constantly try to return to its natural geometry by depositing gravels where it has been unnaturally deepened or widened.

The River Eamont provides an important habitat which supports a range of protected species. This means that any flood mitigation activities must consider their impact on the environment. Whilst this has not influenced our ability to deliver a scheme it would have been likely to influence the design and construction had we been able to progress the project.

Funding

The main funding for flood mitigation schemes in England is from the UK Government and is called Flood Defence Grant in Aid (FDGiA). Following the unprecedented flooding that occurred during Storm Desmond, in December 2015, the government pledged additional funding to support the development of new and improved flood schemes in a number of communities across Cumbria. This funding was in addition to any funding that could be secured through FDGiA and through investment by third parties. Crucially, this funding was dependent on being able to develop a viable scheme that could secure sufficient funding. This funding did not guarantee that it would be possible to deliver a viable, fully funded flood defence scheme.

More details on funding can be found here -

https://www.gov.uk/government/publications/flood-and-coastal-resilience-partnership-funding-an-introductory-guide

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/221094/pb13896-flood-coastal-resilience-policy.pdf

https://www.gov.uk/government/publications/fcrm-partnership-funding-calculator

We estimate that the cost to construct the defence in Eamont Bridge would be approximately £3.6m. The funding shortfall for this option is over £1.6m.

What next

In addition to our efforts to deliver a scheme within the village we have been working with our professional partners to explore other options to reduce flood risk in Eamont Bridge. One opportunity to do this would be the removal of Low Mill Weir at the downstream end of the village. Our understanding is that removal of this structure would reduce flood risk to some (although not all) of the properties in the village. However, its removal could adversely impact other significant infrastructure that crosses the river. We continue to work with United Utilities and Eden River Trust but so far no viable options to remove the weir in a way that provides the flood risk benefits have been identified.

We also continue to work closely with landowners and the Rivers Trust upstream of Eamont Bridge, to manage the land in a way that reduces flood risk by increasing the amount of storm water which can be held on the floodplain. We are currently contributing to the delivery of one such project in the Dacre Beck catchment upstream of Eamont Bridge.

Finally, our project team is currently writing up a formal summary report which will document the work undertaken to appraise and design a flood scheme in Eamont Bridge since Storm Desmond. We currently anticipate this being completed during Autumn 2020 but acknowledge that the challenges the country is facing at the moment and our priority to deliver schemes in areas where we have been able to secure funding may impact this delivery timeframe. Once this report is complete will be happy to share it with you and answer any of your questions. We remain very aware of the suffering communities at risk of flooding endure, particularly in places such as Eamont Bridge where flooding can be both severe and relatively frequent. We will continue to work with the flood action group and others to identify possible funding partners and additional measures we can take, as well as refreshing the current plan and business case as funding rules change in the future.

We remain committed to further reducing flood risk in the village, we will share the appraisal summary report once this is available and will continue to be available should you have any queries.

Be Flood Ready

We will never be able to guarantee a completely flood-free future, and so we encourage anyone living or working in a flood risk area to be aware and to be prepared. We can support you by; signing you up to receive free flood warnings, helping you to produce a personal flood plan, offering property resistance and resilience information and supporting the formation and ongoing work of a community flood action group.

It is important that you are prepared for flooding and we encourage you to take 4 simple steps:-

1. Sign up to Floodline Warnings Direct to receive free flood warnings
   A large number of properties within Eamont Bridge are still to register for free flood warnings. The Flood Warning Service is a free system which is used to warn you of imminent flooding to land and property.
2. Know what to do when a flood warning is issued. Have a personal flood plan for you and your family.
3. Keep an eye on the situation. You can view a 5 day weather forecast and monitor the river levels online.
4. Keep up to date with early warnings of heavy rain which could lead to flooding by registering for Cumbria Community Messaging. This is a free e-mail service and is complementary to our Flood Warning Service. To register visit www.cumbriacommunitymessaging.co.uk

For information on the above, visit
https://flood-warning-information.service.gov.uk/warnings or ring Floodline on 0345 988 1188

Contacting the Environment Agency
If you would like to contact the Environment Agency about future flood risk management you can email CMBLNC-PSO@environment-agency.gov.uk. If your query relates to community or personal resilience please contact clfloodresilience@environment-agency.gov.uk.

Contact Us
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