

MANAGING FLOOD RISK IN BATH: INFORMATION NOTE

JANUARY 2017

Background

Bath is at risk from river and surface water flooding. Following significant flooding in the 1960's the Bath Flood Alleviation Scheme was completed in 1974 to reduce the risk of flooding to the city.

Twerton and Pulteney gates form part of the 1974 Bath scheme and as they are now over 40 years old, they require significant (and increasing) investment to keep them operating reliably.

The introduction of this scheme in the 1970s, significantly reduced the risk of flooding, but there are still over 500 properties with a 1% chance of flooding in any one year. With the impact of future climate change, this risk is predicted to increase to between 1500 and 2000 properties. To see areas currently at risk, follow this link to the EA website:

<http://maps.environment-agency.gov.uk/wiyby>



Pulteney Weir and Gate

Bath River Avon Options Appraisal

The Environment Agency and B&NES commissioned a high level study in 2016 to consider the best long term sustainable solution for managing flood risk in Bath. The River Avon Options Appraisal Report identified potential actions at a strategic level, including replacement of Twerton and Pulteney Gates and constructing new or improved flood walls.

To quantify the flood risk benefits and costs of each option and therefore identify where further work is best directed, hydraulic modelling and high level cost estimates were undertaken.

Potential options: Twerton Gate

Failure of Twerton gate in the closed position could cause flooding of around 200 additional properties in an extreme flood event.

Failure in the open position could result in the river level dropping, making the riverside look unsightly, inaccessible and impacting on wildlife habitats as well as potential damage to the foundations of historic buildings adjacent to the river.



Twerton Gates

The study has identified several options for Twerton gates. These range from simple refurbishment, to a different gate arrangement and flood relief channel. These options have varying benefits and are estimated to cost between £4 million and £16 million.

Potential Options: Pulteney Gate

The hydraulic modelling shows that failure of Pulteney gate in the closed position would have a minimal impact on flood risk.

Failure in the open position presents a risk of damage to the foundations of historic buildings due to a drop in river levels. The risk is greater here than at Twerton due to its central location

and poor access which could hinder mitigation works.



Pulteney Gate

The study identified various options to replace or refurbish the gate. Some of these options would also improve the amenity value of this key location in the centre of Bath. No decision has been made on the preferred option. Estimated construction costs range between £2 million and £5 million.

Potential Options: Additional Flood Walls

The cost of building additional flood walls through Bath, as identified in the River Avon Options Appraisal Report has been estimated at over £30 million. As the existing flood alleviation scheme mitigates significant flooding in frequent flood events, construction of walls would attract limited government funding under current spending rules. The viability of additional flood walls would also be affected by their visually intrusive nature and resulting environmental and heritage impacts.

Funding

The current estimated cost of implementing all of the potential improvements would be approximately £50 million, with the possibility of attracting around £10 million from central government funding. Progression of all improvements would therefore only be possible with additional funding of around £40 million.

Next Steps

At the present time, neither the Environment Agency or Bath and North East Somerset Council have the funding available to progress all potential schemes; nor are there other sources of funding currently able to cover this large amount. We will

therefore focus work on securing funding to refurbish or replace the Flood gates as the priority.

A detailed condition assessment of Pulteney and Twerton gates has been completed and we are expecting the results from testing by the end of March 2017. This will enable us to get an estimate of the remaining life of the gates, and a more detailed understanding of the state of the materials and component parts. We then plan to develop a business case to deliver the works to Twerton and Pulteney flood gates. This investment will maintain the current standard of protection and manage the risk of gate failure.

B&NES Council and the Environment Agency have been working closely together on this project and will continue to work together to identify opportunities to reduce flood risk.

The delivery of the Bath Quays Waterside Flood Conveyancing Scheme is well underway and due to be completed in summer 2017 – see the Council's webpage for more details and regular updates: <http://www.bathnes.gov.uk/services/planning-and-building-control/major-projects/bath-quays-waterside-reconnecting-bath-its>

Upstream storage options continue to be explored to reduce flood risk within Bath, led by the Bristol Avon Catchment Partnership.

In addition, both the Council and the Environment Agency continue to work with developers to manage flood risk on development sites along the River Avon.