

Greyfriars Community Flood Scheme Frequently Asked Questions (FAQs)

We understand that you may have questions regarding Greyfriars Community Flood Scheme, we have put together a document that includes FAQs and other information that covers a wider range of questions regarding flood schemes. We hope this will be able to reassure and answer any questions that you may have about this scheme

How high would a flood defence be and would a survey of land levels be done to show what is required?

A topographic survey would likely be required to confirm land levels. We can base initial estimates off LiDAR (surveyed ground information from aeroplanes) which is accurate to 150mm. The height of any defence would be determined by cost benefit of a scheme, technical ground suitability, computer modelling of river flows, money achieved for a scheme. We will explore every opportunity to reduce construction costs.

Has any consultation taken place with land owners and do option costings currently include for full/market value land purchase or compensation to land owners?

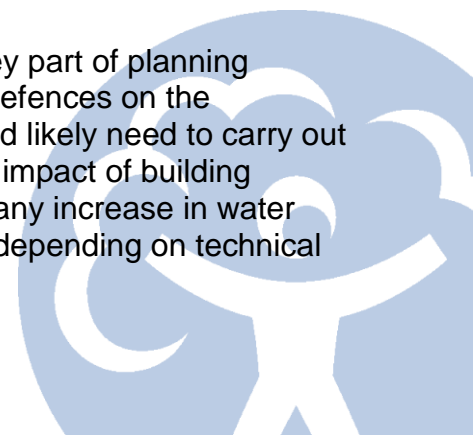
Land and compensation costs are factored into our costing exercises. Land owner engagement will happen as we move towards a preferred option if appropriate.

What would an embankment be constructed of and would it be maintained by authorities long term?

An embankment, if appropriate, would have an impermeable layer, normally clay core. Maintenance costs are factored into scheme cost benefit for the design life of the scheme. When we construct a flood scheme we will determine the maintenance requirements and how and when we will undertake maintenance. Where costs extend to maintenance by us in the future, this will be programmed in and any further investment bid for.

Are the impacts known from the hard defences on flood levels at properties on the properties downstream of Greyfriars Avenue?

To progress any built scheme planning permission will be required. A key part of planning permission is the flood risk assessment. This details the impact of any defences on the surrounding area. As part of the flood risk assessment the scheme would likely need to carry out industry standard computational river modelling to demonstrate that the impact of building defences is minimal on the water levels in the surrounding area or how any increase in water levels could be mitigated for. Modelling could take 12 months or longer depending on technical advice on the most appropriate approach.



What level at the river gauge at the bridge is important for my property flooding?

We encourage you to sign up to our free flood warning service if you live, work or travel in a place at risk of flooding. You can sign up to receive warnings at <https://www.gov.uk/sign-up-for-flood-warnings> or by calling floodline on 0345 988 1188. You can choose to receive a call, text or email when we expect flooding to happen in your area.

We publish our river levels at Hereford Bridge online at <https://check-for-flooding.service.gov.uk/station/4017>. If you know the date and time of when flooding occurred in your area we can provide you with a level that was recorded at our gauge at that time. While all flooding is different this can be useful in helping you plan for flooding. If you would like to request this you can email us at enquiries_westmids@environment-agency.gov.uk or call 03708 506 506

Will the issues of sewer flooding and bursting manhole covers be addressed as part of this scheme?

We will work with utility companies throughout the development of the business case and they will be invited to support with any proposals. It is, however, important that residents continue to report this flooding to their service providers as and when it happens.

During flood events, water rises through the ground first. How can flood walls suggested in certain options prevent this from occurring or would defences extend below ground towards rockhead?

Following a ground survey appropriate design of defences would detail how to mitigate water rising through the ground or drains. Common solutions include piling to an impermeable layer and non-return valves on drains.

The Initial Assessment acknowledges aspects of knowledge shortcomings which required assumptions to be made. Specifically to climate change and modelling.

The Initial Assessment is a desk-based study with the aim of being a reasonably quick assessment of the best available data to gain a view on whether it is economically viable to spend public money on a business case for a scheme to reduce flood risk. The outcome of the Initial Assessment is that a scheme could be viable and gives us the justification to invest further public funding exploring how any scheme could work. There are a number of assumptions we have to make at this stage that we will need to reduce and refine as the business case proceeds.

Why will the process take so long and will it consider alternative options to those identified within the Initial Assessment?

We want to work with the community and listen to feedback in the development of any scheme. The business case will consider a number of options which can be refined as it is developed. We aim to find a solution that is economically viable, technically possible and environmentally acceptable.

The project is progressing and we take a phased approach which is likely to take a number of years to complete. This is because a number of different activities happen as part of this process to enable us to enhance our understanding of the area and design a viable scheme. These could include; topographic survey, ground investigation, archaeological surveys, environmental impact assessment, hydraulic modelling, flood risk assessment and securing planning permission.

There are site specific challenges as with any scheme we carry out before works can commence on the ground. We also need to secure sufficient funding for any scheme. While we want to find

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an optimal solution for the whole community there will be significant technical and funding challenges with any scheme at Greyfriars, Wye Terrace and De Koffie Pot.

Could dredging improve the situation in Greyfriars Avenue (in the short term)?

Re-profiling and dredging is undertaken where it is technically effective, does not significantly increase flood risk for others downstream, and is environmentally acceptable. As with all flood management measures dredging activity should also be cost effective. The Environment Agency assesses each location individually and dredges when it is the right solution and it provides long term value for money. Understanding where it will, and will not, reduce flood risk is key.

Dredging is very expensive and it is likely we would have to dredge for several miles, or indeed the length of the River Wye to see any effect on normal water levels. In times of flood dredging does not give anywhere near the capacity to contain the massive amounts of water conveyed in the floodplain and would likely have little effect. It is very likely after any moderate flows that the silt removed would return as rivers work towards an equilibrium of sediment erosion, transport and deposition. Dredging is also very damaging to the environment and given the designations on the Wye it could be a challenge. The cost of dredging in this location is likely to be too great to justify public investment and could cause bank instability and more erosion.

Could you provide more detail on Property Flood Resilience (PFR). What would happen if a resident is unable to deploy the PFR measures themselves?

With any PFR scheme the first step is to carry out an individual property survey to determine points of water entry, listen to experiences of the residents and propose solutions that could work for both the property and the resident. Common PFR solutions could be; flood proof doors or demountable barriers across doors or drives, non-return valves to stop water coming through waste drainage into the house, pumps to deal with any leakage in a sump, upgrading of walls in the curtilage of properties to make them flood proof, automatic air bricks which self-close when water enters them, wall treatment to make them less permeable to water.

PFR can be a mixture of passive and active measures and some forms do need installation upon warning of flooding occurring. If PFR is to be installed then we look closely at each property and the occupants to consider what would be most suitable. Where active measures (flood gates etc) are best suited then we work with the community to encourage emergency plans including how neighbours can support each other to help those who are not able to deploy the measures themselves or are away at the time of a flood event.

What is Partnership Funding?

Flood risk management schemes are generally funded using public money and we need to demonstrate that any spend is a sound investment that will produce a significant return for society. We do this by carrying out an assessment to compare the economic benefits of a scheme with the costs that will be incurred in its implementation. We then apply a government formula using the 'Partnership Funding Calculator' to the costs and benefits which tells us how much Flood Risk Management Grant in Aid government funding the scheme is eligible for. Based on these economics, some schemes are eligible to be fully funded by government and some need a contribution from another funding source to make up the shortfall. This is called partnership funding.

Further information on partnership funding is available at <https://www.gov.uk/guidance/partnership-funding-for-fcerm-projects>

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What are realistic funding partners/streams available to a community like Greyfriars?

We can apply for the government's Flood Risk Management Grant in Aid as determined by the score in the Partnership Funding Calculator that we will continue to develop and refine for any scheme. The other main source of public funding we can apply for is Local Levy from the English Severn and Wye Regional Flood and Coastal Committee. This funding is raised from a proportion of Council tax from tax payers in the Committee's geographic boundary (broadly Herefordshire, Gloucestershire, Worcestershire, Shropshire, Warwickshire, Telford, Dudley, Coventry among others).

Funding can be sought from other public and private partners who have an interest as well as other funding grants that could be available.

Do financial assessments of impacts assume frequency of flooding events as theoretical, i.e. 1 in 50 years etc? Given recent experience of 3 events in 16 months and other near miss events, will such assessments be adjusted to reflect actual frequencies?

Our detailed cost benefit assessments include depth-damage data where we look at industry design standard flood return periods (e.g. 1 in 50), the depth of water in properties and the damage it causes. We take property threshold levels, local modelling data and industry standard average damages based on property type to derive a cost benefit. It is industry standard to meet government rules so that we can compare like for like around the country and that is why it is based on average values.

It is entirely possible to have four 1 in 50 events in a year as 1 in 50 relates to the statistical chance of a flood event of that particular size occurring in any one year.

Would desilting the arches under the old bridge help?

Any silt removal around the bridge is technically challenging. We have investigated the feasibility of removing silt here but inspections showed that there is minimal silt as the channel bed is artificial and now comprises of a concrete bed. The accumulation downstream are in line with the bridge piers so it would not affect the conveyance of water through the arches.

Would natural flood management be an option?

Research has shown that natural flood management can play an important part of reducing the risk of flooding. For measures to have a significant effect they need to be carried out across the river catchment. Information on natural flood management measures in the Wye river catchment can be found on Herefordshire Council's website at <https://www.herefordshire.gov.uk/roads-1/flooding/5>.

If you have any queries about this project, please contact us via email at enquiries_westmids@environment-agency.gov.uk or by telephone on 03708 506 506.