

# York Flood Alleviation Scheme

## Foss Storage Area

Updated: September 2019

### What is the York Flood Alleviation Scheme?

Following the floods of December 2015, the government allocated an additional £45 million to the Environment Agency to better protect 2,000 properties in York.

We are working in partnership with City of York Council to build new and improved flood defences throughout the city. This involves looking at the catchment as a whole to find new ways to 'slow the flow', store water, and reduce the impact of flooding in both York and surrounding areas, including Strensall. Since we published our initial ideas in the 'York 5 Year Plan' in November 2016, we have been exploring many different options for flood risk reduction and developed plans for 19 separate sites, including along the River Foss.

### What is happening along the Foss?

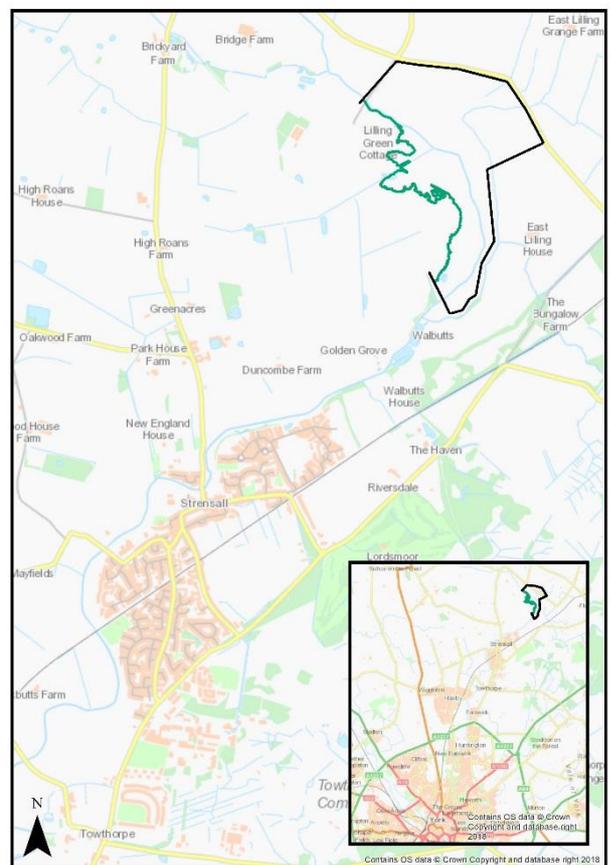
Whilst the Foss Barrier provides protection from flooding for homes near to the barrier, the effect of this is reduced further upstream and there is still a risk of flooding for some homes and businesses extending up to Strensall. Our flood modelling suggests that there are 490 properties along the Foss at risk of flooding during a severe flood. However our options in such a built-up catchment are extremely limited; in such a populated area, building new flood defences would cause enormous disruption and be extremely expensive.

### Our proposal

We are proposing to build a flood storage area on land north east of Strensall village. Flood storage areas help to 'slow the flow' by temporarily holding back flood water, helping to reduce peak flows in the river and therefore reducing flooding downstream. These areas are not like reservoirs and do not store water permanently. They are designed to be dry in normal weather conditions and only fill up for short periods during large flood events. Unlike other physical flood defences, a flood storage area can be built at some distance from the communities they protect and therefore have minimal impacts during construction and operation.

### What we've done so far

In September 2018, we held two drop-in events in Strensall and Huntington to share our initial plans for the flood storage area. Since then, we have been developing detailed designs for the scheme. This includes habitat surveys, a detailed Environmental Impact Assessment and modelling to inform the overall design of the scheme. We have also met with local landowners, the Internal Drainage Board, Natural England, local councillors and community groups to discuss our proposals during this phase of the project.



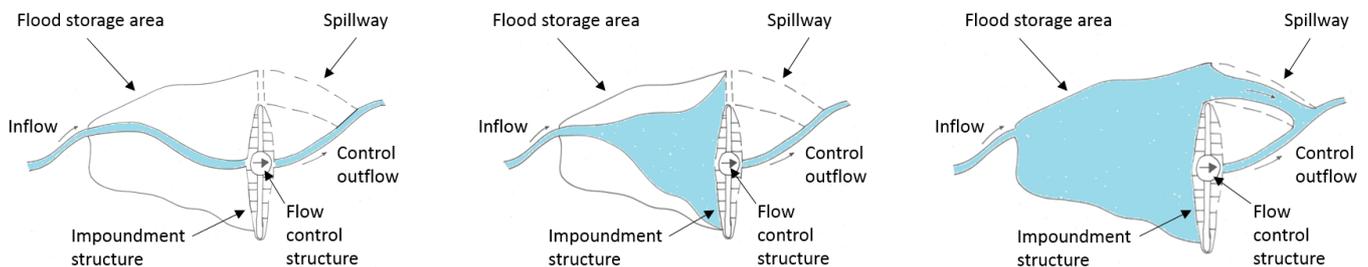
**Figure 1** Flood storage location between Walbutts House and East Lilling Grange Farm

## The Foss Flood Storage Area

The Foss Flood Storage Area we are proposing will be located 2 kilometres north-east of Strensall, between Walbutts House and East Lilling Grange Farm (shown on the map above). This site meets very specific requirements for a flood storage area in terms of location, size, geography and hydrology. Its location on the River Foss and near to York is ideal for flood protection and the storage capacity of the local landscape means that it will provide protection for properties downstream on the Foss.

### How will it work?

Under normal conditions a flood storage area such as the one we are proposing would allow the Foss to flow through the line of the embankment and exit via a control structure without holding back water. The structure would only begin to restrict flood water during higher flows, filling the storage area. The stored water would then be released in a controlled manner when peak flood flows passed. In the unlikely situation where water levels rose to the top of the embankment in the flood storage area, a spillway would safely allow the flow to pass around the structure.



### Flood risk benefits

The flood storage area will increase flood protection for 490 properties between Strensall village and The Groves neighbourhood in York.

### Environmental benefits

When the storage area isn't in flood, it will facilitate the growth of valuable wetland habitat, create space for local wildlife and help improve water quality downstream. Materials for building the embankment for the storage area will be taken from within the site, creating pits which fill with water and act as permanent shallow ponds. We are in conversation with Natural England and Yorkshire Wildlife Trust to consider other environmental benefits the scheme may provide and how we might incorporate these into the design of the scheme.

### Safety

Reservoir safety is of the highest importance for the Environment Agency. Under the Reservoirs Act, 1975, we are required to appoint an independent reservoir specialist called a Panel Engineer to ensure the design, construction and maintenance of the flood storage area meet all required safety standards. This means the site will be designed to cope with more extreme floods than predicted and built to the highest standards as if it permanently stored water, even though this won't be the case. It will be maintained and regularly inspected to ensure it is kept in good condition.

### Next Steps

We will submit our plans to City of York Council and Ryedale District Council for planning approval by the 19<sup>th</sup> October. These plans will be available on their planning portals for you to comment on. Information about our scheme can also be found by:

Visiting our website: <https://consult.environment-agency.gov.uk/yorkshire/yorkfas/>  
Visiting our drop-in centre: York Community Flood Hub, Wellington Row, York, YO1 6FZ  
Emailing us: [yorkfloodplan@environment-agency.gov.uk](mailto:yorkfloodplan@environment-agency.gov.uk)

customer service line  
03708 506 506

incident hotline  
0800 80 70 60

floodline  
0345 988 1188  
0845 988 1188

[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)