Minsterworth and Minsterworth Ham

Existing defences and probability of flooding

The defences in this area are earth embankments.

The risk of tidal flooding to Minsterworth village properties is a 1 in 200 chance or less in any year (from the western parish boundary at Denny Bridge to where the embankment ties into high ground near Highcross Farm).

At Minsterworth Ham the earth embankment provides protection with a 1 in 10 chance of flooding to agricultural land in any year. This area is defined as from the eastern side of the embankment tying into the high ground near Highcross Farm, taking in Corn Ham, Minsterworth Ham, the length of defence adjacent to Upper Moorcroft Farm, along past the lower parting of the Severn to where the western branch of the Severn is crossed by the railway line.

In the future, as sea levels and storminess increase, the level of flood risk will increase.

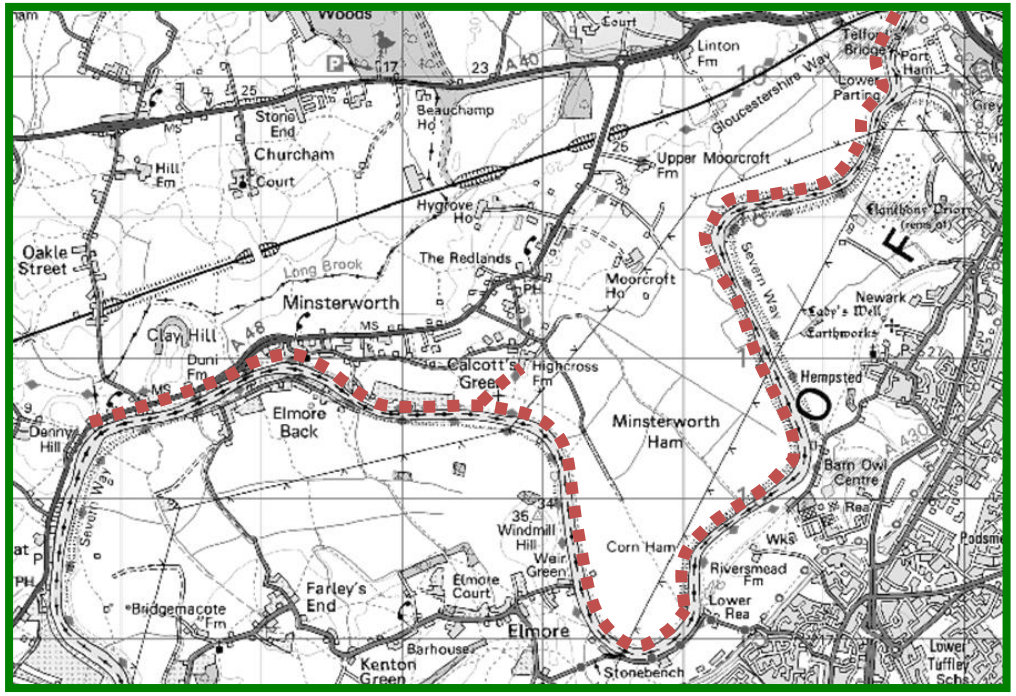
At Minsterworth village, the height of the defence should provide protection against the 1 in 200 year flood until sea level rises by 0.7m.

At Minsterworth Ham a sea level rise of more than 0.1m is likely to result in annual flooding to the agricultural land. It is expected that more frequent flood events will make the defence ineffective at some time between 2030 and 2060 (dependent on the amount of flood damage and sea level rise that occurs in future years).

Sea level rise note

The UKCP09 medium emissions scenario projects about 0.1m of sea level rise by 2030, about 0.3m by 2060, and about 0.7m by 2110.

Currently sea level is rising at about 2 to 2.5mm a year. If this rate were to continue then sea level rise would be less than what is projected by the UKCP09 medium emissions scenario.



What could be done in the future?

If a point is reached when the EA is unable to continue to maintain the Minsterworth Ham defence and/or a tipping point is reached in terms of increased flood frequency there are a number of options that can be considered.

Those options may include:

- Landowners taking on responsibility for the maintenance of the defences (subject to the appropriate consents or permissions being obtained). Any work to raise the defences at Minsterworth Ham could have impacts for flood risk in Gloucester which would need to be carefully considered before consent could be granted.
- Doing nothing and allowing the standard of protection to reduce as the condition of existing defences deteriorates.
- Landowners, community and the EA exploring a voluntary managed realignment scheme to construct new defences, provide an improved standard of protection for property and allow some land to be used for habitat creation.
- Adapting properties and farming activities to become more resilient to flooding.

What can be done now?

The EA intends to maintain, and then sustain the current standard of protection by raising the defence at Minsterworth in response to climate change. This is subject to the availability of funding.

The EA intends to carry out maintenance at Minsterworth Ham as long as the economic benefits outweigh the costs of doing the work. This is also subject to the availability of funding.

Please see the Supporting Information for further explanation of EA maintenance and funding.

Ongoing local discussions

Potential options for future flood risk management on Minsterworth Ham are continuing to be discussed by the EA and landowners.

How these options were reached

The numbers of properties at risk at Minsterworth mean that the economic benefits are more than the costs of maintaining the defence in the short term and are likely to be more than the costs of sustaining the current standard of protection into the medium to long term.

The costs of low level maintenance on Minsterworth Ham are less than the economic benefits. There are few properties at risk on Minsterworth Ham such that the economic benefits may not be sufficient to outweigh the costs of larger scale maintenance works and this would need to be looked at on a case by case basis.

Key

Existing defences referred to in text