

Newnham, Westbury on Severn, Rodley and Bollow

Existing defences and probability of flooding

There is a 1 in 50 chance of tidal flooding to property in any year to around 30 properties at Newnham, and a 1 in 100 chance in any year for properties on the southern edge of Westbury.

Westbury Court Gardens has a 1 in 10 chance in any year of flooding from the tide.

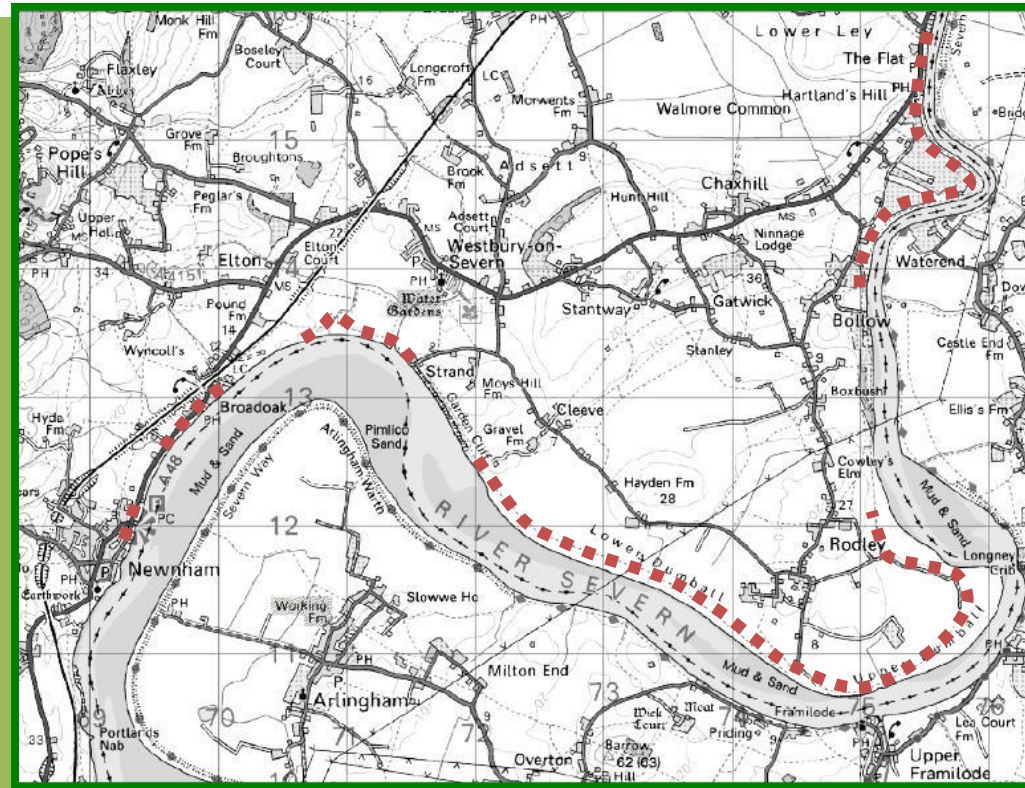
The banks from Cleeve to Rodley and at the Noards ensure the risk of flooding is a 1 in 200 chance or less in any year to properties in these areas. Important infrastructure protected includes the A48 road and the railway line.

Bollow properties are built on natural high ground so that the risk of flooding is a 1 in 200 chance or less in any year.

In the future, as sea levels and storminess increase, the level of flood risk will increase. Even if the existing defences are maintained at their current height, a sea level rise amount of 0.1m would increase the risk of tidal flooding to a 1 in 20 chance in any year to Newnham and a 0.3m rise would increase the risk to a 1 in 10 chance in any year.

A 0.1m rise in sea level would result in Westbury Court Gardens having a 1 in 5 chance of tidal flooding in any year and the properties on the southern edge of Westbury having about a 1 in 50 chance in any year. A rise in sea level of 0.3m would result in the Westbury Court Gardens being severely flooded in most years.

The defences from Cleeve to Rodley and at the Noards are currently in good condition. This means that they require minimal maintenance and should have a long remaining life. The height of these defences means that they should provide protection against the 1 in 200 year flood until sea level rises by 0.3m.



Sea level rise note

The UKCP09 medium emissions scenario projects approximate sea level rises of 0.1m by 2030, 0.3m by 2060, and 0.7m by 2110 and an approximate increase in fluvial flow of 25% 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 the amount projected by the UKCP09 medium emissions scenario.

Key



Existing defences referred to in text

What can be done now and in the future?

At Newnham and Westbury the EA intends to continue to maintain and repair the defences (as funds allow) and to then sustain the current standard of protection by raising the defence in response to climate change (as funds allow).

The National Trust is currently considering flood risk management options for Westbury Court Gardens. The EA will work with the National Trust to secure flood risk and environmental benefits for the area.

The EA intends to continue to maintain the embankments between Cleeve and Rodley and at the Noards (as funds allow), and to then sustain the current standard of protection if sea level rises over 0.3m (as funds allow). Raising the height of the defences on their existing line or realigning them inland are both options that could be considered with landowners at that time. Earlier managed realignment of defences may be an option should landowners wish to consider this.

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

How these options were reached

The number of properties, as well as infrastructure, listed structures and environmental features that have some protection from the various defences means there are high economic benefits for ensuring the continued integrity of the defences.

Ongoing local discussions

The EA will work with the National Trust in connection with flood risk management options for Westbury Court Gardens