

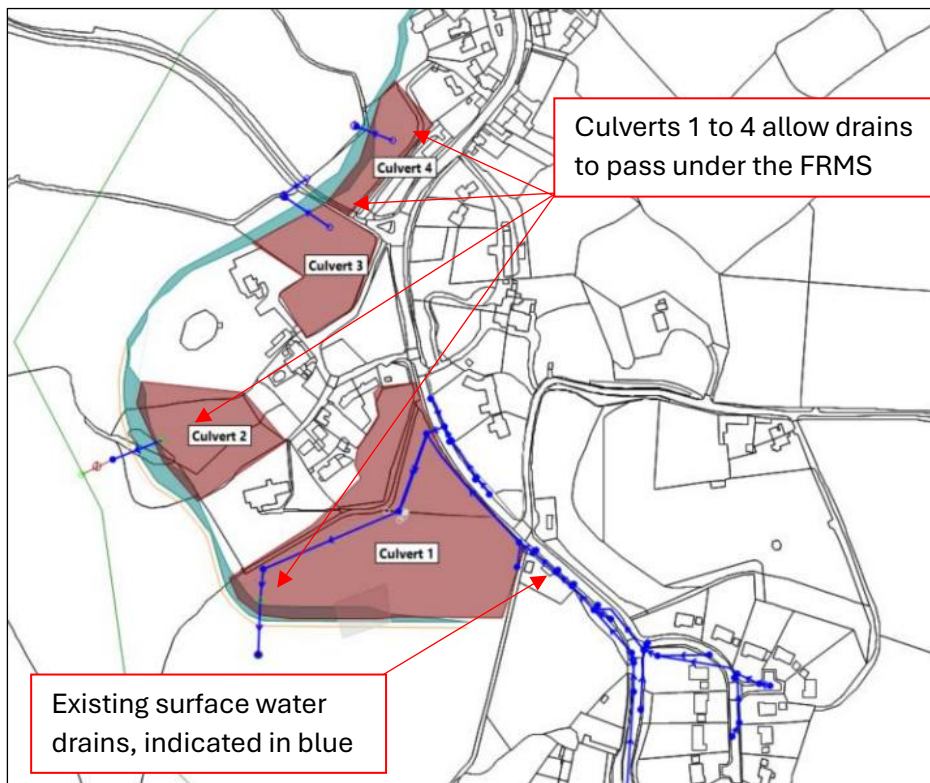
Appendix A

Severn Stoke Flood Risk Management Scheme Scheme description

The Severn Stoke Flood Risk Management Scheme (FRMS) is designed to reduce flood risk from the River Severn. The FRMS will take the form of a flood bank, which will be very approximately 700m long and will run along the western side of the village.

The flood bank will have a consistent crest level and will tie into higher ground at its northern and southern ends, and, with existing ground levels varying considerably along its route, its height -and consequently width- will vary considerably too; the flood bank's greatest height above existing ground level will be 3.6m.

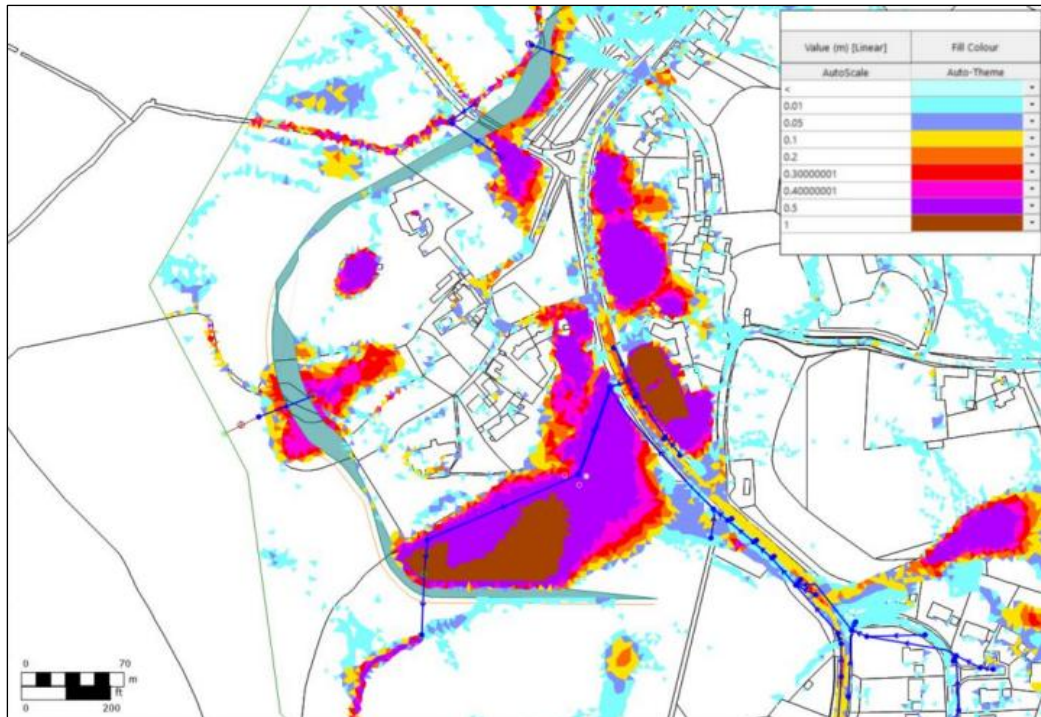
Existing surface water drains will be directed through the flood bank via culverts (see culverts 1 to 4, in **Plan 1**, below). Each culvert will be fitted with a non-return valve, which will prevent river flood water flowing back through (underneath) the defences.



Plan 1; Arrangements for the existing surface water drains

When river flood water reaches the FRMS, the non-return valves (which will be flap valves) will automatically close, preventing river flood water from flowing under the FRMS (and from thus undermining the protection of the village).

When the non-return valves are closed, surface water drainage, flowing from the village towards the FRMS, will thus become trapped. The FRMS has been designed to safely accommodate this, by allowing space, on the 'village side' of the flood bank, for the trapped surface water to safely pond, before it can then drain away once the river flooding has subsided.



Plan 2; modelling showing trapped surface water

The above plan shows where surface water run off is likely to pond in the heaviest storms when those storms coincide with river flooding (i.e. when the non-return valves on the culverts will be shut).

It can be seen from **Plan 2** that the trapped surface water does not cause flooding problems for any of the properties in the village.