

Appendix B: Strategic Flood Risk Assessment (SFRA) 2018 progress update

1. Introduction

- 1.1 The River Thames and its tributaries is a dominant feature of the Borough of Spelthorne. A significant amount of existing development is situated adjacent to, or near, the river and/or its tributaries. Flooding from the River Thames has occurred a number of times within the last 100 years, most recently in 2014 in which many homes and businesses were affected. It is estimated that over 5,500 properties are at 'significant' risk of flooding within the Borough, encompassing almost 20% of the existing urbanised area.
- 1.2 In November 2017 we commissioned consultants AECOM to undertake a new Strategic Flood Risk Assessment (SFRA) to support the new Local Plan.

2. History

- 2.1 The previous SFRA was undertaken by consultants JE Jacobs in December 2006, informed by the draft Planning Policy Statement (PPS) 25: Development and Flood Risk. Since that date, there have been a number of significant changes including the revocation of the South East Plan, the introduction of the National Planning Policy Framework (NPPF) and the Flood and Water Management Act, the production of a national surface water mapping (Areas Susceptible to Surface Water Flooding and Flood Map for Surface Water) and a significant update of the Environment Agency's Flood Map in 2012.

3. Latest from AECOM

- 3.1 AECOM provided us with an update on 19 January 2018 regarding their progress so far.
 - Data has been requested from Spelthorne BC, Surrey CC (as the LLFA), Thames Water and the Environment Agency and is largely complete.
 - The following datasets are outstanding or awaiting clarification:
 - Environment Agency have informed us that the modelling for Lower Thames is currently being updated. Outputs are anticipated March 2018. Spelthorne BC require the Level 1 SFRA before this date and therefore the existing model is being used to inform the SFRA. A statement will be included in the report referring to the new modelling pending. A change order will then be required in due course to update the Level 1 SFRA with the new modelling when it becomes available.
 - The EA hold a dataset detailing information about flood defences – the Asset Information Management System (AIMS). The EA have supplied this in MS Excel format and we would expect spatial GIS format. We have an alternative we can use in the interim, but we have responded to ask whether a GIS shapefile is also available and are awaiting a response.
 - Thames Water historic sewer flooding records have been provided by post code area. However data hasn't been provided for every post code area in Spelthorne. AECOM awaiting

- clarification from Thames Water that we have all the correct information they hold.
 - Draft mapping for the Level 1 SFRA has been prepared by AECOM and is going through internal review.
 - The Level 1 SFRA Report is currently being drafted based on the flood risk maps.
- The main findings to date are as follows:
 - The River Thames and its tributaries, the River Ash and River Colne, present the main flood risk to the Borough:
 - 23% of the Borough is defined as Flood Zone 2 Medium probability of flooding (probability of flooding of 0.1% AEP, 1 in 1000 year);
 - 9% is defined as Flood Zone 3 High probability of flooding (probability of flooding of 1% AEP, 1 in 100 year); and,
 - 12% is defined as Flood Zone 3b Functional Floodplain – where water has to flow in time of flood.
 - Summary by area:
 - **Staines:** Areas of Flood Zone 3b Functional Floodplain are identified along Priory Green and Leacroft associated with the River Ash; areas adjacent to the River Thames including Riverside Drive and Riverside Close associated with the River Thames; and the floodplain of the Sweeps Ditch, including Knightsbridge Crescent, Wheatsheaf Lane, Garrick Close Wrabness Way.
 - **Shepperton:** the area to the north of Shepperton station is identified as Flood Zone 3a associated with the River Ash. This area is shown to be protected by flood defences and therefore the risk residual. There is a large area of Flood Zone 3b along the Thames, however this is retained as open land and is not urbanised.
 - **Stanwell Moor:** The River Colne and its tributaries flow through Stanwell. Areas off Flintlock Close and Horton Road are shown to be Flood Zone 3 Medium risk of flooding, but they are also shown to benefit from the presence of flood defences.
 - **Ashford:** The majority of the area is defined Flood Zone 1 or 2 Low or Medium probability of flooding from rivers. The area adjacent to the Staines by pass is defined as Flood Zone 3 associated with the River Ash.
 - **Sunbury:** largely defined as Flood Zone 1 Low probability of flooding from rivers. The Environment Agency mapping Risk of Flooding from Surface Water shows potential for localised surface water flooding in this area which is

verified by the presence of a number of Surrey County Council 'Wet Spots'.

- The Environment Agency 'Areas Susceptible to Groundwater Flooding' mapping identifies the areas adjacent to the Thames and Colne floodplain is highly susceptible to groundwater flood emergence. This is associated with the underlying permeable fluvial deposits and the pathway for water to flow from watercourses into the groundwater. When water levels in the river are high, localised groundwater flooding can occur in low lying areas in the floodplain.
- Sewer records: Thames Water records identify a greater number of reported flood incidents of sewer flooding throughout Stanwell, Shepperton Green and Staines.
- A number of key water supply reservoirs are situated within or adjacent to the Borough. These reservoirs are situated aboveground, and a sudden failure of the embankments retaining the stored water would have a catastrophic effect on properties situated in the path of the resulting flood wave. The potential risk of failure is considered very small as the reservoirs are stringently managed and monitored by Thames Water.

3.2 A draft report is due from AECOM in February and will be reported to the next LPWP.