Preliminary flood risk assessment: London Borough of Bromley

This addendum by London Borough of Bromley (2017) updates the council's preliminary flood risk assessment report published in 2011. Read the addendum in conjunction with the preliminary assessment report.

Addendum

The preliminary flood risk assessment (PFRA) and flood risk areas (FRAs) for London Borough of Bromley (LBB) were reviewed during 2017, using all relevant current flood risk data and information.

Past flood risk

The 2017 Strategic Flood Risk Assessment (SFRA) details recent flood events in 2012 and 2013/14. Winter 2013/14 saw flooding in the Cray Valley which was due to a combination of groundwater, fluvial (Ordinary Watercourse) and pluvial sources. During this period there were reports of flooding in areas that had previously flooded during 2008, only on this occasion the floodwater had encroached into properties. Additionally, the 2011 Surface Water Management Plan (SWMP) reported several surface water flood incidents.

Future flood risk

New surface water flood mapping was published by the Environment Agency in 2013. This mapping provides the most comprehensive understanding of surface water flood risk across the borough and will be used as the 'locally agreed surface water information' for the borough.

Guidance on climate change allowances was issued by the Environment Agency in 2016, with the upper-end allowance for peak rainfall intensity in small catchments increasing from 30% to 40%. With the inclusion of an allowance for climate change, an area greater than that shown in Environment Agency surface water flood mapping is likely to be considered at risk from surface water flooding.

The Environment Agency has suggested using the increase in numbers of people at risk between 1% and 0.1% AEP surface water flooding events as a proxy[1] for the increase in people at risk in 1% surface events due to climate change.

This shows that the lower lying areas of the borough along the River Ravensbourne and River Cray catchments could expect the greatest increase in people at risk due to climate change. The greatest predicted increase in risk is in the north west of the borough around Penge and Beckenham. The LBB SFRA completed in 2017 includes the delineation of Surface Water Flood Risk Hotspots (replacing the existing Critical Drainage Areas defined by the 2011 SWMP) based upon the risk of surface water flooding (RoSWF) mapping and the topographical catchments draining to the areas at greatest risk.

Flood risk areas (FRAs)

The following FRA has been identified for the purposes of the Flood Risk Regulations (2009) 2nd planning cycle:

- Greater London (extends into parts of LLB)

Some additional areas outside of the FRA have experienced groundwater flooding and are shown as vulnerable to groundwater flooding by the British Geological Survey Groundwater Vulnerability mapping, which is included in Appendix A of the LBB SFRA. The majority of

[1] Information provided by the Environment Agency to support LLFAs in reviewing the PFRA

these areas are focussed in the south of the borough and there are no reported incidents of flooding in these areas affecting properties. As the susceptibility of land to groundwater flooding is highlighted in the 2017 SFRA and no incidents of property flooding have occurred, it is not deemed necessary to extend the FRA. This will be further discussed with the Environment Agency on submission of this PFRA update.

Other changes
Bromley is an active participant in the South East London Flood Partnership, with the Environment Agency, Thames Water, and neighbouring boroughs Bexley, Lewisham and Greenwich. Over the reporting period the Partnership has collaborated on sub-regional flood strategy, and provided a forum for sharing of knowledge and data between members.

Bromley Borough Council has recently developed a system to collect and record data on waterbodies throughout the Borough. This will detail the level of risk associated with each feature.

London Borough of Bromley
December 2017