

21 July 2015

Planning and Licensing Committee

Surface Water Management Plan for Brentwood Borough

Report of: Gordon Glenday, Head of Planning

Wards Affected: All Wards

This report is: Public

1. Executive Summary

- 1.1 Essex County Council, in its role as Lead Flood Risk Authority, has produced a Surface Water Management Plan (SWMP) for Brentwood Borough. The plan has been undertaken in consultation with stakeholders, including Brentwood Borough Council.

The SWMP is an intermediate assessment to inform spatial and emergency planning along with determining possible areas that may benefit from flood mitigation measures. It will also determine if/where detailed assessments should be undertaken and enable warning and informing initiatives.

2. Recommendation

- 2.1 That the Surface Water Management Plan for Brentwood Borough, as attached at Appendix A, be acknowledged as a material consideration for the purposes of determining planning applications where relevant to a particular application.**

3. Introduction and Background

- 3.1 The SWMP enables local communities and organisations to gain a better understanding of flood risk and outlines the preferred surface water management strategy in specified locations. In this context surface water flooding describes flooding from sewers, drains, groundwater, run-off from land, small water courses and ditches that occur as a result of heavy rain.
- 3.2 The SWMP enhances the existing evidence base contained in the Council's Level 1 Strategic Flood Risk Assessment (2011), providing a more detailed assessment of the risk from surface water flooding.

4. Issue, Options and Analysis of Options

4.1 In accordance with guidance produced by the Department for Environment, Food and Rural Affairs' (DEFRA) (2010), Brentwood Borough has been prioritised as an area considered to be at significant risk of surface water flooding and an area where partnership working is considered essential to both understand and address surface water flooding concerns.

4.2 Following guidance from DEFRA, the SWMP was conducted as a four stage process:

- *Phase 1 - Preparation*
- *Phase 2 - Risk Assessment*
- *Phase 3 - Options*
- *Phase 4 - Implementation*

Phase 1- Preparation

4.3 Phase 1 work involved the collection and review of surface water information from key stakeholders responsible for flood risk management.

4.4 The key partners within the SWMP were:

- Essex County Council;
- Brentwood Borough Council;
- Essex Highways;
- Anglian Water; and
- The Environment Agency

Phase 2 – Risk Assessment

4.5 As part of the risk assessment, direct rainfall modelling has been undertaken across the whole of Brentwood Borough to determine the overall flood risk and to identify flooding hotspots which may require further analysis. Where surface water flooding hotspots were identified, further modelling has been carried out to understand the flooding mechanisms and risks in more detail.

4.6 Using this information and other sources of flood data, such as historic records from the Environment Agency and Anglian Water, a number of flooding hotspots have been determined. These hotspots were based around three main areas; West Horndon, Ingatestone and Brentwood Town Centre.

- 4.7 Following identification of flooding hotspots, detailed models were created. The models were run with 30, 100 and 200-year rainfall events of various rainfall durations. In addition, the effects of climate change were investigated using the 100-year event. A number of key areas have been defined which are highlighted as having significant flood risk and which might benefit from mitigation options.

Phase 3 – Options

- 4.8 Based on the key flooding areas a number of options / measures have been identified which could be implemented to reduce flood risk. Some of these options / measures were specific to a site, such as improving capacity of problem culverts, with some to be considered on a Borough-scale, for example Sustainable Drainage Systems (SuDS), focusing on both new developments and retrofitting SuDS into existing areas where appropriate.
- 4.9 For each of the key flooding areas identified within the study possible mitigation measures have been detailed together with indicative costing.

Phase 4 – Implementation

- 4.10 The document establishes a long term action plan to manage surface water and will influence future capital investment, maintenance, land-use planning, emergency planning and future developments.
- 4.11 The purpose of the action plan is to:
- Outline the actions required to implement the preferred options / measures identified in Phase 3;
 - Identify the partners or stakeholders responsible for implementing the action;
 - Provide an indication of the priority of the actions and a timescale for delivery; and
 - Outline actions required to meet the requirements of Essex County Council and other Risk Management Authorities, as delegated by the County Council under the Flood and Water Management Act 2010.
- 4.12 The SWMP is an evolving document and as such will need to be reviewed regularly, particularly following the occurrence of a surface water flooding event. A number of recommendations have been highlighted that include refining the modelling approach with the inclusion of more data or where data is currently missing. In particular some areas in the vicinity of watercourses have been highlighted as warranting further hydraulic

modelling. This would help to further refine the recommended mitigations measures for an area.

5. Reasons for Recommendation

- 5.1 Reducing flood risk requires a pro-active stance on planning policy across the Borough. The formal acknowledgement of the SWMP for Brentwood Borough as a material consideration for the purposes of determining planning applications will give the plan greater weight in the planning process.
- 5.2 Acknowledgement of the SWMP will help to ensure the Borough meets its Local Plan policy objectives and assist development management in negotiating good quality sustainable drainage schemes as part of new major developments.

6. Consultation

- 6.1 This SWMP study has been undertaken in consultation with key local partners who are responsible for and involved with surface water management and drainage in the Brentwood Borough. This included Brentwood Borough Council, Essex County Council, Essex Highways, the Environment Agency and Anglian Water. The Partners have worked together to understand the causes and effects of surface water flooding and identify the most cost effective way of managing surface water flood risk for the long term.
- 6.2 A briefing session was held with Brentwood Borough Council Members on the 2 April 2015.

7. References to Corporate Plan

- 7.1 The SWMP will support corporate objectives by providing technical evidence which is essential in maximising opportunities to mitigate flood risk, enhancing and protecting our environment, whilst informing the Brentwood Local Development Plan. The Local Development Plan is a key priority in the Council's Corporate Plan as part of 'A Prosperous Borough'.

8. Implications

Financial Implications

Chris Leslie, Finance Director

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8.1 None directly arising from this report.

Legal Implications

Chris Potter, Monitoring Officer

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8.2 None directly arising from this report.

Other Implications (where significant) – i.e. Health and Safety, Asset Management, Equality and Diversity, Risk Management, Section 17 – Crime & Disorder, Sustainability, ICT.

8.3 Information contained within the SWMP and future mitigation of flood risk as a result of recommendations may have implications for Emergency Planning in the Borough. The Planning Policy Team will work with the Environmental Health Department with regard to these potential implications.

9. Background Papers

9.1 Brentwood Borough Council Local Plan 2015-2030: Preferred Options, July 2013 - <http://www.brentwood.gov.uk/pdf/24072013090145u.pdf>

9.2 Brentwood Strategic Flood Risk Assessment (SFRA) (Entec), January 2011 - <http://www.brentwood.gov.uk/pdf/21032011162645u.pdf>

10. Appendices to this report

Appendix A: Surface Water Management Plan for Brentwood (JBA Consulting), January 2015 - <http://www.brentwood.gov.uk/pdf/29052015103139u.pdf>

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