

13 January 2016		ITEM: 16 (Decision 01104344)
Cabinet		
Thurrock Local Flood Risk Management Strategy		
Wards and communities affected: All	Key Decision: Key	
Report of: Councillor Gerard Rice, Portfolio Holder for Environment		
Accountable Head of Service: Ann Osola, Head of Transportation and Highways		
Accountable Director: David Bull, Director of Planning and Transportation		
This report is Public		

Executive Summary

Thurrock has suffered the consequences of flooding in recent years, and it has been estimated that there are more than 8,000 properties across the Borough at risk of flooding from surface water runoff. The key aim of the Local Flood Risk Management Strategy is to reduce the likelihood and detrimental consequences of flooding.

The predicted consequences of flooding to property, businesses and infrastructure have been analysed and those areas identified to be at more significant risk have been delineated into Areas of Critical Drainage (AoCD). Fourteen AoCDs have been identified in Thurrock; they are spread across the Borough, but largely concentrate on urban centres.

An Action Plan has been developed alongside the Strategy with measures identified to tackle surface water flood risk across Thurrock and in specific AoCD. Actions include establishment of policy positions on restricting surface water runoff in new developments and increasing residents' ability to protect themselves in times of flood. The Council is also working on designs for flood storage areas on the edge of Stanford le Hope to reduce the risk of flooding to around 300 properties and has allocated £300k of capital funding over the next 3 years to implement the measures. A project is also underway in Tilbury to produce a computer model of the drainage system, providing evidence of flood risk to support future bids for funding for measures to improve drainage infrastructure, addressing the effects of future climate change.

1. Recommendation(s)

- 1.1 To approve the Thurrock Local Flood Risk Management Strategy for the period 2016-2021.**
- 1.2 To endorse the prioritised measures and interventions for implementation outlined in the Strategy Action Plan (Appendix 1 A).**

2. Introduction and Background

- 2.1 Based on surface water mapping provided by the Environment Agency, it is estimated that more than 8,000 properties in Thurrock are anticipated to be at risk of surface water flooding during an extreme rainfall event. To meet the Council's statutory obligation as Lead Local Flood Authority as well as to improve our understanding and management of this risk, the Council has prepared this Local Flood Risk Management Strategy.
- 2.2 Flooding is likely to become a more frequent event due to climate change, and the scale of flood events may also increase in the future. The cause of the increase in flood events would be wetter weather throughout the year contributing to surface water flooding through the overloading of the existing drainage systems, as well as river flooding through increased catchment runoff.
- 2.3 The Flood & Water Management Act 2010 has assigned new responsibilities to local authorities, so that the council now works in partnership with the Environment Agency (EA), water companies and others to manage various aspects of flood risk. The Strategy has been developed to integrate with the existing strategic and operational roles of the Council and its Partners, as defined in published strategies and plans.
- 2.4 The Strategy also aims to clarify the roles of the key Partners, and improve cooperative working between them through the sharing and communication of information. Flood management solutions can therefore be developed to provide multiple benefits to improve the natural and social environment, in keeping with existing strategies.

3. Issues, Options and Analysis of Options

- 3.1 A range of options have been identified to improve management of surface water flood risk across Thurrock. The options have been developed from a review of previous studies, Multi-Criteria Analysis (MCA) of individual measures, site inspection, detailed modelling and consultation with project partners and stakeholder organisations.
- 3.2 19 options (see Action Plan in Appendix 1 A) have been identified for generic implementation across Thurrock, most likely through the introduction or amendment of Council policy, such as introduction of a risk based

maintenance regime, awareness raising and changes to planning policies prioritising sustainable solutions.

- 3.3 The location specific options (outlined in Appendix 1 A) for potential implementation within Thurrock are unlikely to bring about wholesale sustainable management of surface water on their own. Instead, the overall philosophy is for incremental change which takes advantage of opportunities as they arise to implement options which cumulatively have the effect of better managing flood risk.

3.4 Stanford Le Hope Flood Surface Water Flood Alleviation Schemes

Surface water modelling identified the urban area of SLH as being at highest risk of surface water flooding, with over 3,500 properties found to be at risk. Investigations have been undertaken to determine options to reduce runoff into the town, resulting in the potential introduction of up to 4 flood storage areas on the edge of the town, providing increased protection to nearly 300 properties. Further flood modelling and design work is being undertaken to refine the options, with the aim of submitting applications for funding to the Environment Agency in 2016. The Council has reserved £300k of match funding to contribute to the schemes over the next 3 years.

3.5 Tilbury Integrated Urban Drainage Model

Tilbury is a very flat, low lying urban area that is heavily reliant upon existing drainage infrastructure. It has a history of surface water flooding incidents and is expected to be at greater risk with predicted rises in sea level, making discharge of rainwater from drainage systems more difficult in the future. A project is underway to produce a computer model to accurately identify the potential options for reducing this risk and provide evidence for funding bids to finance potential mitigation in the future.

4. Reasons for Recommendation

- 4.1 According to climate change predictions the frequency and intensity of storms is expected to increase, resulting in an increased risk of flooding across Thurrock. Even if all existing flood management assets are maintained and replaced to their original specification and all new development takes flood risk and climate change into account, there will be an increased risk of flooding. Implementation of the recommendations within the Strategy provides a sustainable approach to incrementally manage flood risk.

5. Consultation (including Overview and Scrutiny, if applicable)

- 5.1 The Strategy has been produced in collaboration with Partner Risk Management Authorities (RMAs) including Anglian Water, Environment Agency and Essex County Fire and Rescue Service. The scope of the Strategy was approved by representatives of these agencies at the Thurrock

Flood Partnership; individual Partner meetings and consultations on draft versions of the Strategy were undertaken as part of its development.

- 5.2 Public engagement into the Strategy started with the development of the Preliminary Flood Risk Assessment in 2011. The public, Partners and Members were invited to provide information on flood events as part of this exercise. This was followed up by development of the Council's Surface Water Management Plan in 2013/14, which involved extensive consultation to seek confirmation of flood extents and acceptance of mitigation options.
- 5.3 A further survey was conducted at the beginning of the year to determine residents' understanding of flood risk, roles and responsibilities as well as their views and expectations of the Council and its Partners in managing local flood risk. This information was invaluable in the development of the Strategy.
- 5.3 Councillors and wider stakeholders were first invited to input into the Strategy development in March 2015 in response to the Strategic Environmental Assessment (SEA) scoping report, which asked for comments on the Strategy's aims and objectives. The Strategy was subsequently developed and culminated in a public consultation between July and September 2015. The consultation was conducted through the Council's website, with paper copies made available in all public libraries. It was promoted through local media and all Members were written to in advance of the start of the consultation inviting their further involvement.

6. Impact on corporate policies, priorities, performance and community impact

- 6.1 Better management of flood risk in Thurrock plays a very important part in meeting the Council's priorities; from ensuring the community is safe by raising awareness of flood risk and personal responsibility of householders to protect their own property, to reducing flood risk where possible through interventions such as flood storage areas or improvements to drainage. Through the introduction of Sustainable Drainage Systems (SuDS) in new developments flood risk will be reduced whilst at the same time improving habitat, biodiversity and public amenity, all helping to protect Thurrock's clean and green environment.
- 6.2 The option of 'do nothing' or 'do minimum' to tackle flood risk in Thurrock could mean potentially more properties will flood and for those already at risk of flooding they will potentially flood to a greater depth and/or more frequently. These options in the short term may save money by not having to invest in flood mitigation measures. However, the potential costs in terms of flood damages and impact on communities, the environment and infrastructure far outweigh any investment in mitigation measures.

7. Implications

7.1 Financial

Implications verified by: **Michael Jones**
Corporate Finance Officer

7.2 Funding for flood defence and coastal protection projects comes from four sources:

- Central Government – Flood Defence Grant in Aid (FDGiA)
- Local Levy – a levy issued by the Environment Agency on the recommendation of the Regional Flood and Coastal Committee and voted for by the LLFA members of the committee
- Contributions from other sources, including beneficiaries, local communities and others
- Un-ring-fenced Local Support Services Grant

7.3 FDGiA is allocated to projects on a competitive basis through a system known as Partnership Funding. In practice, projects will not achieve funding until they have been developed sufficiently to have business case approval. They may be fully or partially funded by FDGiA depending on the outcomes delivered relative to costs. Funding from other sources is therefore essential, such as the local levy, to pump-prime schemes through to business case approval so they can be eligible for national FDGiA.

7.4 The Strategy highlights areas in Thurrock with susceptibility to local sources of flooding and identifies a number of options to reduce this risk. By identifying these options this could raise expectation on the Council to fund mitigation measures. The options identified through the Action Plan will be further developed for submission towards FDGiA allocation, however, these schemes are unlikely to be fully funded and therefore contributions from others will be investigated so that they can be implemented.

7.5 Legal

Implications verified by: **Vivien Williams**
Planning and Regeneration Solicitor

7.6 The statutory power to undertake proposals to manage flood and erosion risks are held by Thurrock Borough Council under the Land Drainage Act 1991 and the Flood and Water Management Act 2010, although these are permissive powers only. The production of the Local Flood Risk Management Strategy ensures that the Council has satisfied its requirement as a Lead Local Flood Authority under the Flood and Water Management Act 2010 to produce a local strategy setting out significant local flood risks affecting its area and how it intends to address them.

7.7 Diversity and Equality

Implications verified by: **Becky Price**
Community Development Officer

7.8 The Strategy will be targeting flood risk management measures according to probability and impact, as highlighted in the Action Plan. The plan has not highlighted any specific diversity and equality issues, but during the implementation of the individual measures in the action plan, such as communication of flood risk and investigation of flood alleviation projects, further consultation with the Council's communications and diversity teams will be undertaken. This will ensure that further issues are understood and addressed as necessary.

7.9 **Other implications** (where significant) – i.e. Staff, Health, Sustainability, Crime and Disorder)

Not applicable

8. **Background papers used in preparing the report** (including their location on the Council's website or identification whether any are exempt or protected by copyright):

- Thurrock Surface Water Management Plan Final Report:
www.thurrock.gov.uk/flood

9. Appendices to the report

- Appendix 1: Thurrock Local Flood Risk Management Strategy and Appendices A - H

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