

# Southend-on-Sea Borough Council

Agenda  
Item No.

**31**

Report of Corporate Director for Place  
To  
Cabinet

On  
**22<sup>nd</sup> September 2015**

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Engineer

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## Surface Water Management Plan

**Executive Councillor: Councillor Martin Terry**

***Part 1 (Public Agenda Item)***

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### **1. Purpose of Report**

- 1.1 To advise Members of the production of the draft Surface Water Management Plan, and the measures taken to consult on it. There is a separate report on this agenda dealing with the Local Flood Risk Management Strategy (LFRMS)). The strategy has been produced to meet its obligations under the Flood Water Management Act for which Southend is designated Lead Local Flood Authority.
- 1.2 To seek Members' approval to the Plan and agreement to publicising it on the Council's website.

### **2. Recommendations**

- 2.1 **That Members adopt the Plan as the Council's high level assessment of the sources of surface water flooding across the Borough, and its proposals to mitigate the effects of those sources of flooding.**
- 2.2 **That, authority be delegated to the Corporate director for Place, in consultation with the Executive Councillor for Public Protection, Waste and Transport, to make amendments to the document arising from Members' or consultees' comments.**
- 2.3 **That Members approve the publicising of the Plan on the Council's website**

### **3. Background**

- 3.1 In the aftermath of nationally widespread flooding in 2007, the Government provided funding to selected Local Authorities to prepare "Surface Water Management Plans" (SWMPs). A format for these Plans was provided, and it was required that they be made publicly available
- 3.2 The authorities were identified as areas at high risk of surface water flooding using high-level surface water flow modelling carried out by the Environment

Agency (EA). Southend-on-Sea Borough Council was one of the selected authorities following this modelling.

- 3.3 The current SWMP is a revision of the draft SWMP produced in 2011. It has been updated to take account of improved flood risk information and to provide an evidence base for the Southend Local Flood Risk Management Strategy.
- 3.4 SWMPs are intended to use this high-level modelling to identify, at a broad scale, the local geographic locations of likely flood risk, and to consider appropriate measures to reduce that risk.
- 3.5 It should be noted that the modelling for the SWMP process did not consider the interaction of surface water flows with either the underground drainage system or with tidal conditions and the ability to discharge water to sea. In this regard, therefore, the conclusions of the Plans should be viewed in this context the modelling has identified indicative risk areas, which largely reflect the general realities of the recent experience of flooding in the town. The SWMPs are not intended to identify individual properties at risk.

#### **4. The Plan**

- 4.1 The SWMP identified the chief areas of surface water flood risk throughout the town, which are grouped around the valleys of current or historic watercourses, some of which still flow and some which are now subsumed by development and are replaced by underground drainage systems. The risk areas are categorised as “Critical Drainage Areas” (CDA), and are centred on valleys, as follows:-

- CDA1 Eastwood Brook
- CDA2 Prittle Brook
- CDA3 Temple Sutton to Archer Avenue (historic watercourse)
- CDA4 Southchurch (historic tidal lagoon running from Bournes Green, through Thorpe Bay Golf course, the Southchurch Parks top the old loading pier site)
- CDA5 Shoeburyness – River Shoe
- CDA6 Chalkwell (historic valley)

- 4.2 The measures proposed for investigation to mitigate the flood risk in these areas consist of an appropriate mixture of:-

- Flood storage: identifying areas of open space, such as parks, where level areas could be re-graded to construct shallow storage basins, which would store flood water harmlessly when needed, but normally remain dry.
- Increasing conveyance: Identifying and removing constrictions or under-capacity in open channels and, where possible, removing or enlarging culverts. Upgrading pumping capacity.
- Overland flow routes: creating preferential flow routes along appropriate existing highways by re-profiling kerbs and carriageway surfaces.
- Land management: review of agricultural practices to identify methods of reducing run-off onto highways
- Sustainable drainage: rainwater harvesting/rain butt installation/ general Sustainable Drainage Systems (SuDS) measures – new or retro-fitted.

- Generic measures: improved drainage maintenance, planning policy adaptations, community resilience and community awareness.

4.3 Members should note that, as the surface water modelling on which the SWMP is based did not consider the effect of the existing drainage system on above-ground water conveyance, no measures are identified which would include the modification of drainage. However, work beyond the scope of the SWMP is presently underway which integrates surface and underground flow through the system, and will both provide more accurate assessments of flood areas and a means of identifying opportunities for effective structural change.

The SWMP was prepared using DEFRA guidance in four phases;

- preparation and scoping the requirements for a SWMP
- risk assessment
- options for the management of local flood risk (including preferred options)
- implementation and review (which includes an action plan and a implementation and review process).

4.4 The SWMP Action Plan lists a range of proposed structural, informative and educational measures to be investigated for implementation in each CDA.

4.5 The Executive Summary and the Action Plan are appended to this report, and the full version has been made available to Members for reference.

## 5 Consultation

5.1 It is a requirement that both the SWMP and the LFRMS be subject to public expert consultation, which has been undertaken. This commenced on 14th August and closed on 14<sup>th</sup> September 2015. This included the Environment Agency, Anglia Water, local residents' associations and via the Council's consultation portal. As the consultation period has only recently closed, an update on this will be provided at Cabinet, together with any recommendations for the text of the LFRMS.

## 6. Corporate Implications

6.1 *Contribution to Council's Vision & Corporate Priorities.*

### **Safe**

Flooding can create substantial hazards for the public in their homes and in the street, from flowing and potentially deep water, in addition to risks to health considered below. This leads to the inevitable extensive deployment of emergency services personnel and equipment and of resources from the local authorities. In extreme cases, life can be placed at risk.

Implementation of the Plan would reduce flood risk in the Critical Drainage Areas, and so contribute to the Corporate priority of Safety

### **Clean**

The immediate aftermath of surface water flooding is a residue of debris, gross contamination from overflowing

sewers and quantities of household effects, ruined by the water, which unavoidably are deposited outside private residences until they can be disposed of. These factors create smell, nuisance and mess in the affected areas.

Implementation of the plan will result in a reduction in the number of premises affected in this way.

### **Healthy**

Flooding creates substantial risks to the health of affected residents due to direct contact of contaminated water with the person and with the fabric of their properties, and potential for injury due to falling, or impact of floating debris. In addition it leads to high levels of stress with the heightened probability of effects on mental health.

The Plan outputs will reduce these impacts by reducing the extent of areas affected by flooding incidents.

### **Prosperous**

The reduction of flood risk will have large economic benefits to residents, business owners and landlords, including the Council, by:-

- Reducing uninsured losses
- Reducing insurance premiums
- Improving the viability of businesses in flood risk areas.

The SWMP will therefore have a beneficial impact on the cost of living for residents and the overhead costs of businesses.

### **Excellent**

Implementation of this Plan will align the Council with Central Government initiatives and best practice in the effective management of local flood risks. It will also serve as an evidence base for funding applications to EA and for discussions with developers.

## **6.2 Financial Implications**

6.2.1 Since 2010, Local Lead Flood Authorities (LLFAs) have been in receipt of Government funding, in the form of Area Based grant to fund the delivery of the new duties imposed by the FWMA. For Southend this has amounted to approximately £160k annually and has been sufficient to deliver the required duties. There is no present clarity on the future of this funding beyond the current Spending Review period.

6.2.2 Implementation of the Plan is at all times subject to available financial resources, but there will be an expectation that the Council will make all practicable efforts to carry out the planned actions.

6.2.3 Projects for capital structural schemes arising from the SWMP which provide relief from surface water flood risk qualify for support from central government on the same basis as coastal defence schemes. These generate funding for a

proportion of their costs according to the level of benefits. For example, a unit value of support is available for each property moved from one level of flood risk to a lower one. The balance of project costs above the level of government support would need to be match funded. The scheme development process for capital projects will identify the funding available from government, and consequently the sums which will need to be raised locally. This may require capital bids to be brought to Council as projects come forward.

### 6.3 *Legal Implications*

The SWMP is a non-statutory document. However, it has been funded through central government and there will be an expectation that the Council will adhere to the Action Plan to the extent possible.

### 6.4 *People Implications*

The implementation of the Action Plan, particularly in respect of structural projects will call for expert support. The Council has in place a contract with AECOM consultants for support in a wide range of functions connected with local flood risk. They were appointed in 2012 through a competitive tender process and could provide support for the SWMP. Professional fees are subject to the financial support on the same basis as scheme costs as referred to in 6.2.3 above.

It is expected that other elements of the Plan, such as public education and information will be funded through existing staffing budgets or through area based grant, if provided.

### 6.5 *Property Implications*

The reduction of the impact of any flooding would benefit many properties in the borough.

### 6.6 *Consultation*

Public consultation has been undertaken jointly on the SWMP and the LFRMS, which is reported on separately, and the Stakeholder Engagement Plan and the Consultation Report are attached as appendices.

### 6.7 *Equalities and Diversity Implications*

The risk to people from flooding is borne disproportionately by the elderly, and people with health or disability issues. Therefore the scheme will impact more beneficially on these vulnerable groups.

### 6.8 *Risk Assessment*

The key risks to implementation of the Plan are considered to be:-

- The resources required are not available at the appropriate time
- The rules on available Government support change detrimentally for the Plan

- Stakeholder opposition to the SWMP.

#### 6.9 *Community Safety Implications*

Community safety, from consideration of the safety of life and limb to the on-going health risks posed by flood water, is the leading issue of concern in connection with flooding.

Implementation of the Plan will be a major contributor to reducing this area of concern.

#### 6.10 *Environmental Impact*

The negative impacts of flooding on the human environment have been commented on above. The impact of the Plan will be to substantially reduce the level of risk to residents across the Borough.

### 7. **Background Papers**

**None**

### 8. **Appendices**

Appendix 1. Executive Summary of the SWMP

Appendix 2 Action Plan

Appendix 3 Stakeholder Engagement Plan

Appendix 4 Consultation Report - to follow