

Southend-on-Sea Borough Council

Agenda
Item No.

19

Report of Corporate Director for Place
To
Cabinet
On
11th November 2014

Report prepared by: Richard Atkins
Coastal Defences Engineer

Flood Incident Report – 24th August 2013

Executive Councillor: Councillor Martin Terry

1. Purpose of Report

To advise Members of the completion of the Flood Incident Report following the flood incident on 24th August 2013.

2. Recommendations

- 2.1 **That Members note the report and its recommendations and approve its publication.**
- 2.2 **That Members approve the continued development of formal partnership with the Environment Agency and Anglian Water Services Ltd in order to jointly investigate possible structural works and other measures to mitigate the effects of future flooding throughout the Borough.**

3. Background

- 3.1 Under the Floods and Water Management Act (2010), (the Act) the Council, as a unitary authority, was designated a Lead Local Flood Authority, with a number of duties to supervise the activity of Risk Management Authorities (RMAs) within its boundaries, including its own departments with responsibilities for management of aspects of flooding.
- 3.2 One of these duties is the investigation of flooding incidents when certain criteria are triggered, and to publish the reports on such incidents. On 24th August 2013 the first of a series of severe rainfall events to impact the Borough occurred. It created widespread flooding of houses, commercial premises, roads and other areas and easily qualified as the subject of the first incident requiring an investigation.
- 3.3 The Council had already appointed URS, a large international company, to provide specialist support to deliver its obligations under the Act, and they were instructed to carry out the investigation.

- 3.4 Their full report is provided as Appendix A. Concerns have been raised over the length of time taken to complete this report. However, it was necessary to clarify a number of issues relating to Clyst Court, adjacent to Eastwood Brook in Leigh, and how this property was affected in particular by the events of 24th August 2013. As a consequence the preparation of the report was delayed.
- 3.5 Further abnormal rainfall events, in October 2013, and July and September 2014 and a localised issue at Rebels Lane in the north east extent of the Borough have triggered further investigations. It was considered inappropriate to complete and publish the reports on these earlier events before the August 2013 report. Nonetheless these investigations have been underway for some time. The first drafts of the reports on all but the September 2014 event have been referred to the Environment Agency (EA) and Anglian Water Services (AWS) for consultative comment before completion and submission of the final documents for Council approval and subsequent publication.

4. Findings of the URS Report

- 4.1 The report found that in general all the RMAs discharged their duties on 24th August. The causes of the flooding were found to be combinations of extreme rainfall leading to high flows of surface water and surcharging of the sewer network which coincided with a high spring tide and high flows in Eastwood Brook due to the rainfall. The high levels of the receiving waters had the effect of inhibiting the outflow from the sewers so that the water had no way to escape, except through gullies and manhole covers, and so appeared at the surface and added to the large volumes of water already accumulating there.
- 4.2 The report highlights that issues arose with the pumping station in Eastern Esplanade, which functions to pump storm water to the sea against high tides. This was caused when high levels of surface water, unable to access the storm sewer due to surcharging, reached the level of the electric controls of the station and caused the station to fail, which aggravated the flooding in Marine Parade. It should be noted in this regard that the level of service installed by AWS is limited by the system of governance by Ofwat, their industry regulator, who control the capital spending of the water companies nationally. Ofwat permit the water companies to provide infrastructure designed to deal with rainfall only up to the limit of “extreme events”. Ofwat’s definition of an “extreme event” is one which exceeds a 1 in 20 year probability. As a consequence, rainfall in excess of this standard could lead to surcharging and flooding. The report notes that the intensity of this storm has been estimated at between 1 in 30 and 1 in 50 years – more intense than the Ofwat limit. In addition, much of the drainage infrastructure in this, one of the oldest parts of the town, is of great age and designed to unknown standards and is unlikely to provide the same service as a modern system.
- 4.3 The report finds that great benefit to residents would be derived from improved communication from the Council about their own options to protect their properties, and their responsibilities as “riparian owners” of watercourses which run through or abut their land. An officer working group has been examining the opportunities for accomplishing this and will, in due course, bring a report to Members with proposals for these and other matters. Extensive information is presently in course of preparation for uploading to the Council’s website, offering

advice to residents on how to respond to surface water flooding to protect themselves and their properties in the events of flood warning and actual flooding, and actions to take in the recovery phase. It also includes a list of contacts for the relevant authorities.

- 4.4 The report also recommends closer co-operation with EA and AWS in order to seek opportunities for partnership working, and the added value available by joint funding to increase the resilience of the drainage system above the standard set by Ofwat. It is intended that these joint initiatives will lead to projects which go beyond the basic responsibilities of the Council and AWS with regard to surface water flooding. In brief, the Council is responsible for the system of gullies and pipes which remove water from the highway; AWS are responsible for the system of public sewers to which this water is conveyed, and which subsequently discharges it safely to a watercourse. Steps have already been taken to fulfil this recommendation for joint working and the first such co-operative work will be a thorough survey and review of the drainage system at Marine Parade and Victoria Road. The EA also have proposals, for which they have bid for finance from DEFRA over the next four years, to investigate the flows and capacity of Eastwood Brook and carry out improvements as appropriate. This offers another opportunity for the three organisations to collaborate to bring about improvements for residents.

5. Action Plan

- 5.1 The report recommends a series of actions by the respective Risk Management Authorities, some singly and some in partnership. Those requiring action from the Council are listed below, and Members should note that a number of these (in bold) have been proactively implemented during the preparation of the report, or are underway.

Theme	Action	Others involved	Time-frame
Increase community awareness of flood risk	Update SBC website, including links to partner RMAs (underway)	EA, AWS	Short-term (<1 year)
	Regular updates in Council publications		
	Assist with formation of and liaise with Flood Action Groups		
Increase awareness of riparian ownership responsibilities	Communication with riparian owners through meetings and publications	EA	Short term (<1 year)
	Enforce actions to maintain privately maintained watercourses		
Planning Policy	Incorporate SuDS policies in Core Strategy and LDF		Medium term (1-5 years)
	Ensure compliance through Development Control Policy		Short term (<1 year)
Property level protection	Promote action by residents to protect their own properties. Provide information and support as possible.	Residents	Medium term (1-5 years)
Restructure roads and footway levels	Identify opportunities to use carriageways to store greater volumes of flood water. Consider means of restricting vehicular access to prevent "bow wave" effect of vehicles driving through.	Residents	Medium term (1-5 years)
Theme	Action	Others	Time-frame

		involved	
Source Control	Identify SuDS measures for retro-fitting, or in new development, eg green roofs, rain butts, permeable paving, swales etc. (Particularly in flood risk areas, eg Eastwood Brook valley)	Residents, developers	Medium term (1-5 years)
Update Multi-Action Flood Plan	Identify areas and properties of high vulnerability; consider specific response measures for these. Use of flood mapping and flood records to identify	EA, ECC	Short term (<1 year)
Watercourses and drainage ditches	Identify watercourses under SBC ownership (complete) Include in maintenance contracts (complete) Channel of Communication with public for reporting blockages Consider frequency of gully maintenance in flood risk areas	EA Highways	Short term (<1 year)
Eastwood Brook	Co-operate with EA project to investigate and improve capacity of brook, or improve flood defences. Investigate options to construct flood storage areas (eg Eastwood Park and in Rochford DC)	EA RDC	Medium term (1-5 years)
Coastal strip	In partnership with AWS:- Investigate drainage system in Marine Parade and Victoria Road areas (underway) Construct additional drainage infrastructure where appropriate (complete) Investigate existing pumping capacity and consider additional capacity (underway) Consider resilience of pumping stations to flooding (underway) Identify opportunities to increase sewer capacity, and separate combined systems	AWS	Short term (<1 year) Medium and long terms (1-5 years & >5 years)
	Investigate the potential to enhance the storage capacity of lakes in Southchurch Park and Southchurch Park East		EA

5.2 During the production period of this report, the Council's highways team has been actively investigating and, as far as possible, resolving problems with Council drainage infrastructure across the Borough. This work has included the following:-

- Provision of new gullies and connections at The Ridgeway, Highlands Boulevard, Campfield Road, Northumberland Crescent and , Chalkwell Esplanade
- Replacement of gullies at Southchurch Boulevard, Kenilworth Gardens/Arundel Gardens, Crowstone Avenue/Chalkwell Esplanade, Symons Avenue and Crescent Road
- Repairing damaged gully connections at Fairfax Drive, Smith Street and Ness Road

- Investigating flood incidents at Leigh Old Town, Sutton Road, Thorndon Park Drive and Vardon Drive, among many other locations.
- Extensions of the drainage installations at City Beach to effect improved interception of surface water.

5.3 In addition, the Council has had discussions with Anglian Water Services with a view to resolving issues with the drainage system in general and in particular City Beach area, where it has been decided, a joint investigation will seek to identify possible opportunities for working together, as referred to in 4.4 above. This investigation is now underway.

5.4 New provisions for maintenance of watercourses throughout the Borough have now been included in the term maintenance contracts which are out to tender at present.

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

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.

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.

Prosperous Flooding on a regular basis would impact on the tourist offer of the town, by discouraging visitors.

The likelihood of increasing insurance premiums for homes and businesses would also impact on financial well-being and profitability within the town, possibly leading to relocation of businesses.

Excellent

The Council has legal obligations under the Act to lead on flood risk management, through local partnership with other designated Risk Management Authorities. Such partnership also offers the opportunity to transcend the limits of legal obligation and provide enhanced service standards for residents.

6.2 *Financial Implications*

The funding implications which are clear at present are limited to staff time in liaising with EA and AWS, and other existing revenue demands. In the future, applications for funding bids for capital projects may come forward. Members should note that funding for this area of work qualifies for EA grant-in-aid support on the same basis as coastal defence works.

6.3 *Legal Implications*

The production of this report was a statutory duty under the Act, and its publication is similarly required.

6.4 *People Implications*

It is anticipated that the on-going partnership working can be provided with existing staff resources.

6.5 *Property Implications*

A number of Council owned properties were affected by the flooding incidents of August 2013, in addition to the many private residences and commercial premises. All steps taken to mitigate the impacts of future flooding will therefore have beneficial effects for the Council as well as many private residents having property in the flood risk areas.

6.6 *Consultation*

As the report recommends activities and possible expenditure by the EA and AWS as well as the Council, they have been consulted on its content.

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. It should be noted that of the three premises which were evacuated during this event, two were sheltered accommodation for vulnerable people.

The communication of flood risk and people's response to it needs to be propagated to all residents and will require that consideration be given to providing translations for people whose first language is not English.

6.8 *Risk Assessment*

The risk of flooding within Southend, based on experience before and since August 2013, appears to have risen from very low to substantially higher than is indicated by official government statistics. Four events causing extensive flooding have been experienced within a year, two of which are classed as “Extreme events”. This is of great concern, and it is suggested that part of the partnership working should be serious consideration, led by EA, of the validity into the future of the accepted rainfall probability statistics.

6.9 Community Safety Implications

Community safety, from consideration of the safety of life and limb to the ongoing health risks posed by flood water, is the leading issue of concern in connection with flooding. While this report discharges a duty on the Council in legal terms, sight should not be lost of the deeper human issues surrounding the traumatic effects of flooding on communities, and it is intended that the working relationships being forged with partner organisations will lead to increased safety of people and resilience of property to the risks posed.

6.10 Environmental Impact

The negative impacts of flooding on the human environment have been commented on above. In addition, inundation of wildlife habitats by polluted water could have major impacts on species using those habitats, and any measures to improve their security will be of benefit to biodiversity in general.

7. Background Papers

None

8. Appendices

Appendix A: Southend-on-Sea Flooding 24th August 2013 - Investigation Report
URS Ltd