

11 Action Plan

The Action Plan outlines a wide range of recommended measures that could be considered to more effectively manage surface water within Southend-on-Sea. The Action Plan has been developed to outline the responsibilities and implications of both structural and non-structural preferred options discussed in Phase 3 of the SWMP. The Action Plan proposes methods, timescales and responsibilities for each proposed action.

Within the Action Plan there are details of general measures that could be implemented across the Southend-on-Sea administrative area, as well as specific measures for each of the CDAs. These have been developed from the preferred options described in Section 10. The general actions are non-structural and encourage improved surface water management through planning policy and public education and awareness. The general actions also include the development of a flood response strategy and surface water flood warning system, which would be beneficial in ensuring successful response, with minimal harmful consequences, in the event of extreme surface water flooding.

The Action Plan is aligned with the draft Southend-on Sea LFRMS and FRMP, and will be used to support and inform future flood risk management studies in the Borough. The duration for each action is outlined as either 6 months, 1 year or 6 years. The 6 year duration is in line within the review period of the LFRMS.

The Action Plan is included in Table 11-1 below. Each of the actions outlined in the Action Plan, has been assigned a priority of high (H), medium (M) or low (L). The prioritisation is based on the current understanding of the local flood risk and the resources and funding available to address the action.

Table 11-1: Southend-on-Sea Action Plan

| Area | Action | | | | Implementation | | | | |
|--------------|--------|----------|--|---|----------------|----------|-----------------------------------|---|---|
| | No. | Priority | What? | How? | Location | Duration | Responsible Authority | Potential Barriers | Solution to Barriers |
| Borough Wide | 1 | H | Maintain records of flooding events. | Develop a system to accurately record the causes and consequences of surface water flooding events in line with the requirements of FWMA. | Borough wide | 6 Years | SBC | Lack of data collection. Missed opportunity to get public involved in helping report flood incidents. | Allocate a specific resource within the Council who is responsible for flood incident investigations. Increase education and community awareness to encourage reporting of events. Consider providing a toll free telephone number or use of social media to report flooding. |
| | 2 | H | Update Multi Agency Flood Plan. | Develop emergency response actions during flood events to account for SWMP modelling outputs and key surface water risk areas. | CDAs | 6 Months | SBC & other Category 1 responders | Limited flood warning available and therefore short time to implement emergency actions. | Ensure systems are in place for rapid deployment of staff and utilise the Met Office Extreme Rainfall Alert (ERA) service. Focus on CDAs and high risk areas. |
| | 3 | H | Adaptation of spatial planning policy. | For all new development to fully consider the risks of flooding from groundwater, surface water and ordinary watercourses. Requirement for SuDS or source control measures for all new developments with drainage implications. | Borough Wide | 6 Years | SBC | Limiting development options. | Use outputs from the SWMP to adapt spatial planning policy to give consideration to high risk areas and to identify upstream areas of the catchment which could be utilised to implement source control measures. |
| | 4 | H | Improve community awareness and resilience | Education events, newsletters and use of internet and social media. | CDAs | 6 Months | SBC | Reaching key target audiences through language, cultural and mobility barriers. | Use a range of methods to ensure coverage, such as the internet, media and newsletters. |
| | 5 | H | Review agricultural land management practices. | Provide guidance, in line with best management, on methods that increase attenuation and reduce flood risk. | Borough Wide | 6 Years | SBC and Farmers | Engagement of agricultural land owners and farmers. | Meet with farmers and land owners and begin to raise awareness and develop practices that reduce flood risk. |

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| | 6 | M | Install groundwater monitoring systems. | Understand long term trends and seasonal fluctuations in groundwater levels through installing monitoring equipment in key areas. | Borough Wide (focus on development sites) | 6 Years | SBC | Available resources and funding for groundwater level monitoring. | Allocate resources and funding to install groundwater monitoring, leading to a detailed assessment on groundwater flood risk and suitability for infiltration SuDS. |
| | 7 | H | Install a rain gauge network across the borough. | Identify suitable sites to achieve adequate coverage across the borough and commission installation. | Borough Wide | 1 year | SBC | Lack of stakeholder engagement and landownership of sites. | Early stakeholder involvement to assist in ongoing monitoring and management of individual gauging stations. |
| | 8 | M | Maintenance of ordinary watercourses and drainage system. | Regular checks and maintenance to Ordinary Watercourses. | CDAs | 6 Years | SBC | Lack of funding. | Focus on at risk areas and effective management of resource. Encourage local community involvement in maintenance. Identify budget from council revenue. |
| | 9 | M | Water management and conservation measures. | Utilise rainwater harvesting systems and water butts in key flood risk areas throughout the catchment. | CDAs | 6 Years | SBC and private property owners and developers | Lack of funding for schemes and understanding of their benefits. | Consider providing a subsidy and educating people of the benefits of such systems. |
| CDA1: Eastwood | 10 | M | Feasibility study of flood storage area: Eastwood Park. | Evaluate potential of the development of temporary flood storage within Eastwood Park through re-landscaping and drainage to the site. | Eastwood Park | 1 Year | SBC | Perceived conflict of interest from different parks users. | Ensure clear communication of function of storage system and additional wider community benefits. |
| | 11 | M | Coordinate feasibility study of flood storage area outside of Southend with Rochford DC and Castle Point BC. | Discuss with Rochford DC and Castle Point BC potential flood storage areas at the top of Eastwood Brook catchment in Rochford and Castle Point. | Rochford and Castle Point | 1 Year | SBC, Essex CC, Rochford DC and Castle Point DC | Cross boundary issues of flood control. | Develop a Local Flood Risk Management Partnership between neighbouring authorities. Discuss cross boundary issues. |
| | 12 | M | Modify services crossing across Eastwood Brook. | Investigate the potential of modifying service crossings through discussions with relevant utilities companies. | Eastwood Brook | 1 Year | SBC, Utility Companies | Lack of engagement. Unwillingness of Utility Companies to modify service crossings. | Ensure all bodies are contacted to discuss the proposal. |

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| CDA2: Prittle Brook | 13 | M | Feasibility study of flood storage area: Priory Park | Investigate the potential to development of flood storage within existing open space at Priory Park. | Priory Park | 2 Years | SBC and Developer(s) | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |
| | 14 | M | Feasibility study of flood storage area: Belfairs Park. | Investigate the potential to development of flood storage within existing open space at Belfairs Park. | Belfairs Park | 2 Years | SBC and land owners | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |
| | 15 | L | Investigate the potential to develop an urban blue corridor (preferential overland flow path). | Feasibility study of re-profiling road layout to provide channelling capacity and direct surface water flows. | Rochford Road | 2 Years | SBC and Highways | Implications of this are unclear. | Further investigation required to gain detailed understanding. |
| CDA3: Temple Sutton | 16 | L | Feasibility study of the installation of additional flow routes through A1159 embankment. | Investigate the potential installing secondary culvert through the road embankment or set up permanent pumping system. | A1159 embankment | 2 Years | SBC, land owners and Highways Authority | Concern over cost of tunnelling under the A1159. Damage to pumping system if unprotected. | Explore other options and mechanisms for safely achieving this. Conduct cost benefit analysis. Consider protecting pumping system. |
| | 17 | L | Feasibility study of flood storage areas: Cluny Square Park, Temple Sutton Primary School and Archers Avenue. | Examine potential of flood storage and potential compromise of land use. | Cluny Square Park, Temple Sutton Primary School, Archers Avenue | 2 Years | SBC and land owners | Potential for conflict of interest with land use and vulnerability of surrounding area to flooding. | Ensure clear communication of function of storage system and additional benefit. Examine impacts of each system using modelling and cost benefit analysis. |

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| CDA4: Southchurch | 18 | M | Provide protection to pumping station in Southchurch Park | Examine suitable methods of protecting the pumping station from flooding during an extreme flood event. | Southchurch Park | 6 Months | Anglian Water | Collaboration with Anglian Water to come up with suitable scheme. | Discuss potential scheme with Anglian Water and agree a way to take it forward. |
| | 19 | M | Increase pumping capacity of existing Anglian Water pumping system. | Increase capacity of two existing pumping stations. | Southchurch Park and Southchurch Park East. | 6 Months | SBC and Anglian Water | Reliance on pumping system and limited to pumping at low tides. | Reduce reliance on pumping system through increased storage areas further upstream. |
| | 20 | M | Increase storage capacity of ponds within Southchurch Park and Southchurch Park East. | Feasibility study to determine the potential of increasing capacity through dredging of silt from existing ponds alongside current works to restructure channel banks. | Southchurch Park | 6 Months | SBC and Anglian Water | Potential for disruption to ecology and implications to WFD objectives. | Construct with least impact and aim to improve on standards in WFD objectives. |
| | 21 | M | Feasibility study of flood storage area: Thorpe Hall Golf Course. | Investigate potential to re-contour sections of golf course to provide a temporary flood storage area incorporate flood storage into the design of the golf course. | Thorp Hall Golf Course | 1 Year | SBC and Golf Course Landowner | Concerns over flooding of golf course and loss of income to golf course. | Ensure clear communication of function of storage system and additional benefits. |
| | 22 | M | Investigate construction of bund for flood water retention. | Feasibility study to examine potential to construct a flood bund to retain surface water north of Bournes Green. | Bournes Green | 1 Year | SBC, Developers and Landowners | Cooperation of land owners. | Outline purpose and need for the development. Compensate for use of land if required. |
| | 23 | M | Increase surface water drainage along roads. | Feasibility study for increasing the capacity of the surface water drainage system. | Roads accessing Southchurch park (Lifstan Way, Colbert Avenue, Thorp Hall | 1 Year | SBC, Anglian Water | Lack of knowledge of current capacities and potential to develop. | Consult with Anglian Water. |

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| | | | | | Avenue) | | | | |
| CDA5: Shoeburyness | 24 | M | Feasibility study of flood storage areas: North Shoebury Park | Investigate potential to develop flood storage within low lying areas through detailed feasibility studies and modelling. | North Shoebury Park | 2 Years | SBC and Landowners | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |
| | 25 | M | Feasibility study of flood storage areas: Gunners Park school development. | Investigate the potential to develop flood storage as part of the design of the potential new school. | Gunners Park School | 2 Years | SBC and Developer | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |
| CDA6: Chalkwell | 26 | M | Feasibility study of flood storage in Chalkwell Park. | Investigate the potential to develop flood storage within Chalkwell Park. | Chalkwell Park | 2 Years | SBC and Landowners | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |
| | 27 | M | Feasibility study for retrofitting SuDS across schools. | Investigate the feasibility of retrofitting SuDS into school grounds within the CDA. | Chalkwell School | 2 Years | SBC and Landowners | Conflict of interest with land use. | Ensure clear communication of function of storage system and additional benefits. |