

Appendix 2 – Additional Flood Mitigation Measures

Flooding cause	Impact	Team responsible	Mitigation	Limitations
Capacity issues within the Southern Water Combined System during storm events	During extreme rainfall the Southern Water System is unable to cope with the speed which water enters the system and therefore flooding occurs regardless of what condition the gullies are in. When the Southern Water System reaches capacity there is a risk of sewage discharging onto the public Highway.	Southern Water	<p>Replacing the Victorian combined sewage system throughout Brighton and Hove is cost-prohibitive and would cause huge disruption throughout the City.</p> <p>To mitigate the risk Southern Water do not allow the Council to make any new connections to their network and do not allow the replacement of existing gullies with high-capacity gullies as both actions increase the risk of the network becoming overwhelmed and sewage discharging onto the public highway.</p> <p>Instead they support initiatives that help to slow the flow of water such as the implementation of Sustainable Drainage (SuDs) Schemes.</p> <p>They also operate a series of Storm Overflows that act as a relief valve in extreme weather events to prevent homes and businesses from being flooded. For more information please see their website - Link to Southern Water website - Storm Overflows</p>	

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<p>An increase in extreme rainfall events caused by climate change</p>	<p>Climate change is increasing the frequency and intensity of extreme rainfall events. A standard gully is designed to accommodate an average rainfall event of 5mm/hour. At 10mm/hour both the BHCC and Southern Water System will begin to struggle e.g. On 5/01/24 we experienced a 30mm/hour rainfall event and widespread flooding occurred. This level of extreme rainfall is becoming increasingly commonplace.</p> <p>Without a long-term plan to manage this change, both the Southern Water System and the Council's drainage network will be unable to function and the frequency of emergency flooding events will increase.</p>	<p>Flood Risk Management Team & Southern Water</p>	<p>As part of our ongoing participation in The Aquifer Partnership (TAP) the Council are an active member of the Pathfinder project which also includes the Environment Agency, Southern Water and the South Downs National Park - Link to TAP website. This project is to undertake an assessment of the Brighton and Hove catchment to assess the areas which require additional support in surface water management and to identify suitable locations for SuDS schemes.</p> <p>The Council has developed a updated Surface Water Management Plan, which has identified 10 locations around the city which will be taken forward as part of the Environment Agency funded Feasibility Study for Surface Water Management within the Brighton and Hove catchment. The plan is due to be presented to Committee this year. For further information, please contact the flood risk management team.</p>	

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Leaves on gullies	Leaves and detritus on top of gullies prevents water from accessing the drainage system and can cause localised flooding. This has a significant impact from September to November each year.	City Clean	<p>Leaves are removed from gully tops as part of the routine street cleansing service. Additional targeted gully top cleansing takes place ahead of predicted heavy rainfall but only when resources permit.</p> <p>When resources are limited, additional support is provided when possible by the Highways Operations Team as set out below.</p>	Mechanical street sweepers face limitations when it comes to effectively removing leaves from gullies. Due to the placement of the suction box in the middle of the sweeper, they can only sweep leaves from the top of the gully's cover rather than reaching inside. Additionally, these sweepers require a minimum of 5 meters of clear space to swing and reach the drain cover with the brush.

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Leaves on gullies		Additional support provided but Highway Operations when possible	<p>Highways Operations have a list of 61 priority sites in the City for leaf clearance from gullies based on historic flooding data. When budgets allow, these sites receive an additional visit from our Highway Contractor in October/November for additional clearance.</p> <p>Ahead of predicted heavy rainfall, Highway Inspectors carry out additional checks within their inspection areas to identify any potential issues that could lead to flooding such as leaves on gullies. These locations are collated and shared with City Clean to action, if resources permit at the time. If not then they are issued to our Highway Contractor. This additional service is however subject to resource and funding availability and sufficient warning from the Met Office.</p>	These additional actions are subject to funding and cannot always be guaranteed.
Increase in hard surfaces with insufficient drainage, from private land. e.g. driveways	The increase in driveways and non-permeable surfaces within gardens contributes to the Southern Water System exceeding capacity.	Highway Enforcement Team	All new applications for a vehicle crossover are required to ensure that no water will discharge onto the public highway. This maybe by the provision of permeable paving, soakaways or other private drainage systems.	
Construction and Commercial waste being discharged into the drainage system	Disposal of construction waste, particularly cement, blocks the system and makes water infiltration impossible and is very costly to repair. The same occurs when commercial properties, such as food outlets, wrongly dispose of cooking fat and other waste products into the system.	Highway Enforcement Team	Potential cases of misuse are reported to the Highway Enforcement Team to investigate and action is taken against organisations to cover the cost of clearing or repairing the damage.	Cases are difficult to prove unless there is CCTV or photo evidence available.

