



Reducing Flood Risk Through Sustainable Drainage Schemes

The floods of 2021 had a profound impact on Redbridge, with heavy rains overwhelming the borough's drainage systems. A detailed investigation, captured in the Council's Section 19 Flood Investigation Report, revealed that the majority of the flooding resulted from overcapacity in the sewer systems. Many drains were unable to cope with the volume of water, causing localised flooding that disrupted daily life.

In response, Redbridge Council identified 64 actions to reduce flood risk and address the underlying causes of the 2021 floods. These actions ranged from increasing water attenuation to improving sewer maintenance and clearing obstructions.

The Council has also stepped up its public engagement programme conducting joint roadshows getting out into community and talking to residents about the work being done and flood risk in the area. This exercise helped by getting valuable information from residents on any specific local issues the team could make plans for or incorporate into their designs.



Council flooding campaign

"Be Flood Aware, Plan, and Prepare"



Flooding roadshows in South Woodford





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In January 2024, Redbridge Council adopted its Local Flood Risk Management Strategy and Surface Water Management Plans. These documents provide a clear roadmap for reducing flood risk in the borough. A key focus has been the integration of SuDS to manage surface water sustainably, enhance infiltration, and reduce the pressure on sewer systems.



*Chalgrove Crescent
Rain garden*



*Blake Hall Road
Rain garden*



*Chalgrove Crescent
Rain garden*

Collaboration has been a cornerstone of Redbridge's flood risk management strategy. The Council has worked closely with Thames Water, the Environment Agency, and neighbouring boroughs, as well as with Greater London Authority (GLA) teams and environmental charities such as Thames21. These partnerships have not only ensured joint progress on actions but have also unlocked additional funding opportunities. To date, Redbridge has secured over half a million pounds in funding for flood mitigation projects, enabling the delivery of innovative SuDS across the borough.





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Schools are a key focus of the Council's SuDS program due to their large impermeable surfaces and importance to the community. Working with delivery partners Kensons and SANDS, along with Thames Water and the Department for Education, the Council has completed SuDS projects at The Wohl Ilford Jewish Primary School, King Solomon High School, and Caterham High School.

These projects involved installing planters that capture rainwater from property drainage and act as above-ground rain gardens. At Caterham High School, the scheme was even more extensive, incorporating a large underground attenuation tank, five rain gardens, four 1,000-litre water butts, and additional funding from Thames Water to support the works.



School SuDS Planter



Cllr Blackman left planting with Caterham High School students and Headteacher (right) Belinda Chapple



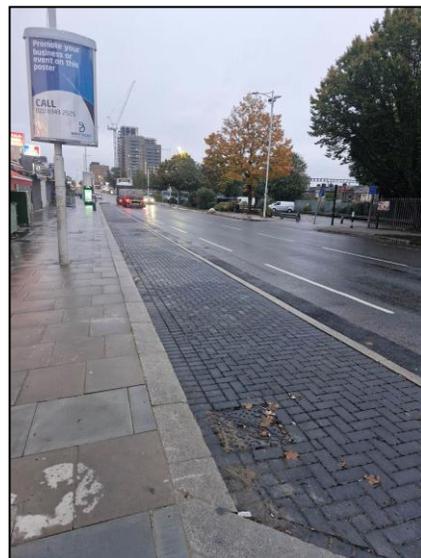
Caterham High School rain garden





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In 2024, Redbridge piloted an innovative SuDS technology called Hydrorock on Seven Kings High Road. This system uses underground blocks to store and gradually release water into the sewer system. Unlike traditional solutions, Hydrorock allows surface areas such as roads and parking spaces to remain fully functional. To enhance the system's effectiveness, the Council also installed permeable paving, enabling surface water to filter directly into the blocks. Below are the photos of the Hydrorock works in progress and post completion.





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The Council has continued to expand its SuDS program, with recent projects completed on Ley Street and Seven Kings High Road. Future schemes are already planned, including works to narrow excessively wide junctions at locations such as Nelson Road and Nightingale Lane which is currently in progress, Dawlish Drive, and Mortlake Road. Additional plans include a pilot project for a Clayhall Gravity Relief Chamber and the continuation of bund works at Westwood Rec.



Ley Street rain garden construction



Clayhall area rain garden



Nelson Road junction improvement and rain garden works



