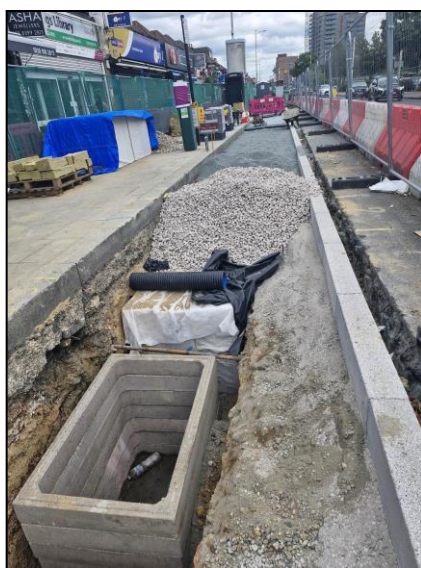




Seven Kings High Road: Reducing Flood Risk Using Hydrorock

The Hydrorock system is an innovative solution to reduce the risk of surface water flooding. The highly permeable stone wool, blocks made from natural Basalt rock, act like natural aquifers beneath the road surface. Rapidly absorbing and holding water during heavy rain and then gradually releasing it when the drainage system can handle the flow. This prevents immediate surges of water into the drainage system, reducing road flooding.

At Seven Kings High Road, the Hydrorock system spans a catchment area of 1,223 square meters, with an attenuation capacity of 52.6 cubic meters. This equates to storing over 52,600 liters of water, or more than 701 five-minute showers, which would otherwise flood the road or enter the stressed Thames Water sewer system.



One major advantage of the Hydrorock system is its ability to mitigate flooding without affecting road use. Installed beneath the surface, the system does not reduce parking capacity, a critical factor in busy urban and commercial areas like Seven Kings High Road. Additionally, by holding water and releasing it gradually, the system eases the burden on local drainage infrastructure and reduces the risk of sewer overflows.





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To further improve flood prevention, permeable surface materials were installed over the Hydrorock blocks. These materials allow additional rainwater to be absorbed into the ground, reducing surface runoff and enhancing the overall effectiveness of the flood management system.



Since its installation in mid-2024, Seven Kings High Road has not experienced the flooding that previously affected the area. The Hydrorock system has performed as expected, preventing flooding even during heavy rains. As a result, Seven Kings High Road businesses have not experienced the disruptions that previously affected the area, which often made it inaccessible during storms. . The system also helps reduce pressure on the Thames Water sewer system, benefiting nearby areas as well.





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Despite the excavation challenges from numerous in-ground utilities, the installation was completed without major delays, due to the ability of Hydrorock to readily fit around existing infrastructure.

While the Hydrorock system has a lower carbon footprint than conventional drainage solution, such as plastic crates, Redbridge Council's commitment to sustainability means carbon offset measures will be taken to balance the environmental considerations.

