

Permavoid provides long term passive irrigation solution to leafy London suburbs

Polypipe's Permavoid system was retrofitted below the road surface at Arundel Gardens to provide flood alleviation, but with the added benefit of being able to irrigate tree pits along the road to enhance the biodiversity of the streetscape.



Biodiversity



Surface water management

CASE STUDY

Project

Counters Creek Flood Alleviation Scheme, London

Client

Thames Water

Application

Source control, attenuation of stormwater and irrigation for bioretention tree pits

Product

Permavoid and Permafilter Geotextile

 **Polypipe**

Arundel Gardens

Polypipe was selected to provide an at source SuDS system utilising Permavoid. The system has been installed for sub-base replacement to attenuate surface water, with the benefit of being able to create a passive watering system to feed the established magnolia trees that line the street, all year round.

During rainfall events the Permavoid tanks will provide storage for large volumes of surface water and restrict the flow in to the existing combined sewer, providing further defence against flooding and encouraging biodiversity in what is already an area of London rich with conservation areas.



The Permavoid system has been strategically placed to control the quality and volume of surface water run-off within the environment on the street, and to allow for the intelligent reuse of the resource.

Permavoid Capillary Cones were used to move water from the Permavoid tanks through to the ecosystem living above the system, to help maintain soil moisture **between 15% and 45%** by volume.

This passive irrigation ensures that there is the right amount of moisture to promote growth and prevent wilting of the local greenery. The use of a hydrophobic geotextile, placed above the irrigation system allows the gathered water to be distributed across a large surface area.

Through intelligent design, Polypipe has provided a long term solution that enhances the biodiversity of a whole area, rather than localised pockets that depend on rainfall alone.