

# Mixed-use becomes multifunctional with innovative water management

Once a derelict and unusable site of old warehouse buildings and hard surfaces, the multi-million pound Greenwich Wharf, with its mix of affordable homes, exclusive apartments, restaurants, a hotel, leisure centre and commercial/retail premises for local businesses, is now a vibrant, inviting and valuable piece of real estate.



Surface water management



Biodiversity



Placemaking

## CASE STUDY

### Project

Greenwich Wharf

### Client

Durkan

### Application

Podium level attenuation and planter irrigation

### Products

Permavoid 85, Permafoam 85  
Outlet Chambers, Irrigation units

 **Polypipe**

## Greenwich Wharf

Greenwich Wharf wasn't designed purely for financial gain. The site required careful design consideration to mitigate any flood risks. With a scheme of this size, especially riverside, rainwater management needed to be of paramount importance, and Polypipe's design partner EPG, worked with the developer and their design team, to devise a system that not only made space for water within clever podium decks, but also helped inject important Green Infrastructure – bringing a sense of community, wellbeing and calm to the new environment.

The system comprises 6900m<sup>2</sup> of Polypipe Permavoid 85 to ensure stormwater run-off is captured at source and stored for attenuation and re-use. With the addition of 400m<sup>2</sup> of Permafoam 85, the system is also capable of irrigating planters above.

And with the modular nature of our geocellular systems, Green Roofs were created and connected to lower level podium decks, making valuable use of the space available to store more water – whilst making places for a more pleasant environment where people can relax and enjoy whilst attracting wildlife and helping to clean and cool the surrounding air.



27,600 Permavoid units were used in total, and ideal for the shallow environment available to install the system. And because they are lighter in weight than traditional materials, and have high void ratio, they negated the need for heavy concrete basement tanks. But despite its light-in-weight properties, Permavoid is exceptionally strong – allowing amenity for car parking and maintenance vehicle traffic above, whilst clever water management continues below.

Using our **Permavoid Geocellular system**, the site is able to sustain its own Green Infrastructure whilst controlling the discharge of stored water at a controlled rate, providing Greenwich Wharf with a healthier more resilient future.