

# The sky is the limit for Polypipe's roof gardens

Polypipe Terrain has helped provide Seacoal House in the heart of London with a state of the art hard landscaped roof and stormwater management system, improving the efficiency of the building's drainage system.



Permavoid provides modern roof garden space in central London

The existing Seacoal House building owned by UK Power Networks had a sedum roof, however the surrounding taller structures meant that the original roof did not receive natural sunlight, and therefore all vegetation had died, leaving the roof looking unsightly. Polypipe Terrain worked with acclaimed landscape architects Gustafson Porter + Bowman to design, manufacture and install a hard landscaped roof for the building. It was crucial that the plans included a stormwater management solution and attenuation system, for which Polypipe's Permavoid was specified. The result was a permeable surface with aluminium detailing, with Permavoid tanked in a membrane to manage and control stormwater run-off. The roof garden design also provided workers with a space to take a break.

At only 85mm in depth, Permavoid was the ideal solution for a rooftop application. In addition, the Permavoid cells boast a 95% void

ratio and incorporate a unique jointing mechanism that forms an interlocking 'tensile raft'. The void ratio of the Permavoid cells allowed the architect to reduce the number of rainwater outlets used in the roof. All drainage requirements had to be accurately modelled prior to on-site installation, due to a section of the roof sitting above an electrical substation. The team at Polypipe was able to configure the Permavoid cells to meet the required specification. With the modular system manufactured from plastic, it was light in weight and therefore easy to handle and install.

Donncha O Shea, Partner at Gustafson Porter + Bowman, said: "By installing this new system retrospectively, we have been able to successfully develop a stormwater management system for an existing building. It shows how tall buildings within our city centres can adopt this technology."

"We have designed many precise Permavoid systems for inner city areas, whether they be at ground, podium or roof level. When Gustafson Porter + Bowman approached us, we knew we could come up with a system that would work for them."

**Nicholas Wright, National Project Manager for Water Management Solutions at Polypipe Terrain**

"The Permavoid solution delivered for Seacoal House shows how tall buildings in urban centres can adopt new technology to improve building efficiency and occupier experience."



## CASE STUDY

### Project

Seacoal House

### Client

Gustafson Porter + Bowman

### Application

Stormwater management and attenuation

### Products

Permavoid