

Polypipe's Permavoid and Polystorm selected for new bet365 HQ

Polypipe was selected to provide a **shallow attenuation solution** incorporating treatment as part of works to create a new head office for one of the world's leading online gambling companies.



Utilising more than 750m of Permavoid Permachannel and Permavoid Biomat



Overseen by Main Contractor John Sisk Ltd, the development of the new UK Head Office of bet365 in Stoke-on-Trent saw Polypipe's products installed by groundworker E P McEvelly Contractors Ltd and specialist SuDS installer SEL Environmental Ltd.

Following a site survey, it was found that **due to the level of contaminated land, deep excavations for a stormwater solution would be unfeasible** and very costly at the brownfield site.

In looking for an alternative solution, the project's consultant WSP called upon Polypipe to aid in the design of a shallow drainage solution that also provided two levels of surface water treatment and surface water attenuation.

The design incorporated elements of both the Polystorm and Permavoid geocellular systems offered by Polypipe.

MORE THAN 750M

of Permavoid Permachannel and Permavoid Biomat were utilised at the site in order to feed surface water run-off into Polystorm-R attenuation tanks to provide treatment and storage of the surface water.

Permachannel acts to capture silt and oils, whilst the Permavoid Biomat's tri-laminate low density composite mat traps hydrocarbons. Consisting of 21 different runs of Permachannel and Permavoid Biomat, which linked to 21 Polystorm-R geocellular attenuation tanks, the design is capable of storing more than 400m³ of stormwater beneath the development's car park, at a depth of just 1m.

CASE STUDY

Project

bet365 new HQ

Client

bet365

Application

Shallow water treatment and attenuation

Products

Permavoid Permachannel
Permavoid Biomat
Polystorm-R

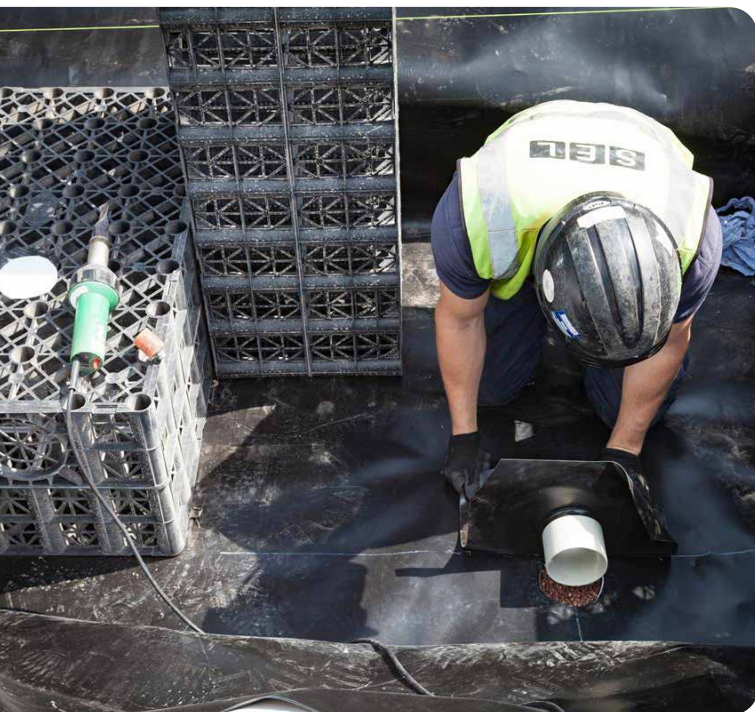
THE SHALLOWER SYSTEM

limited the need for strenuous excavation on-site, saving vital time and cost while reducing potential health and safety risks.

Polystorm-R's robust compressive strength of up to 61 tonnes/m² and its ability to maximise water capture and attenuation, thanks to its 95% void fill ratio, makes it ideal for use beneath traffic load areas such as the bet365 HQ.

The run-off stormwater is initially collected within the Permachannel, which was installed at pavement level to provide initial source control, as well as the first stage of water treatment by capturing silt and oil. Once entering the Permavoid Biomats, the water then passes through the system into Permavoid Biomats containing a tri-laminate low density composite biomat.

The biomat traps and retains any residual oil present in surface water and also provides ideal conditions for aerobic degradation. In doing so, **Permavoid Biomats can encourage the reproduction of microbes to breakdown oil deposits** and further treat stormwater before it reaches the Polystorm-R attenuation tank and eventually discharged into the local water course, replacing the need for petrol interceptors.



95%
void fill ratio



Polypipe's experience in providing designs and systems suitable for contaminated sites meant that the team were able to provide suitable products and assist in the design, specification and drainage planning strategy to suit the required levels of treatment.

Not only did Polypipe's system provide adequate localised attenuation at shallower depths and source control with the use of Polystorm-R and the Permavoid system, it also provided two levels of treatment for surface water run-off from the car park area.

“ Polypipe's Polystorm-R and Permavoid systems also provided two levels of treatment for surface water run-off from the car park area ”