

Polypipe's Permavoid keeps new Network Rail site on track

Permavoid from Polypipe was chosen by specialist SUDS sub-contractor SEL to capture and treat surface water at a new Network Rail facility on contaminated land.



When rail consortium Trackwork Moll won a ten year contract to supply concrete sleepers to Network Rail they quickly identified the need for a site able to produce the 400,000 concrete sleepers needed for the rail network each year in a location with good transport links. As such, a site in Doncaster was chosen.

The selected site, at Ten Pound Walk in Doncaster, is located at former rail sidings containing contaminated soils. As such, a Polypipe Permavoid shallow depth solution was promoted by SEL to replace the compliant 'big tank' solution to provide water treatment, management and storage below the site's car park, access road and service yard while capturing and treating oils contained within the surface water run-off.

Having contaminated soils on site meant our team had to devise a shallow depth solution for installation beneath heavily trafficked areas.

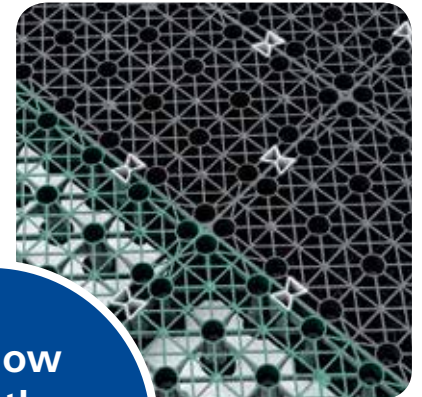
A Polypipe Permavoid sub-base replacement system was selected to be installed within 500mm of finished ground level ensuring excavation within the contaminated soils was

significantly minimised and potentially expensive pumping equipment was not needed.

Permavoid cells lock together to form an interlocking raft of exceptional high compressive and tensile strength, allowing it to be used to support structural loads in heavily trafficked areas. Given the volume of concrete being produced and distributed at the Trackwork Moll site, and the level of traffic necessary in the supply chain of such a product, the Permavoid system made perfect sense for this project.

As well as selecting Polypipe Permavoid to store the surface water runoff, the system also provides an effective method of source control. Our engineers recommended the use of Permavoid cells which contain an oil treating geosynthetic layer that floats on water and is designed to intercept and treat potential residual oils that may be present within emulsified surface water.

A further pollution management measure was specified in the form of Permachannel. Designed to work in harmony with Permavoid systems, Permachannel acts as a separation device at source to prevent silt and oils from progressing beyond the Permachannel into the Permavoid storage system.



Shallow depth attenuation solution



CASE STUDY

Project

Network Rail Strategic Concrete Sleeper Facility, Doncaster

Client

Trackwork Moll (Network Rail)

Application

Water Capture and Treatment

Products

Permavoid System