Case Study

M56, Lymm

UK's first installation of SDS Aqua-Xchange™



SDS Systems
SDS Aqua-Xchange™ Granular Treatment Media.

SDS Customer
BDB Special Projects Ltd on behalf of Balfour Beatty Mott MacDonald Joint Venture (BBMMJV).

Client
Highways England.

Project
Continuous roadside refurbishment programme for the Highways England Area 10 maintenance contract.

Purpose
To renew carriageway drainage facilities of a 1.3km stretch of the M56 motorway in Lymm, Cheshire.

Brief to SDS
To prevent pollution of neighbouring streams and lake by surface water runoff from carriageway filter drains.

Timing
March 2019.

Project Background Information
Renewal works to the carriageway filter drains are scheduled throughout the year.

Project Objectives
To protect local waterbodies from toxic metals generated by high traffic volumes and carried by surface water runoff.

Project Requirements
To introduce within the existing structure of filter drains a low cost pollution prevention solution.

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Surface Water System Requirements

A study for the Mag Brook outfall was undertaken according to Highways England's Design Manual for Roads & Bridges, using the Highways England Water Risk Assessment Tool (HAWRAT), which confirmed a treatment scheme was required to bring the water within permitted levels of soluble zinc and copper.

SDS Product Features

SDS Aqua-Xchange™ filter media in 184 one cubic metre bags.

Ben Dobson, Director, BDB Special Projects, said: *"The whole project, including the addition of Aqua-Xchange™, was extremely straightforward, and not significantly different to a conventional filter drain refurbishment. We were able to complete the works during ten overnight closures, with minimal disruption to the travelling public. It was very refreshing to work closely with the SDS team and to experience their real commitment to seeing the environmental benefits of this product being realised."*



Issues Overcome

The land along the sides of the carriageway was typically very narrow and left no space available in which to install a manufactured stormwater filter to capture the pollutants. Using SDS Aqua-Xchange™ enabled the pollution to be treated simply by being added into the existing filter drains; it would have been extremely problematic to solve the pollution risk at Mag Brook otherwise.

Using SDS Aqua-Xchange™ also meant less excavation and less disruption, and, unlike alternative devices which need to be emptied or cleaned out, no maintenance will be needed during the 15 years' design life.

Proven in independent testing to achieve 99% removal of dissolved copper and zinc, SDS Aqua-Xchange™ was therefore more than adequate to tackle the levels of metals pollution identified in the risk assessment for Mag Brook.

