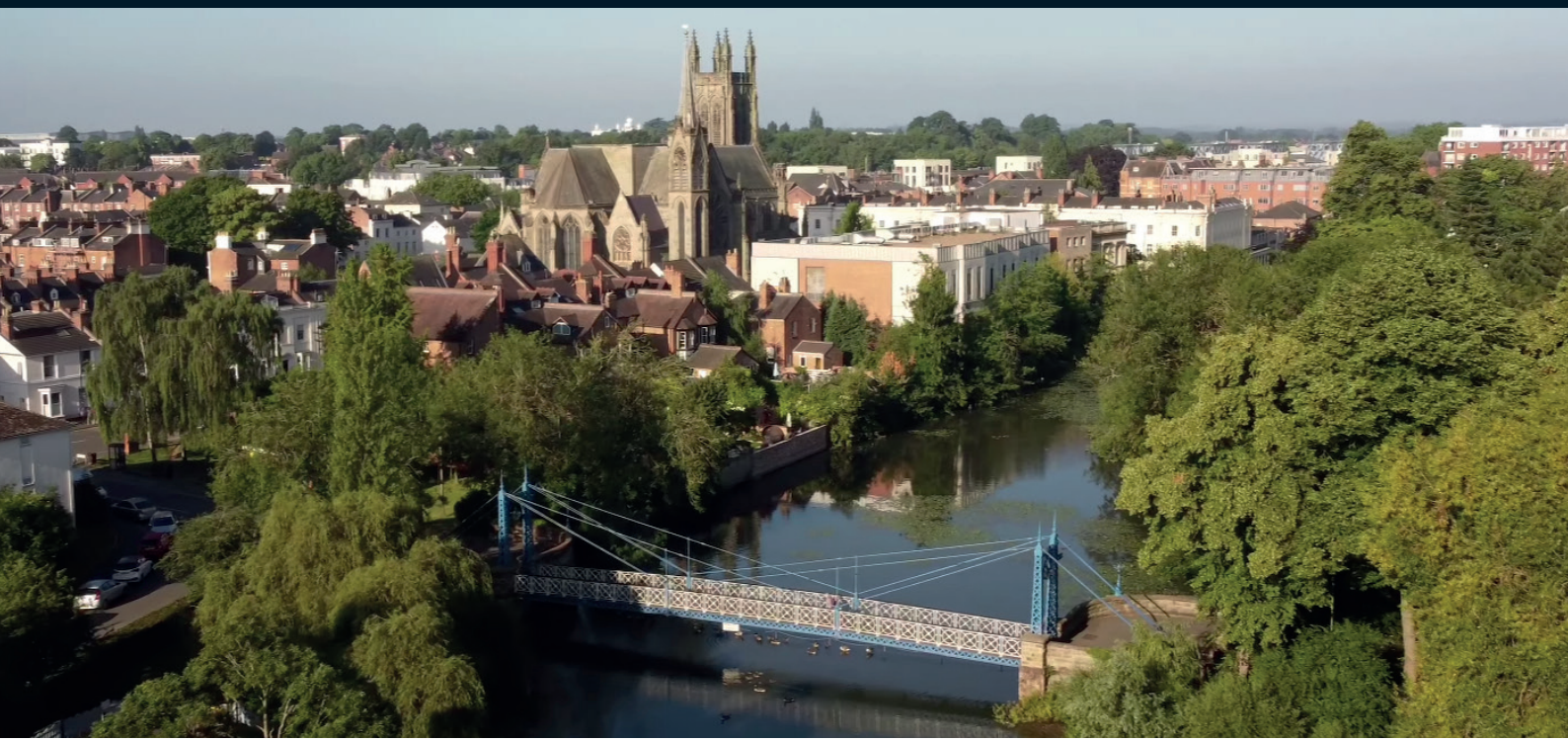
Case Study

River Leam, Leamington Spa

First adoption by Severn Trent of SDS GEOlight® system



SDS Systems
SDS GEOlight® Attenuation Tank.

Client
Forkers.

End Customer
Severn Trent Water.

Project
Green Recovery Programme.

Purpose
To enable Severn Trent to fulfil its "Get River Positive" campaign commitments.

Brief to SDS
To design, manufacture and install a surface water attenuation system for connection to both a new and pre-existing sewer network.

Timing
Installation completed during late Spring and early Summer 2024.

Project Background Information
Severn Trent's Green Recovery Programme has been established with the intention of improving river health. As part of this work, it is investing circa £78 million to create two stretches of river, in Leamington Spa on the River Leam and on the River Teme in Shropshire, that are suitable for bathing purposes.

Innovation is a key theme that runs through all projects in the Programme; Severn Trent has set out to identify and use cutting-edge technology and to develop novel, groundbreaking approaches to complex challenges that are facing the sector as a whole.

Project Objectives
To provide safe community bathing facilities and protect the quality of the river's supply source of drinking water.

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Project Requirements

To increase storm water storage capacity in the existing underground sewerage network in order to protect sewage treatment works from overload and thereby prevent CSO discharges into the River Leam. This will enable Severn Trent to meet its wastewater treatment obligations which are growing as a result of increased rainfall from climate change and additional housing to support a rising population.

SDS Product Features

A GEOlight® attenuation tank, measuring 40m x 34m and with a storage capacity of over 2 million litres, has been installed below a 1.2ha playing field which adjoins Milverton Primary School and the Leamington Spa Conservation Area. New surface water sewers are being laid in several roads in Leamington Spa which will discharge into the GEOlight® tank.

Issues Overcome

This project is particularly significant in that it represents the first ever installation of a GEOlight® geocellular tank for Severn Trent Water, who have traditionally deployed Weholite HDPE tanks for the purpose of surface water attenuation.

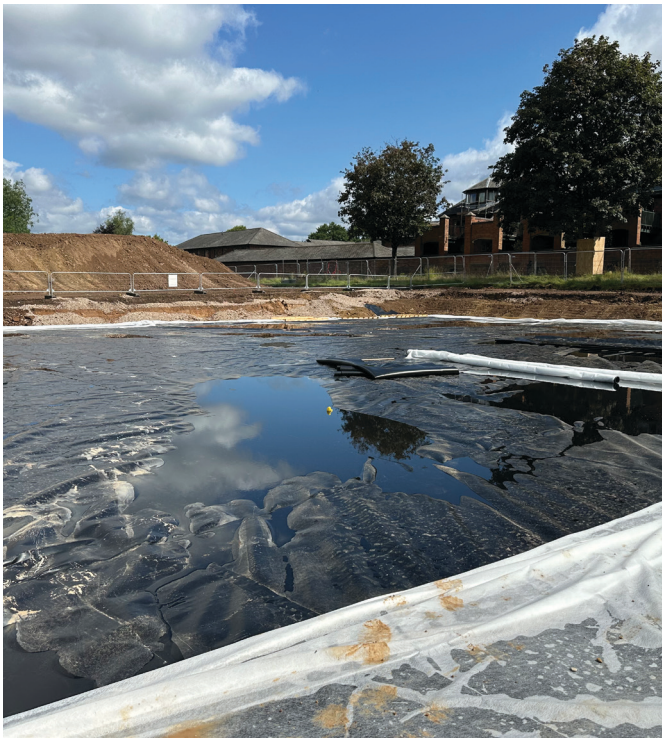
SDS was invited to provide information regarding the system that the company would recommend and comment on the suitability of its products' characteristics, construction methodology and loading capacities. The tank's location within a field meant that loading would be minimal, but with an all-weather pitch to be constructed on the remade ground, details were provided by SDS of the construction and bedding requirements and maximum loading achievable. The site has low biodiversity value and was therefore not a notable consideration in planning.

Modifications to the site's boundary walling were made to accommodate the multiple heavy machinery and lorry movements required to extract and remove soil and waste materials from site and deliver the GEOlight® tank in its modular block form over the scheduled installation period.

Results

Increasing storage capacity on the network and reducing the number of spills into the River Leam accords with Policy 8 of the Warwickshire Waste Core Strategy and Policy DS3 of Warwick District Council Local Plan. The scheme also fulfils the core sustainable development objectives of the NPPF by delivering economic, social and environmental benefits.

Paul Gent, Specification Manager, SDS, said: *"Our end client Severn Trent has previously been reluctant to select geocellular storage over unproven concerns of the tank's accessibility for maintenance purposes. However, we were able to demonstrate the efficacy of SDS GEOlight® which has already been adopted by many other Water Companies around the UK as a DCG compliant product. At a time when expenditure of this type is under significant pressure GEOlight® has delivered greater value over a concrete-based alternative."*



SDS WATER

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