Case Study

A320 North of Woking, Surrey

SDS stormwater infrastructure critical to completion of A320 improvement scheme

SDS Systems
SDS GEOlight® Attenuation Tanks.

SDS Customer
GRAHAM Group Ltd.

Client
Surrey County Council;
Homes England;
Runnymede Borough Council.

Project
A320 North of Woking Improvement HIF (Housing Infrastructure Fund) Scheme.

Purpose
To upgrade the A320 corridor between Ottershaw and Chertsey in order to improve traffic capacity and safety, enhance connectivity to local communities and essential services, and support planned housing growth.

Brief to SDS
To future-proof the upgraded A320 against flooding and extreme weather.

Timing
Preparation works commenced in 2022 with main construction from March 2025 until winter 2026.

Installation of the GEOlight® tank was completed in Autumn 2025.

Project Background Information
The A320 is a major transport artery through Runnymede, connecting communities between Chertsey and Woking and providing access to the M25, St Peter's Hospital and the proposed Longcross Garden Village.

To meet ambitious housing targets set out in the Runnymede 2030 Local Plan, including 7,500 new homes, Surrey County Council and Runnymede Borough Council launched a comprehensive road improvement scheme, supported by £41.8m of funding from Homes England's Housing Infrastructure Fund.

Delivered in phases by contractor GRAHAM, the works include new roundabouts, widened carriageways,

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enhanced pedestrian pathways, crossing points, cycle routes and extensive flood mitigation measures to futureproof the road network.

Project Objectives

To provide safe, high-capacity stormwater storage beneath critical junction upgrades along the A320, ensuring the transport corridor remains resilient to extreme rainfall events while supporting land use intensification and environmental protection.

Project Requirements

The upgrade of St Peter's Way, Ottershaw Roundabout, and Holloway Hill required a surface water attenuation system that could be integrated below newly widened roads and junctions, without disrupting traffic flows or surrounding land.

The system needed to align with sustainable drainage principles, accommodate significant runoff volumes, and offer ease of installation within a demanding construction schedule and constrained road network.

SDS Product Features

SDS designed, supplied, and installed two GEOlight® attenuation tanks of 630m³ and 320m³ capacities — providing a combined 950m³ of below-ground stormwater storage.

The lightweight, modular tanks were delivered in pre-assembled blocks, allowing rapid installation within tight construction windows and ensuring minimal disruption to surrounding traffic and residential areas.

Manufactured from recycled post-consumer PVC waste, the GEOlight® tanks also contributed to the project's sustainability goals, helping Surrey County Council meet its commitment to lower-carbon infrastructure and ensuring the long-term resilience of the A320 transport corridor and the communities it serves.

Issues Overcome

The works were carried out on one of Surrey's busiest roads, adjacent to critical public buildings including a major hospital and ambulance station. SDS coordinated closely with contractor GRAHAM and local authorities to ensure the safe, phased delivery of attenuation tank materials in line with precise traffic management and site logistics plans.

By optimising tank locations and leveraging GEOlight®'s flexible, modular structure, SDS was able to navigate buried utilities and site constraints while maintaining the required hydraulic performance.

Results

The SDS GEOlight® systems provide long-term surface water attenuation for the upgraded A320 corridor, helping to manage runoff volumes and maintain pre-development discharge rates.

By supporting the safe and effective delivery of key highway improvements, the tanks play a crucial role in unlocking land for housing, improving transport accessibility, and delivering Surrey's vision for connected, resilient and sustainable communities.

Ben White, Specification Manager, SDS, said: *"SDS delivered its GEOlight® solution to support flood mitigation on this high-profile scheme. The system was designed to meet strict technical, sustainability, and installation requirements, ensuring long-term drainage performance across critical transport infrastructure. Our reliable delivery approach helped the project team remain on programme while achieving their flood resilience objectives."*

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