

## Case Study

### Banana Tip, Rhondda Valley

SDS delivers underground stormwater storage to support Welsh Water wastewater network capacity improvements



#### SDS Systems

SDS Weholite Tanks;  
SDS Weholite Manholes.

#### SDS Customer

Mott MacDonald Group.

#### Client

Welsh Water Capital Delivery.

#### Project

Banana Tip Stormwater Storage Scheme.

#### Purpose

To reinstate the site for continued community use.

#### Brief to SDS

To deliver a cost-effective underground storage tank solution that will reduce construction programme duration and provide value engineering over an existing precast concrete design.

#### Timing

Installation was completed in May 2026.

#### Project Background Information

Located between Tylorstown and Ferndale, the 'Banana Tip' site—named for its distinctive shape—is a reclaimed former coal waste tip associated with historic mining activity in the Rhondda Valley. The area forms part of a historically significant colliery landscape, where mining infrastructure and associated settlements once dominated the region.

Following the closure of the Ferndale Collieries in 1959, the surrounding land was extensively remediated and landscaped during the 1980s. The former Banana Tip has been converted into Greenwood Park, which now hosts a local cricket pitch and sports ground.

The project has been under consideration for a number of years as part of wider efforts to improve wastewater infrastructure capacity. Earlier proposals had been developed based on a precast concrete tank solution; however, evolving site constraints and cost considerations prompted a review of alternative approaches.

## Project Objectives

To improve the resilience of the local wastewater system within the Rhondda Valley by increasing stormwater storage capacity.

## Project Requirements

The scheme required reinstatement of a usable surface above the storage tank, including the construction of a football pitch to return the site to community use.

A key requirement was to achieve cost and programme efficiencies compared to the precast concrete solution previously proposed by others.

## SDS Product Features

The installed solution comprises a 10-leg SDS Weholite attenuation tank configuration, engineered to maximise storage volume while accommodating the constraints of the site. The system incorporates manifold connections and an integrated internal weir chamber, enabling controlled flow management and improved performance of the local wastewater network.

Constructed from 2.5m diameter Weholite pipes in a 4kN/m<sup>2</sup> stiffness class, the tank provides a total net storage capacity of 1,341m<sup>3</sup>. The lightweight yet structurally robust nature of Weholite allowed for rapid installation without the need for extensive heavy lifting equipment, making it particularly suited to the challenging ground conditions associated with the former colliery tip.

The modular design of the system enabled phased installation, allowing sections of the tank to be

backfilled progressively as works advanced. This not only improved on-site efficiency but also reduced programme duration and minimised disruption.

In addition, the corrosion-resistant HDPE material ensures long-term durability and low maintenance requirements, making it a sustainable alternative to traditional precast concrete solutions.

## Issues Overcome

The project involved an extensive design development period, during which SDS worked closely with the project team to demonstrate the viability and benefits of the Weholite solution as a value-engineered alternative.

The site presented challenging ground conditions associated with historic mining waste, including variable fill material and areas of unstable made ground, requiring careful excavation and preparation for the tank's installation. Existing waste material was removed to enable construction, and a geotextile layer previously installed within the ground was also excavated, as it had contributed to localised flooding issues on site.

## Results

SDS's Weholite solution delivered a programme saving of approximately three months compared to the precast concrete alternative, alongside reductions in on-site labour, plant requirements, and associated costs.

The reinstated surface ensures the site can continue to serve the local community, maintaining its value as a recreational space.

**Andrew Macdonnell, National Sales Manager – AMP, SDS, said:** *"Working closely with MMB and Welsh Water, we were able to demonstrate a practical and efficient alternative to the original design. Our Weholite solution not only met the technical requirements of the project but also delivered significant programme and cost benefits, while accommodating the complexities of the site."*

