

Case Study

Southbank Place, London

SDS Intellistorm® Rainwater Management System installed at prestigious new development.



SDS Systems

Intellistorm® Rainwater Management System.

Client

AECOM.

End Customer

Braeburn Estates (JV between Qatari Diar Real Estate Investment Company and Canary Wharf Group plc).

Project

Construction of a new, mixed use real-estate development.

Purpose

To create a showcase development which reinforces the Southbank's reputation as the epicentre of culture, design and architecture in London and reflects the customer's hallmark vision of sustainable development.

Brief to SDS

To minimise the additional pressure the development will have on London's water supply and drainage infrastructure.

Timing

Three systems were installed in phases, starting in early 2018, to coincide with the construction of the new development. All of the systems have now been installed and the attenuation function is in full operation; the reuse function will be introduced in line with the operation of the new buildings.

Project Background Information

Southbank Place is located just across the River Thames from the Palace of Westminster and overlooks Jubilee Gardens. The development includes 49,000m² of office space, spread across 8 buildings, 877 homes and 4,500m² of retail space, plus restaurants and cafes.

Project Objectives

To minimise the impact the development's requirement for the supply and disposal of water will have on the local environment and existing infrastructure.

Project Requirements

To ensure the development is able to meet an estimated demand of 100 megalitres of water, and to process more than 11 megalitres of surface water, per annum, whilst limiting discharge to the peak flowrate dictated by GLA and Thames Water.

SDS Product Features

SDS Intellistorm® is a web-based intelligent rainwater management system which uses live weather forecast data from the Met Office to facilitate the efficient reuse of water and thereby reduce the volume discharged to drains. The system intervenes to retain, rather than discharge, rainwater, reusing it for non-potable purposes such as toilet flushing and cooling the air conditioning units, and delivering substantial cost savings. SDS Intellistorm® uses the data to understand how heavily it will rain and empties the attenuation tanks, prior to a rainfall event, sufficient to make space for the new influx of water; consequently, the tanks are always partly full, supplying recycled water to the site.

Capacity

The system at Southbank Place is able to harvest up to 15,000m³, or 15 million litres, of water per year.

Issues Overcome

Due to limitations on green infrastructure, and therefore no opportunity to consider the use of swales and oakaways, SuDS options for the site were effectively limited to attenuation of surface water and, due to the sub-basement levels on the build, controlled and pumped discharge to drain. With space at such a premium, and things tight both practically and financially, basement-level attenuation tanks were installed. Intellistorm enables these tanks to be used to collect and store the rainwater; the tanks create a storage void of more than 1,000m³, sufficient to provide the minimum viable solution using Intellistorm®.

Paul Taylor, Associate Director, AECOM, said:

"The London Plan directs that all developments should consider the re-use of rainwater in the design of stormwater drainage. For this project, we wanted to use a large proportion of rainwater to support the site's air-conditioning cooling tower plant. Intellistorm® ideally suits the Southbank Place project. Most recently, we are now planning to utilise some of the rainwater, supplemented with greywater, with which to irrigate the neighbouring Jubilee Gardens."

