CASE STUDY

SDS

Water Infrastructure Systems

Stortford Fields residential development

SDS installs UK's largest geo-cellular stormwater attenuation system.

→ SDS SYSTEMS

SDS GEOlight® Attenuation Tanks.

→ CLIENT

Breheny Civil Engineering.

→ END CUSTOMER

Countryside Properties plc;
East Herts District Council.

→ PROJECT

Construction of a 2,200 new homes residential development.
The first of three major phases comprises of 857 homes, a school, neighbourhood centre and sports pavilion.

→ PURPOSE

To help meet the East Herts District Plan, adopted as a local framework in 2018, for an additional 18,400 new homes by 2033.

→ BRIEF TO SDS

To ensure the development remains free from flooding by extreme rainfall events.

→ TIMING

SDS attenuation tanks were installed in May 2018.

→ PROJECT BACKGROUND INFORMATION

Stortford Fields is located on the northern fringes of Bishop's Stortford, on the Hertfordshire / Essex border.
The mixed use development will comprise, on completion in 2027, circa 2,200 new homes, a primary school with nursery and relocation of an existing oversubscribed secondary school, as well as a care home, 1,000m^2 retail area and a 4 to 5 hectare business park that is expected to create approx. 500 new jobs.

→ PROJECT OBJECTIVES

The provision of circa 58 hectares of green open space and the adoption of, and addition to, existing mature trees and hedgerows, as part of a drive to improve the overall diversity of the site, are a key requirement of this development. As well as play areas for children and allotments, new footpaths, cycling routes and bridle ways will also be created.

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→ PROJECT REQUIREMENTS

The pre-existing watercourse, in effect an agricultural ditch which runs through the site, provides a natural feature by which the layout of the development is structured, in order to maximise drainage, recreation and biodiversity benefits within an enhanced, 2,250 metre long green corridor.

→ SURFACE WATER SYSTEM REQUIREMENTS

A site-wide sustainable drainage scheme linked to the watercourse will improve water levels and water quality in the watercourse as well as provide new riparian habitat such as reed beds and increased plant diversity.

→ SDS PRODUCT FEATURES

The SDS GEOlight® geo-cellular attenuation tanks sit beneath the schools' full size football pitch and adjoining junior pitch, which have been designed to provide additional stormwater storage capacity when required.

→ CAPACITY

Representing the single largest surface water storage facility yet installed in the UK, the SDS GEOlight® attenuation tanks have the capacity to store up to 8,000m^3, or 8 million litres, of water.

→ ISSUES OVERCOME

The huge scale of this development demanded that the installation was completed over the course of a number of weeks, requiring SDS to co-ordinate with the different delivery schedules of multiple suppliers to site and the variable progression of associated groundworks.

Ownership and maintenance of the public open spaces will be managed by The Land Trust, a national non-profit organisation that is committed to the long term sustainable management of open space for community benefit.

Steve Pallister, Project Manager, Breheny Civil Engineering:

"Due to its sheer size alone the Stortford Fields development provides us with a whole set of new challenges. Planning over the extended timeframe that the project demands adds new complexities to items such as the scheduling of materials deliveries, groundworks and installations. It is vital, therefore, that the specialist suppliers and subcontractors in whom we place our trust deliver not only to the highest standards that we expect but are sufficiently flexible to respond positively and adjust whenever a change to the plan is required. In SDS we have a partner on whose unerring capacity to deliver we can always rely."

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