



**Take
Control
Of Water.**

Total Water Security

Delivering total water security by managing the journey of water from source to sea.

Climate change and population growth are placing the water industry under unprecedented and ever-increasing pressure. The impact on nature and the environment of over-abstraction and pollution of our natural water resources are the subject of intense political, media and public scrutiny.

The adoption of innovative technologies and application of modern, integrated approaches to water management will play a key role in ensuring the water sector's long-term resilience and maintaining a sustainable supply of this most precious resource.



Water Security – Expert’s View

“The global population faces significant water security threats related to water supply, water pollution, wastewater removal, sanitation and associated ill health, and the socio-economic impacts of droughts and floods.

Nowhere are these issues more acute than urban spaces and developing world contexts where radical new visions for water infrastructure and ways to cope with extreme events are required for a growing population”.

University of Birmingham, Water Sciences Dept.

About SDS Infrastructure

SDS Infrastructure specialises in providing innovative and cost-effective water management infrastructure that enables housebuilders and developers to **take control of water**.

SDS-engineered systems ensure that, from the point at which rainfall first meets the ground to its final destination, water can be collected, treated, stored, released and, in some cases, reused safely, reliably and sustainably.

SDS surface water management and sustainable drainage systems have been installed in more than 40,000 locations around the UK in every industry.



SDS Infrastructure Full Service

SDS offers a comprehensive range of services that includes the manufacture, supply, installation, adoption and maintenance of SDS water management systems.

We design and engineer each and every system to meet the specific requirements of individual projects, so that our customers receive a full-service solution that is bespoke to them.

By taking responsibility for each element of the project, we ensure that our systems will always operate as intended and to their maximum potential efficiency and effectiveness.



Engineering

SDS creates engineering solutions that accommodate the increasing frequency and intensity of rainfall events. Our continuous assessment of new data, alongside the mapping of potential future scenarios, is integral to the correct design and specification of water management systems that are bespoke to each individual site.



Design

Our in-house design team* will consult with you from the early specification stages of a project to ensure a water management solution is provided to match your unique requirements; then, because we manufacture all the systems we specify, we can create the exact system your project requires.

*Backed by Professional Indemnity Insurance.



Manufacture

Our state-of-the-art manufacturing processes underpin the SDS vision to innovate in design and delivery, ensuring we are able to keep tight control of your project costs whilst guaranteeing product quality and availability.



Supply

Our manufacturing bases are quickly accessible from the UK motorway network, enabling our products to be delivered quickly to all parts of the country, whilst our flexible production processes allow us to turn around most urgent orders.



Installation

Our team of expert installers* ensures that the benefits of every SDS piece of equipment are optimised through correct preparation, installation and connection, guaranteeing peace of mind for both our partners and end customers.

*All work is covered by our Contractors All Risk Insurance and a complete system warranty against any defects.



Adoption & Maintenance

The attention to detail paid during design and installation means SDS water management systems are simple and straightforward to maintain. However, for added protection, we offer complete scheduled maintenance and can adopt our systems where required.

FLOOD PREVENTION

SDS GEOLight® and Weholite surface water attenuation systems help to prevent flooding by collecting and storing water which would otherwise be unable to soak into the ground naturally or overwhelm the sewer system.

SDS GEOLight®

The geocellular surface water attenuation solution of choice in more than 40,000 installations in the UK alone, and the product on which SDS was founded over 25 years ago, SDS GEOLight® is widely acknowledged as the UK's leading sustainable drainage and surface water management system.

SDS GEOLight® is manufactured at production plants in Highbridge and Biddisham, in South West England, and is unique in being constructed entirely of recycled post-consumer PVC waste material, which would otherwise have been disposed of to environmentally unfriendly landfill.



8 million litre capacity SDS GEOLight® tank at Stortford Fields residential development, Hertfordshire.

The controlled release of stored water to the drainage network, or into the environment or the ground, can be undertaken once weather and land conditions allow; alternatively, the water can be retained for further treatment and/or reuse as a non-potable water supply.

SDS Weholite

Since 2019 SDS has held the exclusive licence to manufacture and sell Weholite High-Density Polyethylene (HDPE) products, in modular and large diameter pipe form, in the UK and Ireland.

The production plant in Newport, South Wales, has been manufacturing products using Weholite HDPE material for more than 25 years and has the capacity to produce over 10,000 tonnes of products each year.



SDS GEOLight® and Weholite: A Unique Partnership

SDS GEOLight® storage tanks can combine with Weholite conveyance and inspection devices to ensure surface water is managed efficiently and effectively, from its point of entry into the SuDS system to its final release. Weholite manholes also provide a suitable location in which to house SDS SYMBiotiC™ smart monitoring and control devices.



- 1 SDS WEHOLITE UPSTREAM MANHOLE - Offsite-manufactured, light weight HDPE, BBA HAPAS-certified manhole, available in multiple sizes and any orientation. Provides a suitable location for SDS SYMBiotiC™ smart monitoring and control devices.
- 2 WATERPROOF GEOMEMBRANE - Sealed continuously to encapsulate the GEOLight® reservoirs, distributor pipe and granular fill, and protected by a heavyweight, needle punched, non-woven geotextile.
- 3 GEOTEXTILE - Placed between the granular fill and GEOLight® attenuation units to prevent silt and particles from being washed into the reservoirs.

- 4 SLOTTED DISTRIBUTOR PIPE - Typically arranged in the centre of the reservoir but can be placed at the side where topographical constraints dictate; wrapped in geotextile.
- 5 SDS WEHOLITE MANHOLE / INSPECTION CHAMBER - Supplied suitable for immediate use, equipped with lifting points and anti-slip benching, and totally resistant to hydrogen sulphide (H₂S).
- 6 SDS GEOLIGHT® - Laid bonded horizontally and vertically, the length and height of the GEOLight® reservoirs are determined by the quantity of water to be stored. Suitable for use under a wide range of surfaces including grass, paving, tarmac and concrete.

- 7 CLEAN STONE TRENCH - Filled with draining material, such as granular 15/25 mm clean graded stone free from fines.
- 8 SDS WEHOLITE DOWNSTREAM MANHOLE - Incorporates a flow control to prevent excess surges of flood water from passing downstream and enable the GEOLight® reservoirs to store the water for the period of the storm.

CASE STUDY

Tattenhoe Park, Milton Keynes
Client / SDS Customer: Bellway Homes Ltd / RM Contractors Ltd

Tattenhoe Park is a substantial residential development in western Milton Keynes, comprising over 1,200 homes, a school, green spaces and a community centre. SDS was called upon to install a robust, cost-effective surface water drainage system that reduces flood risk, complies with Milton Keynes Council's requirements, and delivers long-term performance within a live construction environment.

The 495m³ SDS GEOLight® attenuation tank was selected for its compact, modular design and speed of installation. Its high structural strength makes it especially suitable for location beneath roads and housing plots, whilst its modular configuration enabled rapid assembly within a constrained site, minimising disruption to other construction activities and ensuring the drainage system could be installed in line with the project programme and planning conditions.

The GEOLight® system provides effective attenuation for the entirety of a key phase of the construction programme, enabling housebuilder Bellway to proceed with development in full compliance with planning requirements. The system supports long-term flood risk management and contributes to climate-resilient infrastructure, aligned with Homes England's objectives for future-ready communities.



CASE STUDY

South Sebastopol, S. Wales
Client / SDS Customer: Taylor Wimpey

Wren's Nest' is a 27-acre phase of the 'Edlogan Wharf' 244-acre residential development in South Sebastopol which will take an estimated 10 to 12 years to construct. Upon its completion, the site will comprise 1200 homes, a village green, sports pitches and play areas, cycle and leisure trails, allotments and extensive areas of green space.

SDS was required to deliver a drainage system that ensures the site remains flood risk free, and to create new habitats for nature conservation, whilst still retaining the six existing streams and canal which traverse the site.

Multiple GEOLight® attenuation tanks, totalling in excess of 8,000m³ capacity, have been installed over the past five years, the most recent

involving two tanks which, together, are capable of storing over half a million litres and which can be accessed by three 1.5 metre diameter Weholite HDPE manholes.

Whilst pre-existing streams and canal habitats have been retained, the construction of new balancing ponds and swales provides additional attenuation features, whose natural bio-cleaning mechanisms are being relied upon to break down any hydrocarbon pollutants. This "hybrid" SuDS scheme ensures that, despite the redevelopment of former grass fields and woodland to impermeable areas, the hydrological status quo has been retained.



ENVIRONMENT PROTECTION

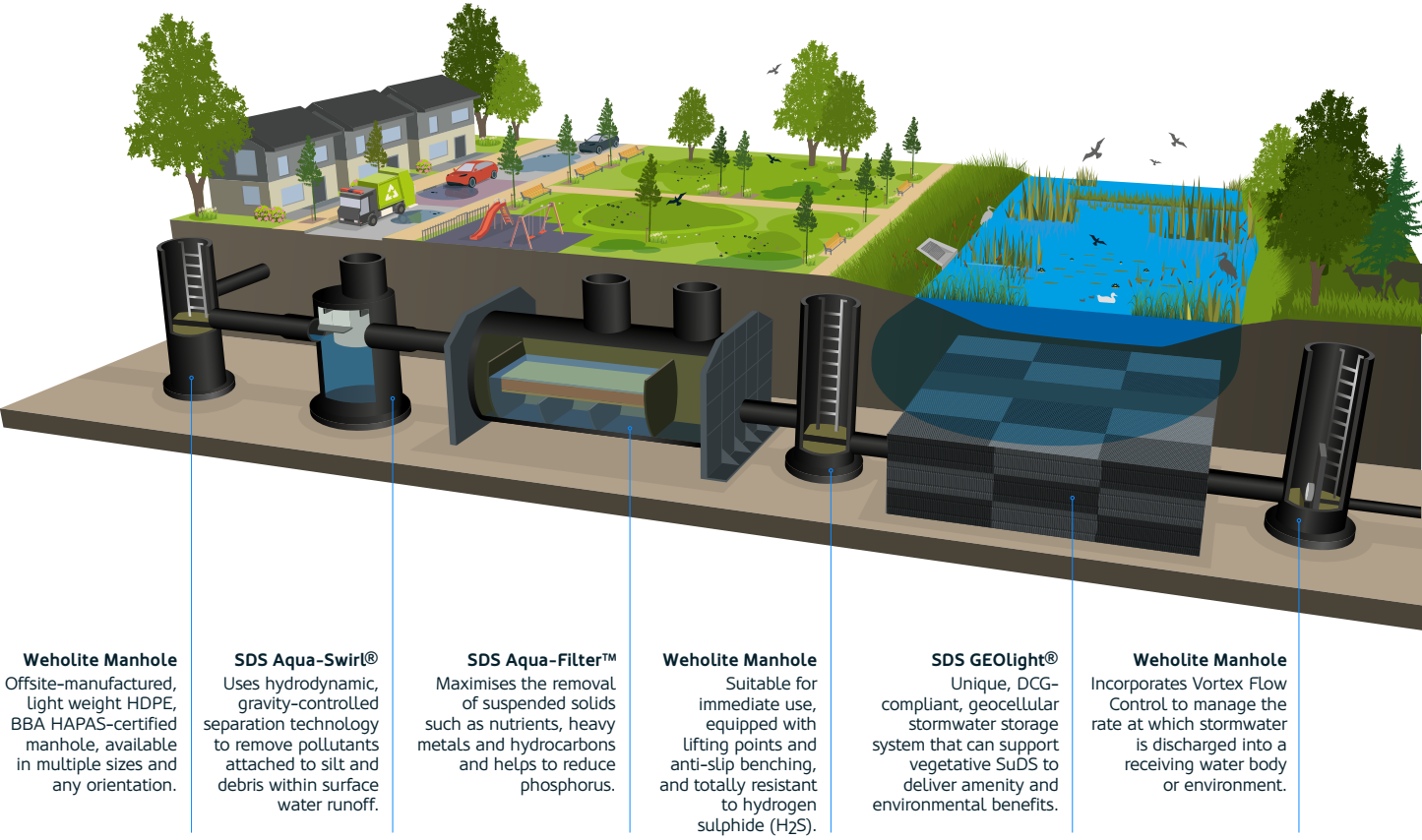
Engineered and Nature-based Solutions: together delivering environmental benefits and Biodiversity Net Gain

The Environment Act of 2021 encourages all stakeholders in new developments, in particular housebuilders, to consider the impact that growing urbanisation might have on the local ecosystem and the wildlife that it supports.

The Act legislates the requirement to achieve Biodiversity Net Gain, an approach to development that mandates the need for a site to end up in a better position to support wildlife and habitats than it was before construction began; using a mitigation hierarchy and metric

system, applicable developments must deliver a 10% net gain in biodiversity.

Alongside their ability to prevent flooding, provide community amenities and support mental wellbeing, sustainable drainage systems (SuDS) have been identified as a means to help comply with the Act's requirements whilst also addressing the falling health of our watercourses, largely a consequence of unchecked pollution and wastewater discharges.



- Weholite Manhole**
Offsite-manufactured, light weight HDPE, BBA HAPAS-certified manhole, available in multiple sizes and any orientation.
- SDS Aqua-Swirl®**
Uses hydrodynamic, gravity-controlled separation technology to remove pollutants attached to silt and debris within surface water runoff.
- SDS Aqua-Filter™**
Maximises the removal of suspended solids such as nutrients, heavy metals and hydrocarbons and helps to reduce phosphorus.
- Weholite Manhole**
Suitable for immediate use, equipped with lifting points and anti-slip benching, and totally resistant to hydrogen sulphide (H₂S).
- SDS GEOLight®**
Unique, DCG-compliant, geocellular stormwater storage system that can support vegetative SuDS to deliver amenity and environmental benefits.
- Weholite Manhole**
Incorporates Vortex Flow Control to manage the rate at which stormwater is discharged into a receiving water body or environment.

In the above graphic, engineered SuDS, including GEOLight® storage and attenuation tanks as well as SDS water treatment and flow control devices, can be combined with natural vegetative features, such as swales and reed beds, to maximise the volume and variety of pollutants' removal whilst also reducing the rate of deterioration of these features and thereby extending their lifespan. Such "hybrid" SuDS schemes allow housebuilders and developers to meet their legal obligations without the loss of extensive areas of land, that would otherwise generate commercial revenue for them, to supporting nature.

This symbiotic relationship between the engineered and the natural can be further enhanced with the inclusion of SDS smart technology. Wet areas, that are introduced for the benefit of existing flora and fauna or to attract new species to a development, rely upon a constant, automated supply of water to sustain life, otherwise they will ultimately create more damage to the local wildlife and ecosystem. Water management devices and assets that are equipped with SDS Intellistorm® can be programmed to ensure that they are never allowed to either dry out completely or overflow and flood their surroundings.

In line with new national standards for surface water drainage systems, anticipated as a condition of Schedule 3, the Independent Water Commission states in its review of the water sector, published July 2025, that: "SuDS in new developments in England should be a mandatory requirement and should be built and maintained to a consistent standard; consideration should be given to retrofitting SuDS in existing properties, both commercial and residential, and in public spaces."

CASE STUDY

Berewood, Waterlooville
Client / SDS Customer:
Grainger plc; Hampshire County Council / Careys

With circa 2,500 new homes the five hundred acre Newlands residential development at Berewood, near Waterlooville, is one of the largest of its type in the UK. SDS was required to provide pollution prevention services while helping to develop a new wetland resource.

Working with the consulting engineers, SDS developed a "SuDS management train" approach whereby a series of above- and below- ground drainage techniques change the flow and quality characteristics of the runoff in stages. Surface water runoff from the site is first cleaned through one of several Aqua-Swirl® separators of varying capacity before entering one of seven separate ponds and swales that have been landscaped into the development.

Selected for their ability to surpass Environment Agency standards and maximise pollution mitigation the Aqua-Swirl® separators provided the additional flexibility to engineer high performance water quality protection upstream of the ponds.



CASE STUDY

The Quarry, Erith
Client / SDS Customer: L&G / Anderson Design & Build Ltd

Spanning approximately 20 hectares, The Quarry is the redevelopment of a former landfill site into a 600-home residential complex and 630-place three-form primary school. The site is designated a Grade One Site of Borough Importance for Nature Conservation (SINC) and must therefore reflect a careful balance between ecology and development, achieved by providing a generous proportion of play space, open space and ecology areas. No development is permitted to take place in these 'ecology rich' areas, other than the provision of footpaths and cycle-ways and the construction of sustainable drainage features, including wet

ponds and swales to manage surface water drainage and promote biodiversity.

SDS GEOLight® attenuation tanks, with a combined storage capacity of up to 6,070m³, have been installed beneath new wet pond features including three low level lakes and an area of natural grassland and scrub, surrounded by small wooded areas. These 'wildlife areas' provide a habitat for notable protected species including newts, lizards and slow worms.



DROUGHT MITIGATION

SDS rainwater and grey water management systems, either separately or in combination with each other, help to counter water scarcity by providing an alternative source of supply for non-potable applications where increasingly expensive drinking quality water is not required.

SDS Intellistorm® Smart Rainwater Recycling & Attenuation System

SDS Intellistorm® enables a property, or group of properties, to maximise rainwater reuse and minimise discharge to drain, operating entirely under its own control. The system interprets and assesses weather forecasts along with expected rainfall and local catchment data and responds accordingly.

SDS Intellistorm® facilitates the reuse of harvested rainwater for non-potable home applications such as toilet flushing, garden and plant irrigation, and vehicle and window cleaning whilst also creating storage capacity for stormwater that might otherwise overwhelm and flood the drainage system.

Unlike traditional attenuation systems which temporarily attenuate stormwater and allow a continuous controlled discharge of any collected surface water, SDS Intellistorm® actively empties in accordance with weather forecast data. It provides only sufficient space in the tanks to receive the incoming rainwater and therefore ensures the maximum amount of water for reuse is continuously available.

SDS Intellistorm® puts water reuse well within the reach of every project where SuDS are a planning requirement. Where a new build development needs to consider both flood resilience and water consumption impact, there's no need for separate rainwater

harvesting and attenuation systems. Significant savings in construction costs can be achieved, while spatial restrictions to accommodate large water storage volumes are mitigated. Furthermore, end users achieve ongoing cost savings through water reuse and the wider environment and society benefit from increased flood resilience.

SDS Intellistorm® systems installed at The Smart House (Adastral Park) and retro-fitted to established properties in Deal and Combe Martin.



CASE STUDY

80 Holland Park, London

Client / SDS Customer: chapmanbdsp / CPC Group

'80 Holland Park' is a new luxury apartment complex located in a distinguished, affluent area of West London on the former site of 'Duke's Lodge', a neo-Georgian mansion constructed in 1939. The development consists of 25 homes, comprising duplex 'town houses', loft-style apartments and penthouses, along with a swimming pool, spa and gym, residents' lounge, private screen areas and business suite.

SDS was required to deliver a bespoke grey water recycling system that enables the waste water from basins, showers and baths to be treated and reused throughout the building, thereby making the development achieve water efficiency criteria of 100 litres maximum mains water consumption per person per day.

The system's small footprint ensured that it could fit more easily in the building's plant room than a traditional MBR system might. The topography of the site, along with the restricted headroom and layout of the basement level plant room, were key factors in selecting the SDS system; the plant room's central location placed the system within reach of as many as 27 collection outlets.

Using SDS's SYMBiotiC™ technology, remote monitoring of the system is also enabled, so that any requirement for maintenance visits or servicing can be identified in real time, ensuring continued water supply.



CASE STUDY

Z House, Salford

Client / SDS Customer: Salford University / Barratt Developments

Barratt Developments' unique Zero Carbon concept home, "Z House", located on the premises of Salford University, Manchester, is the first house in the UK designed to showcase an "A to Z" of modern green home developments. The house has been constructed using the latest building methods incorporating Modern Methods of Construction (MMC) and features cutting-edge sustainable housing technology.

In order to minimise the property's consumption of mains water, with which to irrigate the property's green wall, SDS has equipped the house with a smart rainwater recycling system. Rainwater is channelled from the roof guttering and downpipe and collected in a tank via a leaf filter before being used to supply the green wall for as long as there is sufficient available.

The system is programmed to deliver 4 litres of recycled rainwater to the wall every six hours when there has been no rain and there is no immediate prospect of rainfall above a pre-determined threshold;

without it, the green wall would be reliant on potable water for its irrigation. Any excess rainwater remains in the tank for use elsewhere in the garden or to wash the car.

The 'Z House' project provides a live test bed for the adoption at scale of sustainable equipment and operating practices, with the primary objective to establish the capacity for a typical, average-size new build residential property to operate with a zero-carbon footprint.

Barratt Chief Executive, David Thomas, opined on behalf of the housing industry: "We hope that this will be the beginning of an exploration, not just by Barratt, but by the UK housebuilding sector overall, of the potential for smart water collection and reuse technologies in residential developments. Whether the systems are on a plot-level or shared by a street or a whole community, the principles of smart, dual purpose water management help to protect against flooding as well as cut down on the use of mains water for non-drinking purposes."



DROUGHT MITIGATION

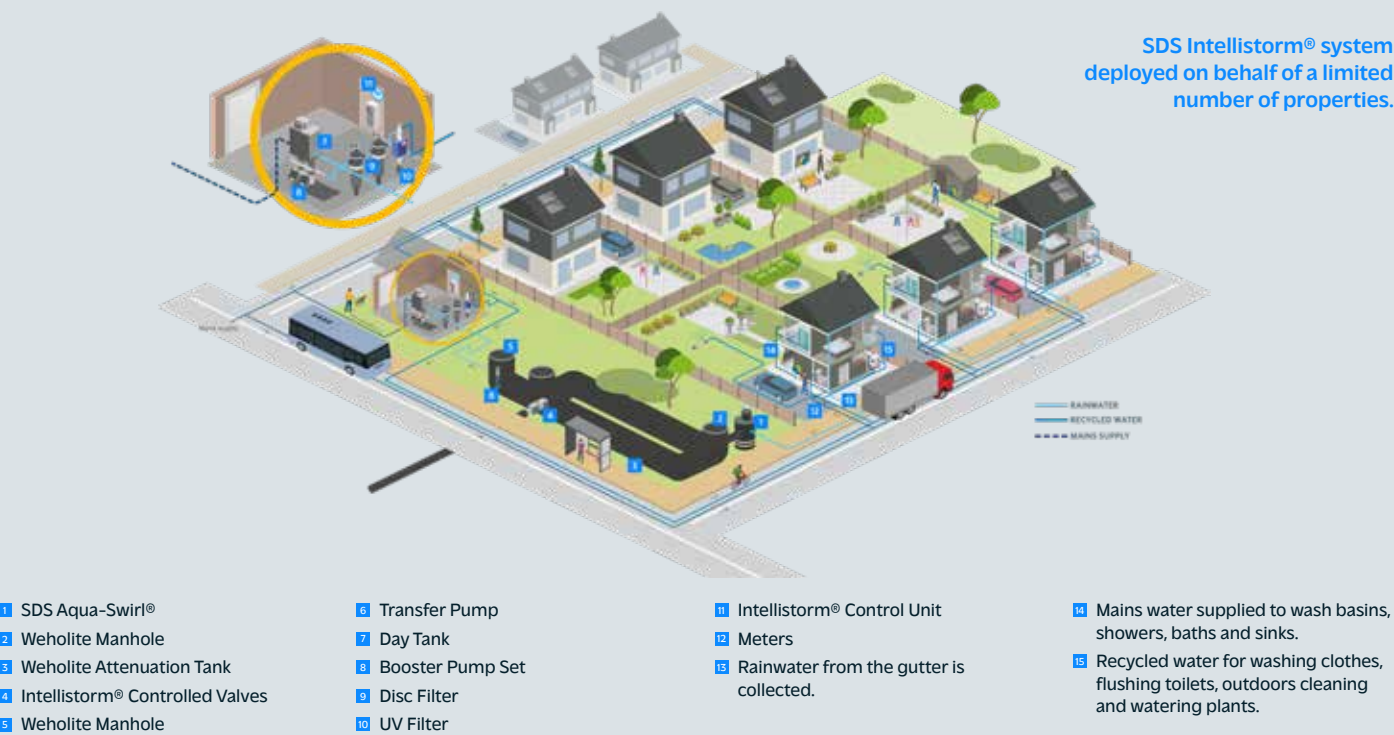
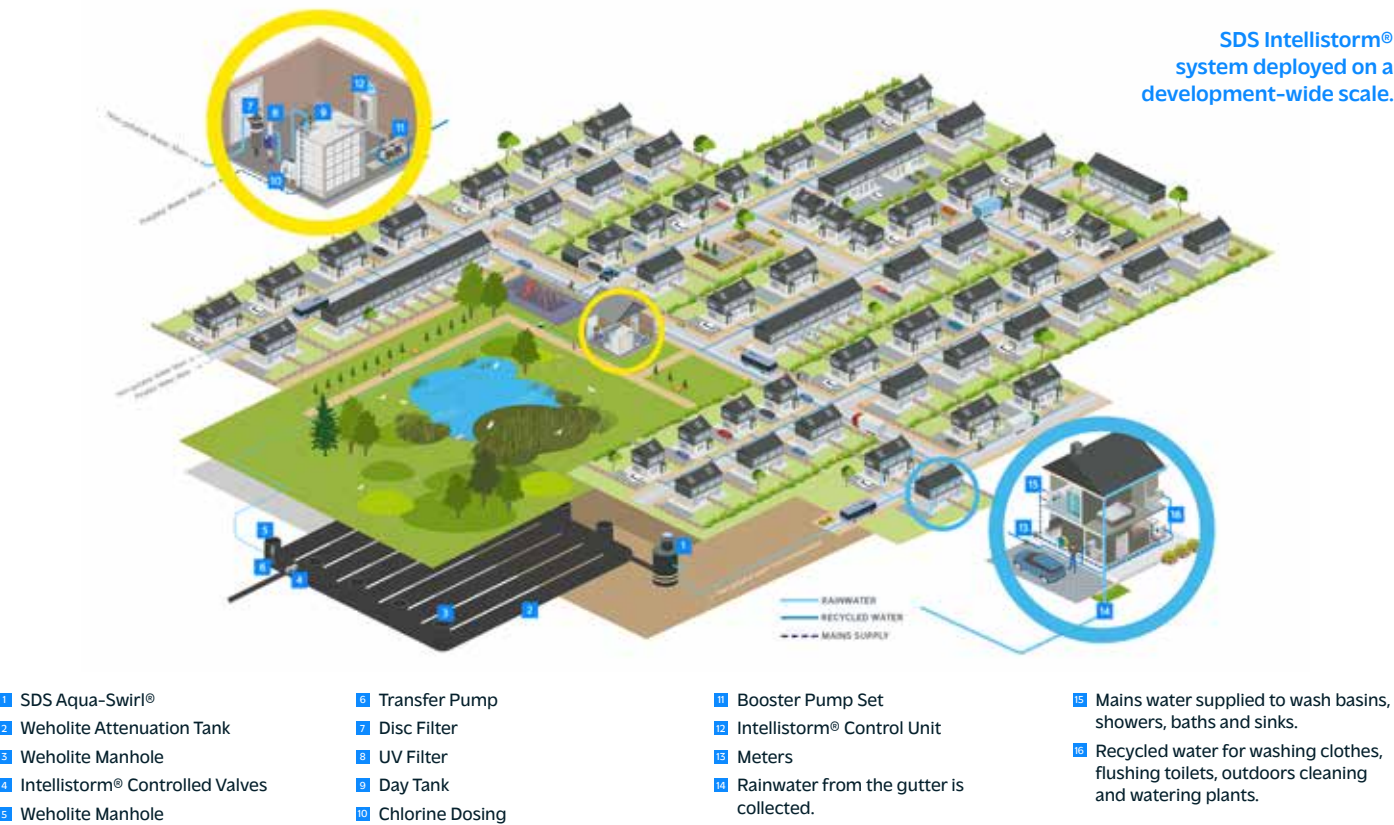
SDS Smart Community Rainwater Management

To provide a dual drought mitigation and flood prevention solution on a large scale individual SDS Intellistorm® systems can be deployed at multiple single properties whose combined rainwater harvesting capacities deliver significant attenuation and reuse volumes.

Alternatively, the Intellistorm® system can be deployed at a community level whereby the rainwater collected from some, or all,

of the properties on the same development can be centrally treated and redistributed for non-potable purposes.

Whilst this community scenario is not yet legal in the UK the Independent Water Commission Report (July 2025) suggests that this would provide the means by which to make significant inroads into cutting the country's water supply and demand imbalance.



SDS helps you take control of water.

SDS treats each and every project with equal importance and with the same desire and determination to deliver the best solution and best value for the job.

The knowledge our staff collectively share of our specialist sector ranks amongst the industry's best and our advice to anyone, whether a customer or not, is free.

We take no work for granted and are proud to have been serving some of our customers operating in the housing industry for more than two decades.

Here are just a few of the comments and feedback we have received from our customers:

"We have been working with SDS on this project for a number of years now and will continue to do so until the site is completed in six or seven years' time. We appreciate the way in which the SDS team takes responsibility not only for ensuring the delivery of every aspect of their involvement but also for always going the extra mile to help us resolve issues on-site that sit outside of their control."
Matt Tinsley, Project Manager, Taylor Wimpey.

"SDS helped us to engineer a successful SuDS outcome at an extremely challenging brownfield location. SDS GEOLight® tanks were integral to the drainage solution, providing attenuation to meet the very low site discharge rate on a steeply sloping site with limited space and no opportunity to infiltrate. Using below-ground storage in conjunction with surface water drainage features facilitated environmental and wildlife benefits above-ground, while achieving sufficient surface water storage necessary to satisfy planning requirements at this sensitive location."
Ben Rayner, Principal Engineer, Stomor Group.

"The SDS team provided excellent expert support and produced clear calculations to show precisely how much water their system would process and subsequently provide. This information was also invaluable to our client's environmental engineers to demonstrate the sustainable benefits of the development. By reviewing the full efficiency data, we could also be confident that the size of the system being specified was correct."

"By specifying the SDS system, the collection and storage tanks, which would be separate in an MBR system, could be combined to create a relatively small footprint. This meant the plant room could be located as centrally as possible and the pipework could also be routed without encroaching on the headroom requirements in the basement car park."
Dave Honey, Principal Public Health Engineer, chapmanbdsp.

"By master-planning and installing necessary Infrastructure at the very beginning, we have future-proofed our community at Berewood, making it more resilient to the horrid weather we have seen recently. The result is that in spite of the worst rainfall for 150 years the land at Berewood has never looked drier."
John Beresford, Development Director, Grainger plc.

"Specifying SDS Aqua-Swirl® hydrodynamic separators gave us added flexibility to engineer high-performance water quality protection upstream of SuDS ponds for the latest phase of the Berewood development. SDS's bespoke inhouse manufacturing facilities, together with a wide choice of product sizes and outlet pipe diameters, allowed us to minimise the sizes of the devices we required. With the added benefit of the Aqua-Swirls® lightweight plastic construction, we were therefore able to reduce excavation and construction costs significantly."
Paul Stewart, Technical Director, Mayer Brown.

"We recognise the value of water saving in our homes and also in the unbreakable link with carbon reduction. The Z House has provided a realistic environment in which to trial digitally controlled and monitored water-saving technology. We are taking the lead to deliver a level of carbon reduction that is considerably more than the Future Homes Standard and intend for all our new homes to be zero carbon by 2030. It's clear that, in future, home buyers will simply expect to buy greener homes. Sustainable homes will also be more affordable and efficient to run."
David Thomas, Chief Executive, Barratt Developments.

"This project is an important step in demonstrating how smart, site-specific technologies like Intellistorm® and SYMBiotiC™ can be deployed at scale in residential settings. By combining real-time data and predictive control, we're helping to manage surface water more effectively at source, reducing the burden on sewer networks and supporting wider flood resilience objectives. It's a practical, forward-looking solution that addresses both current and future drainage challenges."
Katy Bevan, Operations Manager – Rainwater Management, United Utilities.

"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."
Steve Pallister, Project Manager, Breheny Civil Engineering.

Take Control Of Water.

SDS | INFRASTRUCTURE



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