

Making the case for widespread water reuse in the UK built environment sector

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The problem

You will be aware of the widespread problems in the water industry. Surging demand for supplies, regular new connections to aging infrastructure, and sewers repeatedly overflowing into natural water courses are causing major headaches for our water suppliers as media coverage spikes.

Changing our relationship with water starts with championing technology. Technology offers the opportunity to help us meet the 5 billion litre daily shortfall which is predicted in the next 25 years. Many of the buildings we are constructing today will still be operating in the next 25 years but are they truly water-efficient? Some are, but many are not, and water reuse is still shockingly value-engineered out at the new build stage.

Water reuse as the solution

You will know that water reuse is being mentioned more than ever. And there is a good reason for this. Rainwater harvesting and greywater recycling allow the continued expansion of the built environment whilst helping to solve the issues of flooding and supply shortages.

Water efficiency

The first question we get asked when talking about water reuse is the saving potential.. In a typical commercial building, water reuse technologies can meet 75% of the total water demand. In a domestic setting, 45% of the total water demand can be met with recycled water through a communal solution.

Water management

Water reuse is one of the only technologies which benefits both water efficiency and water management. By managing increased volumes of rainwater and greywater locally, we can reduce the risk of combined sewers becoming overwhelmed during heavy rainfall events.

Commercial and communal-based water reuse systems can even be linked with on-site SUDs systems to increase the volume of rainwater available for reuse. This unique blend of technologies is perfectly safe, ensuring 100% of attenuation capacity is always available for incoming storms. Watch a video of how these systems work [here](#).



Image of a total water reuse solution, containing Rainwater Harvesting, Greywater Recycling, and Active Attenuation System.

Behaviour of building users

Rainwater harvesting and greywater recycling are unique water efficiency technology as they do not require any behaviour changes to water-using habits by building users. Where appliance are being over-used, but fed by recycled water, they are not depleting the precious mains water supply. Where mains water fed appliances are overused, harnessing reused water elsewhere in the building can offset the excess, using a sustainable supply rather than wasting precious mains water.



Image of a self-contained rainwater harvesting system; StormStation.

The solutions available

Many people simply think of water reuse as a tank with a pump. Water reuse technologies have advanced significantly in the past decade with improved filtration, reliability, and features. Here are some of the latest advancements you may not be aware of...

Rainwater harvesting Combi arrangements

Traditionally, there were two types of rainwater harvesting systems. These were a 'direct feed' or 'gravity fed' system. Today, we have other robust solutions that take advantage of a low footprint design but offers the excellent reliability of a gravity-fed system. The combi arrangement is the most popular way of achieving rainwater harvesting in a commercial building. If you walk into the majority of supermarkets developed in the past two decades, you are likely to be flushing the toilets using a combi arrangement. The combi arrangement utilises a pre-built, pre-wired, and pre-tested unit that houses a highly reliable header tank, control panel, energy-efficient booster set, and compliant mains water top-up.

StormStation

The newest way of achieving rainwater harvesting. This is a completely new concept to the UK which is proving popular with over 40 sites successfully using StormStation for recycling rainwater. StormStation is a completely self-contained system, housing filtration, storage tank, compliant mains water top-up, controls, and pumps in one plug-and-play unit. StormStation is ideal for new projects, retrofitting to existing buildings, and for temporary use during construction. We can also supply StormStation with solar panels to reduce operating costs and provide a carbon neutral supply of rainwater after 25 years.

Greywater recycling

Whilst greywater recycling is not as established in the UK, it is widely used throughout Europe to save water and reuse an abundantly available resource. Greywater recycling provides a perfectly clean supply of recycled water by taking advantage of biological treatment and ultrafiltration technologies.

If you're interested in learning more about any of the water reuse systems above, do not hesitate to contact our team. Alternatively, you can learn more [here](http://www.stormsaver.com). www.stormsaver.com



Image of a Combi style rainwater harvesting system in a non-household development.



Image of a self-contained rainwater harvesting system; StormStation.



Image of a greywater recycling system in a commercial office space.