



Rainwater Harvesting Systems

COMMERCIAL AND DOMESTIC SOLUTIONS

 **LOWARA**
a xylem brand

Why do we need rainwater harvesting?

The Facts

The challenge of climate change and the need to reduce greenhouse gas emissions and stabilise their levels in the atmosphere has been globally recognised in the Copenhagen Accord in December 2009.

Transition to a low carbon society is increasingly supported by a range of policy, legislation, targets and implementation plans at international, national and local level.

The UK is committed to meeting CO² and energy targets, agreed between the European Commission and Member States. The European Union has agreed to reduce CO² emissions by 20 per cent on 1990 levels by 2020.

The UK Climate Change Act (2008) sets a legally binding target to reduce UK emissions by at least 80 per cent by 2050 with a 34 per cent reduction in emissions by 2020.

The need to act to reduce CO² emissions, and to tackle climate change goes hand in hand with the need to use resources in a sustainable manner.

Water Resources

Our water resources are not infinite, water usage has increased approximately 70% since 1970 and we simply don't have enough reservoirs to supply the ever increasing demand for water. On average 150 litres of water is used per head of the population per day and a large percentage of this water is not used for drinking purposes: toilet flushing (26%), washing clothes (12%), vehicle washing and garden irrigation (7%), so why use valuable drinking water for these purposes when we could easily harvest and recycle rainwater?

Rainwater Harvesting can also help to reduce floods. Flooding is a result of too much rain entering the drains and rivers too fast. Undeveloped land can store the water in the soil for gradual release into the streams and rivers, but on developed land, where the rain falls on roofs and tarmac or concrete surfaces, it flushes straight into the drains causing immediate river surges.

The Benefits

- Reduced bills for customers with water meters: water meters are currently installed in approximately 37% of domestic properties and the majority of industrial and commercial properties in England and Wales.
- Rainwater Harvesting can reduce demand for mains water and relieve pressure on available supplies such as reservoirs.
- Rainwater Harvesting can also reduce the risk of flooding and pollution as less rainwater is discharged to drains, sewers and ultimately to rivers.

Choosing a Xylem Water Solutions UK Rainwater Harvesting System is the right choice for your contribution to a greener and more sustainable future.



Why install a Xylem Domestic RWH system?

Its easy and simple

With its intelligent low energy design, the Xylem Water Solutions UK system is 75% more energy efficient than other rainwater harvesting systems on the market and could be powered via solar panels or wind turbine. So you reduce both your water and carbon footprint.

Xylem Water Solutions UK system is easy to install, simple to maintain and can reduce domestic water consumption by up to 50 per cent. The Xylem Water Solutions UK system has been developed to provide the homeowner with a simple yet effective automatic supply of harvested rainwater. During periods of low rainfall, if the tank should run empty, the system automatically switches to the mains water supply.

Uses of the Xylem Water Solutions System, typical applications

Vehicle washing

Garden watering

Toilet

Domestic laundry

Option to upgrade to landscape watering and sprinkler



Xylem offers a choice of systems

Non-pressurised system

Rainwater is channelled from the roof into the storage tank, passing an integrated filter to remove large debris, leaves etc. Water enters the tank via an inlet calmer preventing disturbance to fine sediment on the base of the tank. Excess rainwater flows out of an overflow which has a one-way valve and rodent protection; also skimming surface particles.

Inside the tank are sensors and a submersible pump which on demand take water from the cleanest part of the tank through a floating suction filter supplying filtered rainwater to the break tank. This tank gravity supplies water to point of use. It is possible to have the break tank at any level in the building when combined with a booster unit sized for the specific building requirements.

During periods of low rainfall a WRAS compliant mains water top-up provides a continuous failsafe supply. More than one break tank can be used in a system - our team can offer design assistance to ensure the most economic solution is applied.



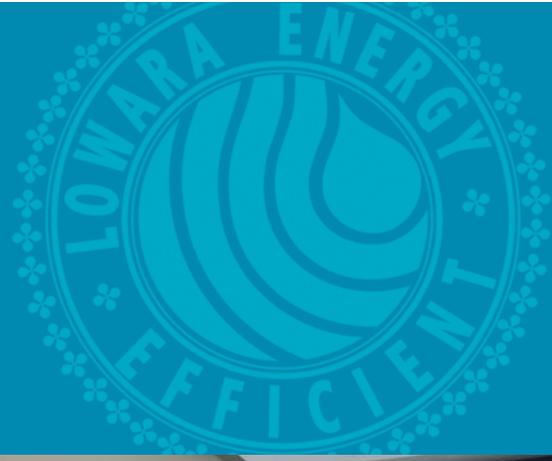
Pressurised system

This system may be required in buildings with low water consumption, where roof space for a header tank is limited or where a pressurised supply is required for applications.

Rainwater collection and flow within the pressurised system follows the same process as the non pressurised system - the main difference being that water enters the control system and flows via a pressurisation unit as a direct supply to points of use. In periods of low rainfall a WRAS compliant mains water backup activates, providing a continuous water supply. This tops-up a percentage of the underground storage tank.

This type of system is only recommended within certain applications and it is best to discuss your individual requirements with our sales team.





Combi system

This is a unique control system combining the benefits of both a gravity-fed header tank system and the pressurised supply of a boosted water system. As with our other systems, rainwater follows the same journey until it reaches the control unit. Instead of the normal control unit a Combi unit is fitted, where water is stored awaiting distribution by the energy efficient variable speed booster; providing water at pressure to a range of applications without the need for large header tanks. The system also features mains water back-up and WRAS compliant air-break to provide a continuous water supply. All of the Xylem rainwater recovery systems will make the most economic use of the local rainfall with predicted water consumption. It is recommended that you speak to our expert staff to help you choose the correct type of system for your application and that you choose low water consuming products to complement the system, furthering a reduction in overall consumption. Easy to install with internal storage capacity of either 400L or 620L.



How we size your system

All Xylem rainwater harvesting systems are developed to meet your site-specific requirements. We take into account a number of factors, including:

- BREEAM requirements
- The roof area of your building
- Local rainfall (based on 40 years of MET Office figures)
- Water demand and occupancy levels
- Any existing specification or site-specific requirements
- Filter co-efficient
- Your budget

The individual requirements of the system will be based on supply and demand rates being calculated as part of the building design, it is best to discuss your individual requirements with our Xylem sales team.



Xylem

Xylem /'zīləm/

- 1) The tissue in plants that brings water upward from the roots.
- 2) A leading global water technology company.

We're approximately 12,700 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to www.xyleminc.com



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