

# Encouraging rainwater harvesting in the UK

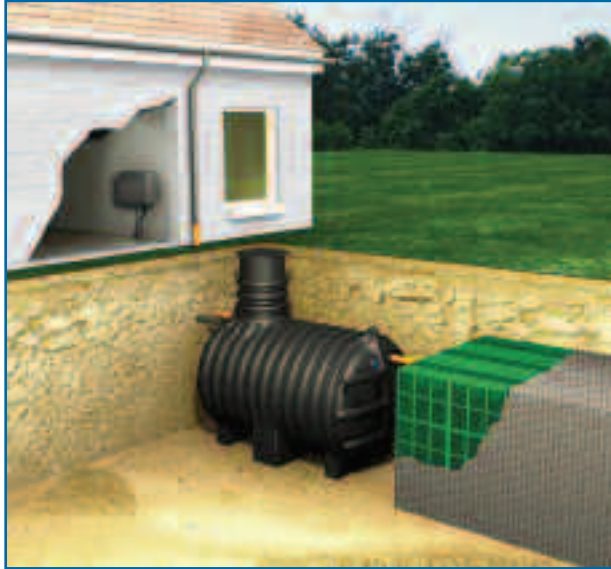
Rainwater harvesting is rarely considered for either commercial or residential use in the UK, in spite of the acknowledged scarcity of available water in the south-east of the country. Issues such as the cost of construction, perceived and actual maintenance requirements, and even the embedded carbon cost, all limit the interest in collecting and using rainwater.

Up until now rainwater harvesting has been considered as “green” and only as a mechanism for saving water, despite there being some appreciation that it may give some stormwater benefits in the form of reducing flooding. However, the official position remains that these systems cannot be designed with the presumption that rainwater harvesting helps manage stormwater run-off.

Research completed by HR Wallingford (report SR736, 2011) not only demonstrates that rainwater harvesting can provide specific stormwater management benefits, but also provides a unique methodology for sizing the storage tanks to meet specific stormwater control objectives.

This exciting breakthrough means that the use of rainwater to save water, whilst providing stormwater benefits, should favour the use of these systems more widely. This is particularly the case now that best practice stormwater management recognises that stormwater volume control is at least as important as stormwater flow rate. Stormwater volumetric control is required in official documents on rainfall run-off management for developments (such as the guidance in Defra/Environment Agency Technical Report W5-074), and is likely to be in the SuDS standards, which should come into effect in 2012.

Since rainwater harvesting can be designed for specific volume retention of any storm size, this is the only effective mechanism, other than infiltration, available for controlling the volume of run-off. In many circumstances infiltration is not a credible option, due to factors



Rainwater harvesting systems can also be used to reduce stormwater run-off rates. (Picture credit: Hydro International)

such as high groundwater levels, contaminated land, or low rates of porosity.

In due course, it is expected that awareness of the benefits of:

- soft rainwater for washing clothes and protecting against hard water calcium deposits;
- the protection of rivers due to reduction in water abstraction; and
- the pressures of an increasing population and risk of drought due to climate change;

will all lead to greater uptake of rainwater harvesting.

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