

The need to accelerate water efficiency

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Insight from Richard Braid, managing director of [Cistermiser](#)

We all have a responsibility to reduce the amount of water we use – indeed, the vision of the [Waterwise UK Water Efficiency Strategy](#)¹ to 2030 is: A UK in which all people, homes and organisations are water efficient. However, with [nearly a third](#)¹ of UK water supplies being used outside the home, for example in offices, factories, hotels, schools, leisure centres and hospitals, water conservation should be a particular priority for businesses and the public sector.

We know that facilities managers are already taking this obligation very seriously. Many are changemakers committed to reducing water wastage, either to support their organisation’s sustainability ambitions and targets or because of personal environmental concerns (or a combination of both – according to the CBRE, [80 per cent of building occupiers](#)² cite personal ethics as the main driver for supporting their organisation’s sustainability goals).

Water efficiency efforts should of course be applauded and encouraged – and with water scarcity in the UK quickly becoming a reality, the need to keep the momentum going and accelerate action has never been greater. It might sound dramatic, but limited water supplies are not just a bleak scenario from a future dystopian world, or a problem experienced by only developing countries, nor are they unique to parts of the globe with low rainfall.

Water shortages have already started to materialise in some regions of the UK. It is often quoted that the South East of England, the UK’s most populated area, [has less water available per person](#)³ than the desert states of Syria and Sudan – but in summer 2023, the reality of this precarious situation came into sharp focus. In June, households and schools across Kent and Sussex experienced [low or no water](#)⁴ from their

taps, and South East Water asked customers to use water only for [essential purposes](#)⁵, imposed a hosepipe ban and provided [bottled water stations](#)⁵.

Hot weather is thought to have caused the demand for water to surge (June was the UK's [hottest on record](#)⁶), leading to supply issues. Extreme, unprecedented heat is likely to continue to affect our water resources, possibly on a more severe scale – not only intensifying society's need for water, but also depleting water supplies through evaporation.

While the UK may have a reputation for often being cold and rainy, weather patterns are changing and the [country is getting warmer](#)⁷. According to a report on climate extremes in the UK, recent years have seen both [higher maximum temperatures and longer warm spells](#)⁷. Furthermore, it is predicted that climate change will result in Britain experiencing [hotter and drier summers](#)⁸ – projections suggest the chance will [increase by up to 50 per cent](#)⁹.

It is also predicted that the UK will continue to get [wetter in winter](#)⁸ (storms have already become [more frequent and intense](#)⁸ because a warmer atmosphere holds more moisture – October's Storm Babet being a recent example).

However, wetter conditions won't necessarily replenish groundwater resources such as aquifers (the [underground permeable rocks](#)¹⁰ that absorb rainwater from the soil above). Rain that falls heavily and quickly might not be easily absorbed – especially if the ground is hard and dry following drought conditions. Drier soil coupled with higher temperatures results in [more water going back into the atmosphere instead of soaking into the ground](#)¹⁰. As [Southern Water explains](#)¹¹, 'For any rain to make a real difference to our river and groundwater levels, we need a constant, light drizzle that will really soften the earth and let the rain trickle down and refill our underground aquifers. Until we get this kind of rain, it's difficult for our river and groundwater levels to recover.' Rain running off dry ground can also cause flash floods and can increase pressure on sewer systems.

Furthermore, there has not been sufficient investment in new reservoirs and the UK does not have the [infrastructure to store water from the wetter winters to support drier summers](#)¹². According to Water UK, much of our infrastructure dates from Victorian times and is [nearing the end of its useful life](#)¹³. No reservoir has opened [since the 1990s](#)¹³, despite our water resources being under pressure from climate change, population growth (there has been an [18 per cent increase since the 1990s](#)¹³) and rising water use (demand for water is thought to be growing at a rate of [one per cent per year](#)³ in the UK).

In addition, desalination – the removal of salt from seawater to make it suitable for human consumption – could potentially help to bolster the UK's water resilience, but we have just a few desalination plants (located in London, the Isles of Scilly and the Channel Islands, with two currently [planned for Cornwall's south coast](#)¹⁴). There are also challenges to overcome, including the process being expensive, energy intensive and potentially harmful to sea life.

All of this is compounded by leaks in the water system; around three billion litres of water are lost through

leaks in water pipes in England and Wales every day – and it’s a [widespread and complex issue](#)¹⁵.

The water industry is attempting to address these issues. For example, water companies in England and Wales recently proposed a [£96 billion investment](#)¹⁶ in water and sewage infrastructure between 2025 and 2030, including building 10 new reservoirs and reducing leakage. However, it will take time for plans to come into fruition and for the impact to be realised – if they are even approved by regulator Ofwat (as water companies have faced a backlash over their proposals to increase consumer water bills to fund the upgrades).

Fortunately, water efficiency is a proactive action that can be implemented almost immediately, without huge financial outlay – and it can make a significant contribution to securing future water supplies. Water efficiency also helps to reduce carbon emissions (with around [five to six per cent of UK greenhouse gas emissions](#)¹ deriving from our use of water) and lowers water bills and potentially energy costs too.

Washrooms present an immense opportunity to reduce water use and are therefore an ideal starting point for facilities managers aiming to make improvements; in commercial and public sector buildings, water supplies are mainly used to serve toilets, urinals, taps and showers (in an [average office-based business](#)¹⁷, toilet and urinal flushing accounts for 43 and 20 per cent of water use respectively and washing accounts for 27 per cent).

There are a wide range of options and solutions to consider, from simple fixes to intelligent controls – and they can all have a considerable impact. For example, repairing a ‘leaky loo’ (a third of commercial washrooms have at least one) could save up to 146,000 litres of water per year, and rectifying a small three millimetre diameter stream from a cold tap could prevent [330,000 litres of water per year](#)¹² being wasted. Meanwhile, replacing manually operated taps to sensor-operated versions can achieve savings of up to 79 per cent, and updating conventional, uncontrolled urinals (which are flushed intermittently regardless of use) to a mains-fed, sensor-operated solution can reduce water wastage by up to 84 per cent.

Water scarcity is becoming an ever-increasing threat in the UK, and while some of the action required to mitigate water shortages cannot be easily influenced by the general population, we can all play a part by using water more efficiently. Many facilities managers are setting an example by driving water conservation forward in workplaces, and it’s never been more important for this commitment to continue.

¹https://database.waterwise.org.uk/wp-content/uploads/2022/09/J37880-Waterwise_Water_Efficiency_Strategy_Inners_Landscape_WEB.pdf

²<https://www.cbre.co.uk/insights/articles/a-vision-for-sustainable-facilities-management>

³<https://waterintelligence.co.uk/water-facts/>

⁴<https://www.telegraph.co.uk/news/2023/06/13/uk-weather-temperatures-rise-27c-two-schools-forced-close/>

⁵<https://www.bbc.co.uk/news/articles/cd1w06vn9lro>

⁶<https://www.theguardian.com/uk-news/2023/jul/03/fears-of-further-fish-deaths-after-hottest-june-in-uk-history?ref=upstract.com>

⁷<https://www.bbc.co.uk/news/science-environment-61825371>

⁸<https://www.nationalgeographic.co.uk/environment-and-conservation/2021/05/the-wrong-kind-of-rain-why-britain-is-not-as-wet-as-we-think>

⁹<https://www.bbc.com/future/article/20190310-why-britains-rain-cant-sustain-its-thirst>

¹⁰<https://news.sky.com/story/why-are-there-still-hosepipe-bans-when-its-been-raining-so-much-12750224>

¹¹<https://www.southernwater.co.uk/the-news-room/the-media-centre/2022/august/the-first-rain-after-drought>

¹²<https://buyingforschools.blog.gov.uk/2022/05/23/how-to-make-your-school-more-water-efficient/>

¹³<https://www.water.org.uk/news-views-publications/views/we-havent-always-got-it-right-cost-inaction-huge>

¹⁴<https://www.bbc.co.uk/news/uk-england-cornwall-64862756>

¹⁵<https://www.bbc.co.uk/news/science-environment-64052740>

¹⁶<https://www.water.org.uk/news-views-publications/news/water-companies-propose-largest-ever-investment>

¹⁷<https://www.south-staffs-water.co.uk/media/1509/waterusebusiness.pdf>