

In our News and Article section, we bring you extracts from a recently published article by RTE (7th August 2023) , which outlines the growing pressure on Ireland's water supplies and what we can do to make more careful use of the resource.

Water, water everywhere - how recycling may prove vital.

The RTE website clearly outlines how the demands on our water supplies are increasing, coupled with climate change, which can lead to potential shortages and contamination. The point is further emphasized that these pressures on water can also impact government policy on planning and housing:

In Ireland this summer it has seemed, at times, to be a case of water, water everywhere, but turning the stuff that drops from the sky into drinking water costs money and carbon emissions. A growing population and economy are putting water supplies under pressure and while the climate is getting wetter as the planet heats up, scientists are also warning of drier summers.

All this makes a strong case for using and reusing water more carefully. Recycling and the circular economy are disciplines that can be applied as much to this most vital of resources as to anything else. Dr Liam McCarton of the Technological University, Dublin, has been working on water conservation for years.

"50% percent of our water resource zones are classed as stressed in normal operating conditions, and we know climate change, is causing extremes, both of rainfall and of drought, and during drought 75% of our water resource zones are actually classed as stressed," he says.

This can lead to water restriction notices when supplies are limited by lack of rain and boil water notices when heavy rains lead to contamination of drinking water.

Dr McCarton also points out that most of the drinking water consumed by households is used for other purposes - *"25% of the drinking water that comes into your house every day is flushed down the toilet, another 50% is used in showers and laundry"*.

Water, or a lack of it, is also contributing to the housing crisis as that can sometimes make it hard to secure planning permission for new developments. Rainwater recovery systems, already in use in some developments in Ireland, could, if installed to enough homes make a big difference.

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According to the RTE website, there is a strong case for re-use and recycling of our water sources and technology is available to harvest rain water effectively:

Dr McCarton says that "if every new build house in Ireland in the last ten years had been installed with rainwater harvesting systems, it would have generated enough mains water saving to supply an additional 30,000 households, and one of the challenges at the moment, with our housing crisis, often is getting planning permission with restrictions on water use."

The technology is simple. He has a table top model in his laboratory in Bolton Street which he has used as a demonstration for projects across the world.

Dominick Hall on Lower Dominick Street in Dublin city centre is an example of good practice. The recently completed apartment block has been built for Dublin City Council.

Architect Denis Byrne says "this building really has an exemplary attitude towards rainwater harvesting. It reuses the rainwater from the roof, stores it in the basement, filters it out and pumps it up to the various apartments so that flushing toilets, the washing machines, the irrigation for that planting (in the common areas) that is all reused water, whereas normally that would have been potable water."

There is a dual cold water plumbing system with separate pipes for drinking water and rainwater. Gloria Conway, a resident at Dominick Hall says, "it's brilliant, it's very clean and the apartments are very well worked up".

Mr Byrne says this "is not rocket science" and can be installed in most standard new builds but there is a capital cost. Dublin City Council was prepared to pay but most private developers would not want to add to their costs. He says that "we should really be looking at how we finance or subsidise this type of initiative, in our houses and all our buildings".

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However, this RTE website article suggests that Uisce Éireann is lagging global developments in this regard:

Dr McCarton, who has worked on water conservation and reuse projects in many countries, says Ireland is behind the curve on this. *"Uisce Éireann's 25-year strategy does not mention rainwater as one of its strategic options, and this comes back ... to a lack of evidence-based research on this to date."* He says there has been research done at TU Dublin to fill those gaps.

"One of the things we've done to address this is, we've published guidelines on each catchment in Ireland, how to optimise systems, for both rainwater and stormwater."

In a statement Uisce Éireann said: *"As the national public water authority, water conservation is a key focus for Uisce Éireann and we work with the construction industry, business organisations, educators, policymakers, our regulators (EPA and CRU), Government and the general public to raise awareness of best practice in relation to water conservation."* It added that "Uisce Éireann has developed best

practice procedures and standards to prevent a reoccurrence of legacy issues that exist across the country.

"These codes of practice for developers completing local infrastructure within their site must be adhered to for anyone seeking a connection to the public water or wastewater network.

"These include guidelines on water management and conservation where developers are encouraged to adopt water conservation management methods, including the use of dual flush water cisterns, low flow taps and rainwater harvesting systems."

(RTE 2023)



References

RTE (2023) 'Water, water everywhere - how recycling may prove vital', August 7th, 2023. Available at: <https://www.rte.ie/news/ireland/2023/0807/1398512-circular-water/> (Accessed 07 August 2023).

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