



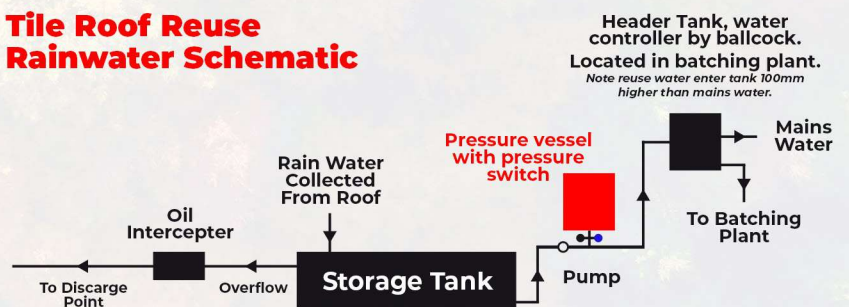
NORTHSTONE

A CRH COMPANY

RAINWATER HARVESTING TOOME



Tile Roof Reuse Rainwater Schematic



PROJECT LOCATION

Rooftile Factory, Toome

START & END DATE

2008 - Present

RELATED SDGS





CASE STUDY

RAINWATER HARVESTING TOOME

THE CHALLENGE

The challenge for Northstone Materials was to design an innovative solution for our concrete roof tile factory in Toomebridge, Northern Ireland, that eased the burden on local finite water sources and infrastructure. This was of particular importance as the factory neighbours Lough Neagh, an Area of Special Scientific Interest and the largest freshwater lake in the UK and Ireland. The lough supplies over 40% of Northern Ireland's drinking water (NI Water, 2023), but the water treatment process is energy intensive. In a world increasingly concerned with water scarcity AND water quality, the importance of efficient water use is becoming more and more prevalent.

THE SOLUTION

Northstone Materials wanted to set a pioneering example and lead the charge in innovative water infrastructure solutions. In 2008, we commissioned a state-of-the-art concrete roof tile factory. Efficiency was key with this new installation; we made the decision to include a gravity fed rainwater harvesting system. Water is collected from the factory roof through pipes in the guttering, passed through a filter to remove contaminants and sent to a 50,000-litre holding tank. The water is then pumped directly into the factory's concrete mixer.

THE RESULT

Since 2008, we have reduced our freshwater usage by roughly 4,000 metres cubed per annum. The subsequent reduced demand for municipal water over the past 15 years has had many environmental, social, and financial benefits.



Environmental – reducing stormwater runoff and therefore reducing the likelihood of flooding, erosion, and sewer overflows; minimising the impact on ecosystems by helping to maintain more stable water levels in Lough Neagh, thus preserving water quality and biodiversity.



Social – reducing pressure on stressed water infrastructure systems that are expensive to update; and increasing water availability for local communities during dry spells.



Financial – saving on water bills; and cost savings for the government in terms of water treatment, distribution, infrastructure, and maintenance.

For further information see www.northstonematerials.com/sustainability