

Project Profile

Objective

To provide additional primary education facilities whilst meeting Denbighshire County Council's requirements for sustainability.

Solution

To reduce the use of potable mains water with installation of a StormBank® Pro to reuse rainwater from the roofs to flush school toilets and urinals. A potential saving of mains water use of up to 1,260,000 litres of water per year.



www.savetherain.info

Product Profile

- Connects to Stormbloc® for storage volumes.
- For Domestic, Commercial and Garden applications.
- Potential savings on mains water use up to 50%.
- Rapid installation, typically with no need for concrete backfilling.
- Integral stainless steel filter for minimal maintenance.
- Not just for grassed areas and flowerbeds - suitable for installation under lightly trafficked driveways.

21st Century School Harvests Welsh Rain

Opened in September 2008, a new 420 pupil primary school, Ysgol Clawdd Offa, has been built in Prestatyn for Denbighshire County Council, and is designed for optimum sustainability, including a StormBank® Pro rainwater recycling system from Hydro International.



The school was awarded with a certificate from Hydro International and the UK Rainwater Harvesting Association for its environmentally friendly efforts. Back Row (Left to Right): Dave Evans, Rheolwr Proiect / Project Manager, Denbighshire County Council; Martin Edwards, Headteacher, Ysgol Clawdd Offa; Roy Barry, Sales Executive, W T Burden Ltd; Karl Hall, Regional Sales Manager, Hydro International; Dave Taylor, W T Burden Environmental Division; Andrew Bailey, Clark of Works. Front Row: Four pupils from Ysgol Clawdd Offa.

The StormBank® Pro system recycles rainwater collected from almost 2,500 sq m of pitched roof, filters it and pumps it to the pupil and staff toilets, providing an estimated 90% of the flushing needs," says Neill Hughes, Project Engineer for Denbighshire County Council.

"Recycled rainwater for use in the school toilets is stored in a 150,000 litre tank. Any surplus water not stored for reuse in the school toilets is directed to a 240 cu m Hydro Stormbloc® modular attenuation tank prior to discharge into an existing watercourse. This attenuation tank is located under the school playing field which is enclosed in an impermeable liner providing a shallow, load bearing storage system. This system also provides stormwater attenuation for surface water runoff from the school car park and 'drop off' area."

"In addition, a third 370 cu m of Stormbloc® module tank located near the school provides attenuation prior to discharge for surface water runoff from the school's new access road, ensuring the development meets its very constrained discharge consent," he added.

Gwen Heap, Project Manager for David McLean Contractors added: "The site conditions are extremely difficult for underground installations as they comprise extensive sands and gravels combined with a very high water table. The Hydro Stormbloc® modular block system has proved its worth as it enables a high volume to be installed in a very shallow excavation and spreads the load of the stored water across the site."

David Evans, Project Leader for Denbighshire County Council explained the thinking behind the school: "Denbighshire needed to invest in additional primary education places in the Prestatyn area, to supplement existing facilities for new housing developments. We took the opportunity to provide 420 places in a new school building designed by Denbighshire Design and Development (the architectural service of Denbighshire County Council) to meet our sustainability and environmental requirements, while offering the best in education and community facilities.

"Hydro's StormBank® Pro system provides the rainwater harvesting we specified to meet toilet and urinal flushing needs, and its versatility in installation has helped the completion of the project by the September 08 opening. The many other sustainability measures include; recyclable aluminium doors, windows and roofs; solar voltaic panelling for electrical heating supply; sunpipes; rooflights and internal courtyards to maximise daylight use; landscaping to improve control of surface water runoff; bicycle facilities to discourage use of cars and timber sourced from sustainable forests."

StormBank® Pro *Advanced Rainwater Harvesting*

Design Optimisation

Rainwater Harvesting is a relatively new concept in the UK, but is rapidly becoming an accepted and desirable feature of new buildings, providing a sustainable and economic resource that reduces and conserves expensive treated mains water supply. The concept also has demonstrable pay-back, even for the larger commercial systems, and many installations will pay for themselves in just a few years. For larger commercial applications, it can be possible to achieve quantity savings on mains water in the order of 35-40%, with commensurate cost savings.

Hydro International provide a range of standard and bespoke rainwater harvesting systems that cover the full scope of user requirements, from the smallest domestic to the largest commercial harvesting arrangements. Rainwater harvesting on a wider scale also plays a positive role in terms of Flood Risk Management and SUDS, reducing impacts on local drainage and watercourses and helping to meet planning requirements such as PPS25.

Save the Rain™

A major campaign to make water saving 'second nature' in every UK household and business and protect Britain's dwindling water resources is running under the banner 'Save the Rain™'. The campaign's vision is to make rainwater harvesting a commonplace option in UK homes and businesses. The campaign is being run in association with British Water and the UKRHA and is sponsored by Hydro International.

Applications

- Schools.
- Colleges.
- University buildings.
- Office buildings.
- Retail parks.
- Garden centres, nurseries.
- Vehicle, train washing facilities.
- Hospitals / care homes.

Advantages

- Bespoke solutions.
- Savings on mains water use up to 35-40%.
- Demonstrable pay-back.



www.savetherain.info

This information is for guidance only and not intended to form part of a contract. Hydro International pursues a policy of continual development and reserves the right to amend specifications without prior notice. Equipment is patented in countries throughout the world.

Hydro International • Stormwater
Shearwater House • Clevedon Hall Estate • Victoria Road • Clevedon • BS21 7RD
Tel: 01275 878371 • Fax: 01275 874979 • www.hydro-international.biz

