

Wrigleys – Using the rain to cool the gum!

SWIG Award 2013 entry from Rainharvesting Systems Ltd: non-domestic retrofit.

The Scheme

Wrigley UK moved their head office and production plant from Wembley to Plymouth in 1970. With around 25% of chewing gum produced in Plymouth exported overseas, the UK factory plays a key role in Wrigley's business development across Europe. As a company, Wrigleys believe strongly in their role in the wider world, a role of 'responsibility and strong citizenship' and are committed to ever-higher standards of quality, efficiency, conservation and safety.

To this end, the company decided to install a rainwater harvesting system to provide water to the existing chillers on the top floor of their factory. Rainwater is collected from the roof (approximate area is 4000 square metres). The water passes through an underground filter to remove any leaves, particulate matter etc. It is stored in the underground tank and pumped to a rainwater control unit- - this is a self contained unit, which incorporates a break tank and booster pumps, to distribute the water to where it is needed.

Why choose a Rainharvesting system?

To create chewing gum, the gum base has to be melted, purified, then cooled. Wrigleys were conscious that they were using a lot of mains water for this process. By using collected rainwater instead of mains water, the potential economic and environmental savings were large. With such a large roof area, and an average annual rainfall of approximately 1000m³, Wrigleys have been able to collect and use about two million litres of rainwater every year. The company committed to installing a 100,000L underground storage tank, which collects the water after passing through a 'Trident' industrial filter unit.

Benefits of the Rainharvesting system

Thanks to the rainwater harvesting system, Wrigleys can expect to see much lower water bills, as well as reinforcing their commitment to the environment. The system will be regularly maintained to ensure that it is working to maximum efficiency.

There is also an important element of stormwater control. A high proportion of the rainfall will be diverted into the storage tank rather than flowing into the stormwater drains. The filter has an efficiency of over 90%, and requires minimal maintenance.

Amount of water.

Wrigleys have calculated that they are capturing enough rainwater annually to supply a third of the water needed for its cooling towers

Photos



The Wrigleys Site in Plymouth



The 100,000L tank goes in.



The Rainwater control unit in situ.