

College Lane Campus - Rainwater Harvesting

Client:	Hertfordshire University
Building Type:	Student Forum
Roof:	100% membrane
Catchment Area:	2,450m ²
Rainwater Apps:	86 WCs for student and staff use
Sustainability:	BREEAM - Excellent
Built:	2009



Rainwater Harvesting Requirements

Rainwater harvesting technology was selected to help achieve an 'excellent' BREEAM rating, installed for all WCs. Waterless urinals were used to further reduce water consumption. The building user profile is principally social providing a large venue for student entertainment and social facilities. The building is used 7 days a week with peak demand on WCs coinciding with major social events in the evenings. HyproDuo — the flagship appliance from Ecozi, was installed to provide reliable service with 3-phase Wilo pumps to supply WCs directly upon demand. The 36,000L precast concrete tank was placed in final position by the truck mounted crane in 50 minutes. The precast tank specified by Faber Mansell on behalf of Willmott Dixon was procured by MITIE Engineering Services. The tank will yield up to 770m³ of rainwater per year from the 2,350m² roof area.



The 36,000L precast concrete tank was placed into the final position by truck mounted crane. Only a crushed base is required, with no concrete backfill. The precast tank saved £4,000 by eliminating a concrete base and backfill that would have been required with an alternative GRP tank. By eliminating concrete cure time 2 days were also saved on installation time. The precast tank has a standard surface load rating suitable for a 40t truck, saving additional structural design cost when located under a vehicular area.

The HyproDuo factory built appliance requires just 4 pipe connections and 3 electrical plug and socket hook-ups prior to commissioning. Just two connections are required at the tank to complete the simple installation.

The tank was also supplied pre-fitted with a DN200 anti-flood valve and overflow siphon. Prefitting of these components in the tank saved £350 in installation costs by eliminating an access chamber downstream of the tank. Ecozi differentiates its self by offering as many pre-assembled components as possible to reduce installation costs and provide the highest system reliability possible.



rainwater harvesting systems

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