

Corby Rail Station - Rainwater Harvesting

Client:	Network Rail
Building Type:	Ticket office and customer services
Roof:	100% mono pitch with sheet cover
Catchment Area:	250m ²
Rainwater Apps:	2 WCs public and staff use
Sustainability:	BREEAM - Excellent
Built:	2008



Rainwater Harvesting Requirements

The modular building design was a fast track build for the new Corby rail station. Similarly the building lent itself well to a modular rainwater harvesting system. Ecozi are experts in pre-assembled appliance based technology from leading German suppliers. The rainwater system supplies two staff and customer WCs from an underground 3,500L PP tank located under the pedestrian forecourt. Equipped with an auto filter spray to eliminate routine maintenance the design engineers', Chorus Rail, specified Ecozi for its modular systems that are robust end easy to install.

The annual rain yield is calculated at 108m³ enough for up to 50 WC flushes per day. The main contractor Dean and Dyball Rail installed the tank and drains. Eurothermal installed the M&E equipment for the building including the rainwater control appliance hook-ups. Ecozi then commissioned and certified the system.

Ecozi provided design assistance for best practice installation to Chorus Rail for the drainage plan and pipe work.



A factory built and tested wall mounted appliance provides direct rainwater distribution to the WCs calling for demand. A 4.6 bar multi-stage centrifugal pump with pressure switch provides plenty of power to the system pipes. The 'excellent' BREEAM rating was partly achieved by fittings leak detection systems and PIR solenoid operated valves to prevent misuse of the buildings water systems. The management appliance, pictured below is simple to hook-up and maintain with no moving parts located in the tank.



The Matrix control appliance is wall mounted in the plant room. Requiring just plumbing pipe hook-ups and two plug and socket electrical connections the Matrix is fast and simple to install. Future maintenance and fault diagnosis is completed from the plant room.



The auto filter spray operates every 7 days using rainwater to eliminate routine maintenance. The components are preinstalled requiring just onsite hook-ups.



rainwater harvesting systems

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