

Tesco Extra Havant - Rainwater Harvesting

Client:	Tesco
Building Type:	Food and retail store
Roof:	100% mono pitch with sheet cover and syphonic drainage
Catchment Area:	800m ²
Rainwater Apps:	14 WCs for public and staff use & two bib taps
Built:	2009



Rainwater Harvesting Requirements

This second generation Tesco store is built on columns to provide a larger store area and car parking than the original store. To meet the planning conditions allowing for the increase site density the SUDS plan required rainwater harvesting. Built by Vinci with Essex Services as the M&E contractor, Ecozi provided design assistance for the scheme that had to utilize an above ground tank due to the high density piles used for the building columns.

The rainwater applications were WCs (public and staff and 2 home delivery wash down points). The 24hr operation 7 days a week requires the rainwater system to be a robust design with flexible architecture to allow for operation during maintenance.



The mechanical plant room was built off-site and craned on to the roof. The rainwater is lifted from the main storage tank with a single pump to the rain manager. The rainwater is distributed from a 300L stainless steel break tank by twin booster pumps on demand to the WCs and wash down points. A fine particle filter and UV filter was specified for additional treatment.

The rain manager solution provides the most flexible solution available and enables the user to operate on mainswater without the main tank being in service and for single person servicing of the whole system. This is especially useful in the event of contaminated water in the main tank and tank servicing. The advanced HyproDuo rain manager supplied by Ecozi is factory tested and has advanced logic control to enable, when possible, continued operation with fault conditions or failed pump.



The surface mounted tank is sectional, insulated GRP with a nominal 12,000L capacity. Two stainless steel pre-tank filters remove debris from the syphonic drainage system. 800m² of the roof area was available due to the roof and drainage layout.

Ecozi provided system design, supply, and commissioning services.



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