

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 and 2 home delivery van washdown points
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. Build 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 for the building columns.

The rainwater applications were WCs (public and staff and 2 home delivery wash down points). Due to the 24hr operation 7 days a week the rainwater system required robust design with flexible architecture to cater for several eventualities.



The mechanical plant room was built off-site and craned on to the roof. The rainwater is lifted by a tank located pump into the specialized hybrid rainwater booster set—HyproDuo. The rainwater is kept in a stainless steel 280L cylinder and pressurized as required on demand to supply the WCs and wash down points. A fine particle filter and UV filter was specified for additional treatment.

The hybrid system provides the best design available and enables the user to operate on mainswater without the main tank being in service. This is especially useful in the event of contaminated water in the main tank and tank servicing. Keeping the main pressure pumps in the plant room also provides much simpler and easy maintenance. The advanced HyproDuo appliance is factory tested and has advanced logic control to enable continued operation even with faults or failed pump(s)



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. Only 800m² of the roof area was available due to the roof type and risk of contamination from the partially trafficked roof by vehicles.

Ecozi provided system design, supply, installation and commissioning services.



Ecozi Ltd
Unit 2 Churchlands Business Park
Ufton Road
Harbury
CV33 9QX

01926 614 002
info@ecozi.com