

Hedge End Sub-station - Rainwater Harvesting

Client:	Scottish and Southern Energy
Building Type:	Electrical sub-station
Roof:	100% pitch and tiles
Catchment Area:	110m ²
Rainwater Apps:	1 WC and hand basin
Sustainability:	N/A
Built:	2008



Rainwater Harvesting Requirements

Remote infrastructure sites, such as wind farms and substations are often only occasionally manned. The cost of installing a mains water supply to these remote sites is often over £100,000. At Hedge End, near Southampton, Skanska required a proven rainwater harvesting system supplier to design and supply a rainwater recovery solution to eliminate the need to install a mains water service to the site. Ecozi had already supplied several remote infrastructure sites and we able to immediately assist Skanska with a proven solution.

The system is designed on the assumption the rainwater demand is low enough so the tank does not run dry. No mains water back-up is available for WC flushing and hand basin applications. The demand from the occasional site visits is very low.



Due to poor ground conditions and uncertainty of vehicle loads on the rainwater tank surface precast concrete was specified. Precast concrete rainwater tanks are rated for 44T trucks as standard and require no additional structural works once installed. The rainwater tank was placed in the final position by delivery truck mounted crane for fast installation by Ecozi.



The submersible pump located in the buried rainwater tank is controlled by a flow switch located with a tank contents display panel inside the building. A fine particle and UV filter provide disinfection to the water for hand washing in the WC basin. An auto filter spray was specified to minimise routine maintenance. Every 7 days a solenoid controlled valve sprays rainwater for 3 minutes on the filter increasing the system efficiency.



rainwater harvesting systems

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