

Bankfoot Church and Community Centre - Rainwater Harvesting

Client:	Parish of Auchtergaven & Moneydie
Building Type:	Place of Worship and Community Centre
Roof:	100% pitch and recycled dust and resin slates
Area:	1,000m ² in total 300m ² connected to the rainwater tank
Rainwater Apps:	12 toilets for public and staff use
Sustainability:	RWH, wind turbines, ground source heating, timber frame
Built:	2008



Rainwater Harvesting Requirements

Following a devastating fire in the original church a vision was created to build a more accessible, larger, sustainable and community related place of worship. Now with several hundred visitors each month touring the new building the design and technology has become a feature itself to Bankfoot, a small community north of Perth. The WC demand in this type of building is difficult to establish, therefore, the tank was sized on the roof area available. To keep costs within budget a proportion of the roof area was connected to the 6,000L tank located under the rear terrace.

The pre-tank filter is mounted directly on the tank providing a single assembly for simple installation by the groundwork's contractor. The integrated filter reduces installation cost by £250 when compared to separate items supplied loose.

The rainwater system is plumbed to 12 of the 15 WCs. The balance of 3 are connected permanently to Scottish Water for use in the event of a power failure. The wall mounted rain manager is located in the plant room and automatically switches over to Scottish Water in the event of low rainfall.



A factory built and tested wall rain manager provides rainwater distribution to the WCs calling for demand. The 5.4 bar Wilo multi-stage centrifugal pump with pressure switch is at the heart of the rain manager. Mains water backup certified to EN1717 ensures continuity of supply in the event of low rainfall. Together, the filter/tank assembly and the wall mounted rain manager provide a unique system that required only two



items shipped to site. The end-user benefits from simple maintenance and reliability. The whole system was commissioned by the M&E contractor, with Ecozi telephone support. With no wearing parts inside the tank future maintenance and fault diagnostics can be achieved easily and safely by a single person. Annual water utility savings of £515 have been estimated based on the roof yield.



rainwater harvesting systems

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