Ecological hotel

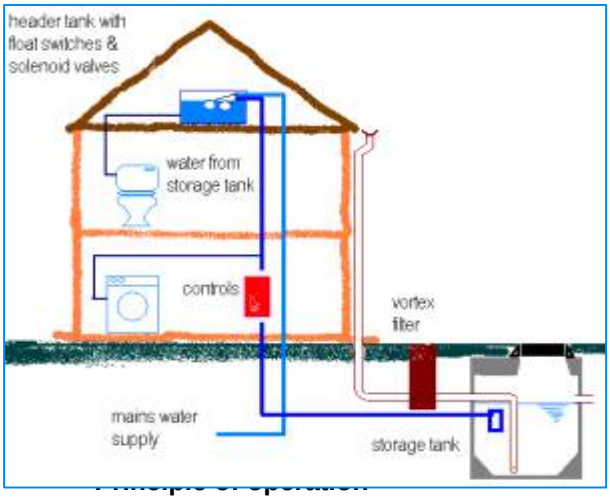
Etap Hotel Birmingham: A hotel equipped to recover rainwater

Presentation

The ACCOR Group, within the scope of its targets for reducing water consumption, uses systems which allow rain water to be recovered for re-use.
The group is thus testing techniques already applied in Belgium, Germany, Sweden and Norway. The recovered water is mostly used for supplying toilets, watering green spaces, maintaining soil and washing vehicles.

In the case of the Etap Hotel in Birmingham, the rainwater is used for supplying the toilets in the rooms. The procedure is simple: the water recovered, generally from the roof is stored in a tank instead of being routed directly to the drain system.

Implementation & Results



The rain water recovery system is a gravity-based system. It has the major advantage that it automatically reconnects to the mains water network in the event of a power cut or pump failure, so as to ensure continuity of supply. The control unit allows the header tank to be filled with either mains water or rainwater, but as long as there is water in the underground storage tank, only this will be used.

Header tank

Underground storage tank

Of the 250 rooms in the hotel, 90 have toilets supplied by the rainwater recovery system. The estimated savings represent between 5 and 10% of the total water use of the Etap Hotel Birmingham. However, depending on the uses, the type of system and the amount of rainfall, even greater savings can be expected (between 25 and 50% of total water consumption).

Financial Aspect

Total annual savings: 780 m3 of water

Return on investment: 14 years

Outlook

The Etap Hotel in Cardiff is currently being fitted out. 140 rooms will be equipped with this type of system, providing an annual saving of 1,150 m^3. The expected payback time is 9 years.