

- Water and sewerage costs may exceed those for heating – and often have greater potential for reduction
- Payback from water efficiency investment is often under a year
- The energy required to supply a megalitre of water creates 404kg of CO2 emissions

## Highly Commended:

### University of Brighton

- Saving On A Rainy Day

In 2003 one of the sector's first rainwater recovery systems was installed in the Watts Building. The system collects water from the roof, and then filters it into a collection tank before use in toilets and urinals throughout the building. In periods of low rainfall the system switches automatically to mains supply.

The scheme has reduced the building's water consumption by 31%, and water costs by £2,446, giving a payback of 4.4 years. An additional benefit is reducing the load on an over burdened storm drainage system in the locality.

David Anderson, the University's Energy Manager, believes that "rainwater recovery should be feasible in most new buildings. It's a low cost, low maintenance, way of conserving an increasingly scarce resource, as well as saving money."



### University of Cambridge

- Metering Saves Water

Since 1988 the University has regularly analysed the 'baseload' and normal consumption patterns for its buildings. Any anomalies – such as unusually high baseloads, or sudden variations from expected consumption (which are usually due to leaks or other wastage) - can then be investigated and, if necessary, remedied. These measures enabled a reduction in water consumption by over 50% - and the annual water bill by over £500,000 - between 1988 and 2003.

In 2003 Cambridge Water replaced older meters with ones producing electronic data, in exchange for the University installing loggers and communications equipment to capture the data (at 15 minute intervals) and send it via SMS to a central PC. Cambridge Water uses the data to manage its system and schedule maintenance, whilst the University can do more detailed and timely analysis and has ended manual meter reading.

Paul Hasley, the University's Utilities Manager, notes that "the total investment in the system - mainly by my predecessor, Dick Ramsay - has been £120,000. Its value was demonstrated when some equipment failed in one of our laboratories. The data enabled us to quickly spot the wastage which could otherwise have amounted to £74,000 by the time we noticed an unusually high water bill."

## Judges' Comments on Water

*"Until recently, water efficiency has generally received less attention than energy efficiency. But rising costs, and the realisation that water is an increasingly scarce resource whose cost will continue to rise, are stimulating action. Fortunately, past neglect means that there are usually many cost-effective minimisation measures available, as the University of Sheffield's admirably planned and executed initiative shows.*

*The University of Cambridge has also benefited from partnership with its water supplier. Its more incremental approach demonstrates continuing improvement opportunities, which are made accessible through its exemplary long-term commitment to investment in metering.*

*One water minimisation option is making use of rainwater for low-grade needs such as toilets. The University of Brighton's impressive installation demonstrates that this can be cost-effective, especially in new buildings."*