

Energy and Water Efficiency

WINNER

Sheffield Hallam University - Avoiding higher water costs through low cost efficiency measures

The drought of 1995 led Sheffield Hallam University to introduce a water conservation programme, which reduced consumption by 25% over the following five years. However, consumption started to rise again after 2000 as the programme lost momentum. In 2002 the work was reinvigorated by the health-related redeployment of a plumber, Bryan Kirk, to the post of Energy Conservation Technician. For Charles Morse, the University's Energy Manager, "it was an obvious opportunity to use Bryan's expertise to lead our water efficiency drive."

The new programme began by compiling a 'league table' of consumption in all the university's buildings. This showed that 25% of total consumption was occurring at a 645 bed Student Village. As a result, Bryan Kirk spent 2 days a week for 6 months at the site to understand the reasons, and to identify and implement improvements. These included restricting flows of hot and cold water to showers and washbasins and fitting displacement devices to WC cisterns. After several experiments, the devices were selected - used plastic milk bottles, cut to size. Charles Morse believes that "this not only uses waste as a free resource, it also raised staff awareness because we asked them to save the bottles they used at work. They not only did this very enthusiastically, they also started to report more dripping taps and leaks."

Over the following years, the experience with the Student Village has been transferred to other buildings. The result was a 15% reduction in consumption across 36 sites, and an average reduction of 24% at the targeted 'Top 5' sites, between 2002 and 2005. This has saved £35,000 annually, and greatly reduced the impact of water price rises that are significantly higher than the rate of inflation.



Charles Morse believes that Sheffield Hallam's experience shows that "even limited time and resources can produce significant water savings. We used simple techniques and basic materials, and also had the most important ingredients - the enthusiastic support of a large number of staff, and a 'champion' who could make things happen on the ground. The fact that Bryan came from maintenance also shows how important that function is in day to day energy and water management."

Bryan Kirk installing a plastic bottle

Judges' Comments on Energy and Water Efficiency

"Energy and water costs are rising and seem likely to continue. Universities and colleges are also under pressure to minimize their carbon emissions - which are indirectly generated by water supply, as well as directly by burning fossil fuel. Energy management is well established in larger institutions but, until recently, water efficiency has generally received less attention.

One result of this past neglect is that it is often easier to find simple but highly cost-effective measures to reduce water consumption than it is for energy. These opportunities are demonstrated by Sheffield Hallam University. Its intelligent use of limited time and resources to identify priorities, and then achieve considerable savings, provides a model for other institutions which have not yet taken action. Notable features include good use of 'no' cost and 'low' cost measures, the quantification of savings, and collaboration with stakeholders. The programme also shows the difference which individuals can make, and the valuable role of maintenance in achieving energy and water savings.