

TITLE:

MYERSCOUGH COLLEGE

DATE: **May 2009**



SUMMARY

Myerscough College has saved 2500m³ of water in the first 11 months of participation in a water-saving scheme. Over the most recent quarter (Feb to Apr 09), consumption has reduced by 25% compared to the previous quarter.

The college expects to save £30,000 over the full three years of the government-sponsored scheme – Aquafund.

INSTITUTION PROFILE

FE and HE Land-based and Sports College
Circa 4000 FTE students, 602 FTE staff
(teaching and non-teaching)
100+ buildings on 6 sites
700 residential places
£25.5M turnover

EAUC COMMENT

This case study provides an excellent example of how an institution can make significant water and financial savings by taking up available initiatives.

PROJECT PARTNERS

Myerscough College
Advanced Demand Side Management (ADSM)
United Utilities

THE PROBLEM

Myerscough College's campus occupies a site with approximately 100 buildings including halls of residence. The original buildings were built in 1960s and the college has expanded significantly in the past 10 years. The underground water supply pipe work is old and has had no major renewal for 40 years.

The college was aware of its excessive water consumption but there were significant challenges to quantify the problem – not least the lack of information about where water was being wasted. The site is complex. There are more than 10 water meters monitoring the various sections of the college including the main campus, farms, horticulture unit, equine arenas and stables.

The key drivers for this project were the opportunity to reduce water costs and the environmental impact associated with high water consumption.

The information gathered is being used to support the college's curriculum, with water use data being analysed by students to suggest more water-saving measures, and also used to calculate the amount used and cost of cleaning sports turf equipment.

THE APPROACH

The college decided to take part in the new government-sponsored Aquafund initiative delivered by ADSM following the receipt of a promotional letter sent to the college. The scheme was created to provide public sector organisations with the funding to reduce water costs and consumption, without the need for any budget.

A base line audit of water consumption was carried out by ADSM for the year ending May 2008, after which the college signed a three year water saving contract. Consumption is being monitored against the base and the impact of various water saving activities can be assessed.

An action plan was produced by ADSM; this included the validation of invoices and the installation of passive infra-red (PIR) sensor urinal controls, displacement bags to WC cisterns and aerators to taps and showers. In addition, the plan included monitoring of night-time water use in order to detect leaks. The college has invested £13,000 in mains isolation valves, automatic monitoring equipment and some repair work as this was outside of the contract with ADSM.

OUR GOAL

- Reduce water consumption from 85,000m³ per year to 60,000 m³ per year on the eight water meters included in the contract.
- Reduce water costs by a minimum of £10,000 per year.
- Reduce the environmental impact associated with water supply by at least 10%.
- Install a borehole to supply 20m³ of water per day to the college's dairy unit.
- Supply robust water consumption data to support modules of the college's curriculum.

OBSTACLES AND SOLUTIONS

Obstacle

- Persuading management to sign a three year contract which appeared too good to be true - the college had seen contracts of this nature previously and experienced the need for additional budget as the work unfolded, so management were naturally sceptical
- Below ground leakage confirmed but unable to identify its general location on the large campus
- Lack of robust data monitoring
- Communicating and managing shut downs in water usage across the campus so infrastructure could be upgraded
- No AMR on the seven ancillary meters around the campus

Solution

- Identifying the problem along with potential costs and savings clearly focuses the mind of management
- The college also sought feedback from the University of Derby which recommended the scheme
- Additional isolation valves were installed to investigate more accurately the source of the leakage
- The automatic meter reader (AMR) was fitted to the main campus meter and meter readings are captured every 15 minutes
- Effective, constructive communications by e-mail alerts to students and staff emphasising the reason for the shut down
- Monthly manual readings of these meters by Estates staff to be introduced to facilitate more robust data

PERFORMANCE AND RESULTS

Installing the AMR on the main campus meter, combined with additional isolation valves, mean the college has more control over and is better able to understand its water usage.

After 11 months on the scheme, water consumption has been slightly reduced. However, there is now the potential to significantly reduce consumption in the future by identifying and fixing leaks, and also through installing water saving devices.

As part of the Aquafund scheme, ADSM produces monthly consumption reports. In December 2008, this identified a potential leak of around 130m³ per day – around six milk tankers a day! The college worked with ADSM and United Utilities to find the leak and it was quickly fixed by the Estates team in January 2009.

The April 2009 Aquafund Water Consumption Report includes further information:-

- The college's current bills are correct and valid for payment
- The consumption trend is satisfactory
- The carbon dioxide equivalent used by this site for water supply has decreased by 21% or 1416 kgs over the last quarter

However, the college still uses more water than similar institutions and will continue to reduce consumption by installing more water saving equipment. The college is confident that further reductions and savings will be realised.

LESSONS LEARNT

Myerscough's first concern was that the Aquafund scheme may be just an information-gathering exercise at some financial cost to the college. However, the information gathered allowed problem areas to be identified and dealt with promptly. The accurate benchmarking expertise provided by the scheme allows good estimates of the size of the problem and potential costs and savings. The scheme is well worth the time and other small investment spent on it. Other lessons learnt include:

- Information is key to managing water consumption – if you can't measure it, you can't manage it
- Night-time usage can be key in identifying leaks or other consumption problems
- Investment in monitoring is necessary in the short term in order to realise savings in the medium term

FURTHER INFORMATION

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ADSM www.adsm.com

More information on the Aquafund can be found at
www.adsm.com/aquafund.php



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