

Case Study

Churston Ferrers Grammar School



Water reduction Case Study for Schools

The school has evening classes, a swimming pool and sports hall used by members of the public. Also bearing in mind the school has maintained high levels of hygiene, the water efficiency for the school has been improved from average to virtually best practice. This was achieved by just tackling the main areas where water could be saved.

Quotation from Sue Foot from Churston Ferrers Grammar School:

"Churston Ferrers Grammar School is a force for change school and keen to implement energy and water efficient solutions. Dart Valley Systems offered to carry out a water survey free of charge and provided recommendations on cost effective solutions to reduce our water consumption. Whilst we obtained a good impression of DVS and their proposals we had the added comfort that they had a Framework contract for water conservation products with OGC buyingsolutions. The case study says it all, to achieve 46% saving in the first year with a payback of less than 9 months was an exceptional achievement. The surveys and work were completed with minimal disruption to the school and we would recommend other schools review the case study and consider the benefits that can be achieved from such an exercise."

Dart Valley Systems Limited has teamed up with OGCbuyingsolutions to provide every opportunity for the education sector to evaluate water usage and implement cost effective water saving solutions.

In 2003 Churston Ferrers Grammar School was selected by DVS and OGCbuyingsolutions to provide a detailed case study with a well managed school to establish some guidelines on realistic cost effective savings. We have been reviewing the savings made since that time.

The year following the implementation of initial water saving initiatives saw a saving of 46%

A typical scenario DVS find is that it is not obvious for a non specialist to identify whether or not urinal controls are functioning properly. The implication of this is that a large percentage of urinal controls fitted by schools in the last 10 to 15 years are not operational. On this site DVS were only confident that 1 out of 7 was working correctly. DVS recommended fitting 6 new urinal controls and setting up a maintenance contract to ensure they continue to function correctly long term.

With around 450 female staff and pupils, and WC's flushing 9 to 11 litres per flush, DVS recommended fitting electronic W.C., Flushvalves in the 15 busiest ladies toilets.

Whilst the WC Flushvalves would of course provide savings in the male W.C.'s, the use is not so high and the payback period longer. DVS concluded that the design of the existing cisterns and pans would cater for one litre displacement bags without reducing efficiency of flushing. DVS would advise however, that incorrect use of displacement bags can result in double flushing and greater water use so careful evaluation is required.

Most of the taps were quite old push taps and not in very good condition. With the exception of one new, toilet block it was considered that taps should be upgraded as and when refurbishments were undertaken. In the new toilet block the push taps were poorly set, the water flow and run time were excessive. In phase 2 of work done, DVS changed these for water efficient self closing non-concussive taps.

Churston had good levels of hygiene, which were not compromised even though massive water savings were achieved.

The savings have been maintained each year since with the exception of 2008 where an underground leak was responsible for a substantial loss of water for a 5 month period. This experience is an example of how a water monitoring system can be beneficial, to quickly identify a leak has occurred.

DVS have introduced a web based Smart Water Metering system which will cater for such eventualities as leakage.

The DVS "Complete Water Manger" is easy to install, user friendly, providing comprehensive data and good value for money. The installation is wireless, using mobile phone technology, with practical solutions for dealing with areas with poor signals. Being web based means that whoever needs to review the data can access it on the web with a password. For example, installations DVS are involved with will be accessed by DVS, our expert partner Company, and our clients. This will enable good communication between the interested parties.

DVS have a network of engineers who will install the loggers on the sites. We will offer complete services to clients, at very affordable prices, which will include options but typically:

- We install the loggers and gather data, providing long term monitoring of water use and trends, with alarms for unusual usage.
- We carry out a survey identifying water use and where savings can be made. This is very often FOC.
- We provide a report with recommendations, forecast savings and expected payback periods for implementing water saving devices.
- Installations are implemented and we can then monitor the savings made.

