

Road to Avalon

Running costs are being shaved at two leisure centres testing a new water treatment system...

Trials of a revolutionary water treatment system are showing impressive savings on running costs at two major leisure centres. The AquaKLEAR swimming pool water treatment system has been installed at indoor pools at Street and Gillingham, for Mendip District Council and North Dorset District Councils respectively. Both test sites are run by Somerset-based Avalon Leisure Ltd, a specialist company that operates swimming pools and leisure facilities on behalf of a number of local authorities.

Leisure Water Solutions (LWS) Ltd, sole UK distributors of AquaKLEAR, approached Avalon's technical manager, Malcolm Baker, in 2001. Malcolm is a self-confessed sceptic when it comes to new products that claim to revolutionise the way swimming pools are operated, having tried a number of so-called 'revolutionary' products that produced no discernible benefits. After in-depth presentations by the LWS team, he agreed to try out one of the units in the Gillingham pool. He agreed to do this because installation of the unit is straightforward and non-invasive; no pipework needs to be cut or altered.

Patented System

AquaKLEAR is a patented system that works by subjecting the water passing through the pipework to a charge, which causes significant flocculation of particles in the water. As they reach the sand filter these flocculated particles sit on top of the sand filter rather than penetrating deeply, ensuring that the pressure does not build up within it. This effect both extends the time between backwashes and reduces the duration of each backwash.

The AquaKLEAR technology also has the effect of killing bacteria and breaking down fixed chlorine. This releases free chlorine back into the water, reducing the formation of chloramines, and their harmful effects. A major benefit for staff and bathers is also reduced smell and irritation as a result of chlorine by-products.

A further benefit of AquaKLEAR for those pools running ozone machines, is that in most cases they can be switched off completely, with significant savings in electricity and



A self-confessed sceptic, Avalon's technical manager, Malcolm Baker, recommends the AquaKLEAR system.

maintenance costs. The technology has been independently proven by Brunel University and the Water Research Company.

Preliminary Results

Gillingham pool has a capacity of approximately 120,000 gallons and was using a traditional sodium hypochlorite solution and



AquaKLEAR passes water through an electrical charge, causing significant flocculation of particles in the water.



As a result of successful trials at Gillingham, two more units were installed at the Strode swimming pools in Street.

news special



Above: Customers and staff alike appreciated the better environment after the installation of the AquaKLEAR water treatment unit.

Opposite: An AquaKLEAR P160 unit was used for the 20,000-gallon infant pool at the Strode pool in Street, Somerset.

weekly backwashing system. A P160 AquaKLEAR unit was installed in the summer of 2001, and provided to Avalon on a three-month money-back guarantee basis. The results were noticed instantly and thus the unit was kept after the initial period.

After a year's analysis, the results were very impressive. Prior to installation, the pool's annual water bill was £6,500 and its sewage bill was £7,500. One year later, these figures had been reduced to £4,500 and £5,500 respectively. In addition, there was a 20 per cent saving in total gas usage and 10 per cent less sodium hypochlorite solution was required. In addition, there is now no need for a separate flocculent (aluminium sulphate), giving a further saving of about £100 pa.

As there had been no other changes to the operation of the facility, these savings were wholly attributable to AquaKLEAR. Other savings that were achieved were in staff time: prior to installation, the team were backwashing weekly through two filters. After the installation, this had been reduced to once



every four weeks, with the resulting cost savings in chemicals, heating and staff time. Time was also saved by the fact that there was no longer a 'tide-mark' around the skim channel to be cleaned.

But benefits were to be found in other areas too. Total Dissolved Solids dropped from 2,000 parts per million to under 1,500 after the installation. Avalon had always gone to great lengths to control their bacteriological levels; tests by the Environmental Health Department on 10 July 2002 revealed that levels were continuing to be controlled, well within acceptable levels.

Perhaps the biggest surprise for Malcolm, though, was the response from bathers. "Topping up after backwashing always causes complaints," he remembers, "as the pool

temperature is reduced. Fewer backwashes means fewer complaints. Everybody also remarked about how totally clear the water was; the only downside was that people could now see the bottom of the pool, with some bathers pointing out the cracked paintwork! There were also many positive comments from bathers and staff that the smell was reduced and that it 'felt better'."

As a result of the success of the Gillingham trial, two more units were installed at the Strode swimming pools in Street. A P200 unit was installed for the 168,000-gallon main pool, and a P160 unit for the 20,000 gallon infant pool in March and June 2002 respectively. Annual cost savings are not yet available but similar benefits are also being found. The reduced levels of di-chloramines and tri-chloramines are also proving to be a major benefit.

Malcolm explains, "Strode is a busy pool with around 195,000 bathers per annum. Before AquaKLEAR was installed, we had 1 part per million of chloramines in the main pool, which was acceptable, but the infant pool has always been more of a problem. Obviously there is less water and there are more 'natural additives', shall we say! We used to keep them to around 1.5 parts per million; with AquaKLEAR, both pools are maintained at less than 0.5 part per million. The results in reduced smell and irritation are noticeable."

Malcolm points out that the cost savings at Strode will not be as great as at Gillingham because of the infant pool, but believes the benefits are worth it. He sums up, "I was astonished by the benefits and cost savings brought about by AquaKLEAR and consider myself a convert. Unfortunately, AquaKLEAR is not cost-effective enough for us to install it at our outside pool, because it is only open three months a year. It was also incompatible with the Ozone system at our Wells pool, but when that system is removed at the end of its life in a few years, we will be adding the AquaKLEAR system there, as well as at any other suitable pools we take on in the future. Because AquaKLEAR can be retro-fitted with no inconvenience, pool operators would be foolish not to take it on trial."

AquaKLEAR technology is now being used by a number of local authorities, health club chains and independent sites. For more information on the AquaKLEAR system contact Leisure Water Solutions. Tel/Fax: + 44 (0) 1749 679599 E-mail: dfitness@aol.com