VEOLIA
WATER

Case Study: Remote monitoring of water *treatment plants*

Veolia Water Ireland (**VWI**) is the Irish subdivision of leading environmental services group Veolia Environment S.A. Focused on the construction and operation of treatment plants for the water and waste-water industries, VWI designs, builds, operates and services treatment plants located throughout the 32 counties in Ireland, typically on long-term service contracts.


Fig. 1 - VWI's Dernakesh Water Treatment Plant.

A key business requirement and differentiator for VWI is its ability to provide effective monitoring services for plants located throughout Ireland. Because these plants are typically situated in remote locations scattered over a range of counties, sending an engineer to a location on a daily basis purely to monitor a site was prohibitively expensive and extremely inefficient. VWI also needed to provide on-line visibility to their clients on the operation of the plants.

VWI required a solution that was flexible enough to be deployed across a wide range of sites with different processes and configurations, from pumping stations to waste-water treatment plants, whilst being reliable, easy to use and cost effective to both deploy and operate on an ongoing basis.

Dexdyne's remote management system (RMS) was evaluated as a solution because it uses standard commercial GPRS SIMs to transmit site data and it also has the ability to show on-demand live site data securely over the internet. Using the drag-and-drop mimic developer package and the included training material, VWI was easily able to create a SCADA-like graphical representation of each of their water treatment plants and pumping stations.
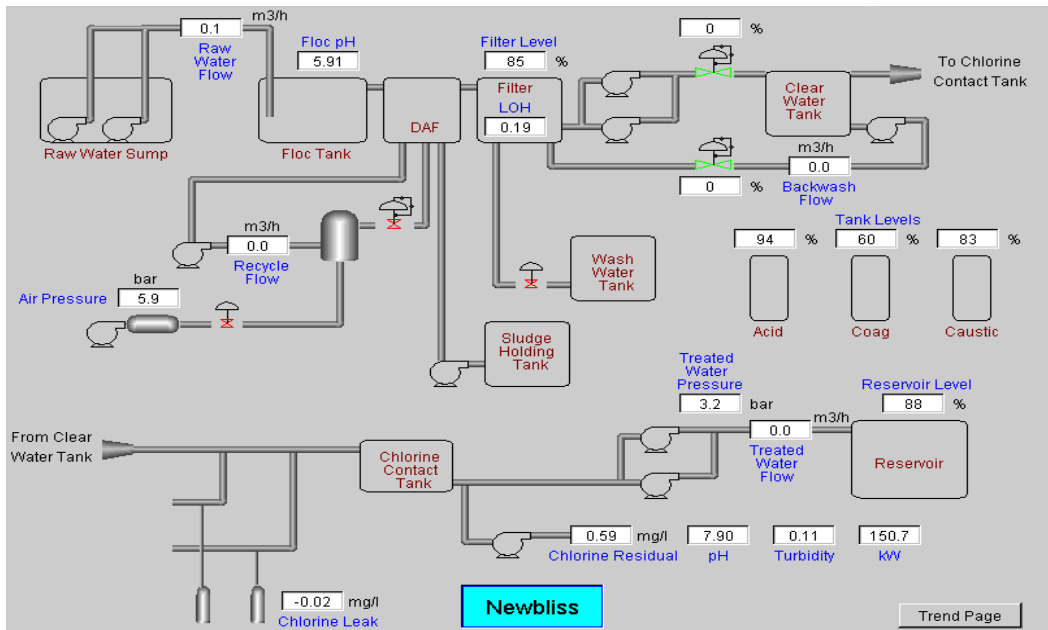
Fig. 2 - Newbliss Treatment Plant SCADA style mimic.

Dexdyne's DX3 remote communication terminal (RCT) was able to connect directly to the PLCs on site through its RS485 Modbus communications interfaces. The RCT was then able to monitor continuously the state of all operational plant parameters and to log data points every couple of minutes ready for transmission back to the Dexdyne Server.

Where sites and engineers are scattered around the country, Dexdyne's RMS can be easily configured to allow engineers and even end customers access to the sites relevant only to them.
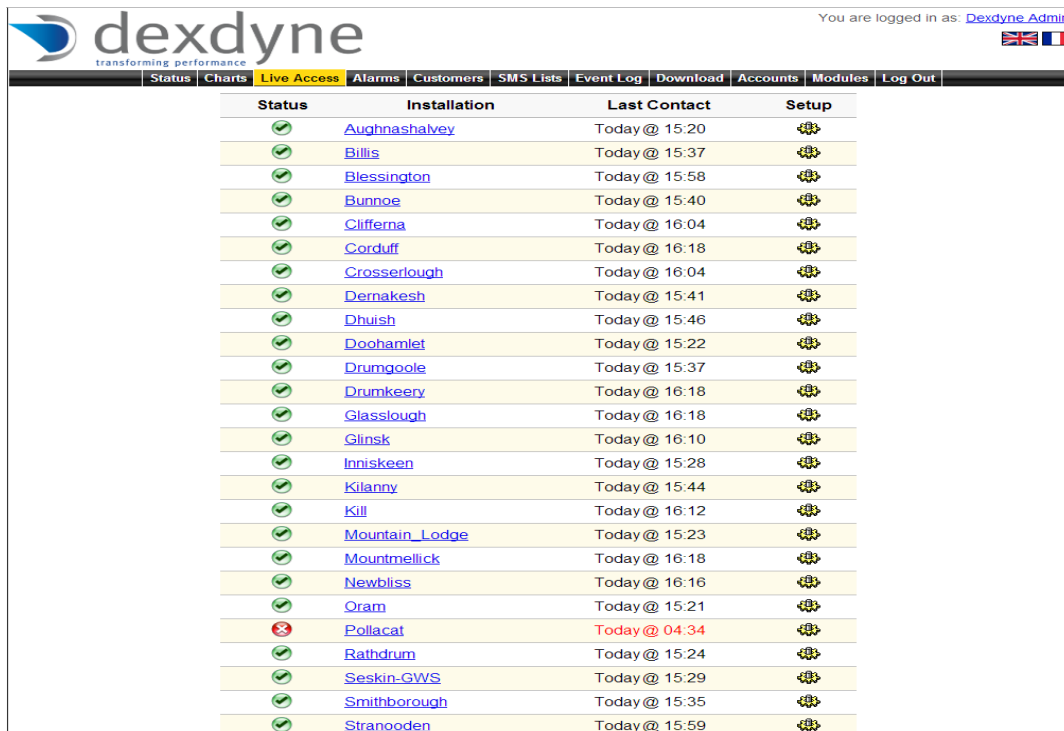
Fig.3 - Dashboard showing entire estate from a single login.

Once in operation, VWI was able to take advantage of the standard Dashboard interface features such as SMS alerts to keep engineers updated if processes on site stray outside user-defined operational ranges. Dexdyne's Dashboard could also produce trend plots of recorded data from any site, allowing historical site performance to be shown.
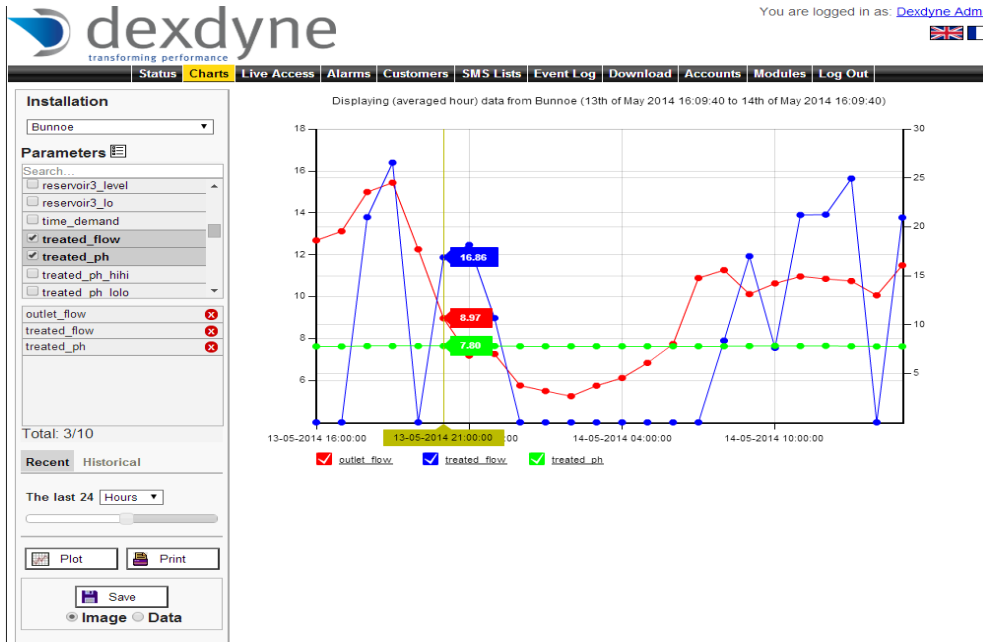
Fig.4 - Dashboard showing charting page.

Having seen the Dashboard facilities and the ease with which their engineers could log in remotely and get an instant view of a site's performance, VWI also asked Dexdyne to produce a computerised version of their paper-based site records entry system.

The site records entry system was installed in the same server and database, without the need to install any additional hardware.
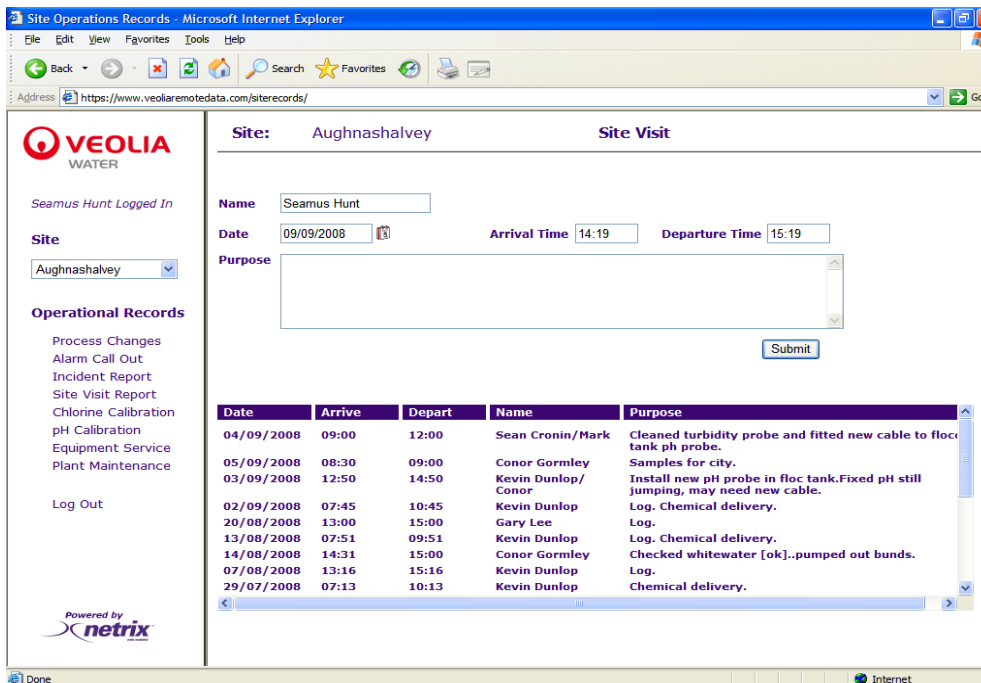

Fig.5 - Completed Veolia Water site records entry system.

Following a successful trial installation, the Dexdyne RMS was quickly retro-fitted to all existing sites. Dexdyne's RMS has since become fully adopted as the *de facto* standard for all new installations and has become a major selling point for VWI when quoting for new business.