

SUCCESSFUL SOLUTIONS AT ST FRANCIS LINKS



St Francis Links – a beautiful golfing estate in the unique Eastern Cape village of St Francis Bay, an hour from Port Elizabeth, Eastern Cape – sports a Jack Nicklaus Signature course, fabulous housing and a sumptuous restaurant. Besides being the venue of many a great round of golf, luxury housing and memorable events, like weddings and Park Runs, St Francis Links is serious about water security, sustainability, self-sufficiency and using less energy to run its facilities.

THE SITUATION

The main sewer pump station had two 48kW motors, and the pumps were not efficient and used high volumes of energy. These pumps would also fail on a regular basis. Another smaller wastewater pump station was high maintenance as the pumps were continually being blocked with rags and other solids. A total of 15 boreholes feed the main irrigation dam for water. These boreholes had an outdated telemetry system by means of radios, and was unreliable in the information that came to the central control unit. Also, there were multiple pump failures as cheaper versions of pumps were installed.

The Estate is supplied with potable water from a 3.6ML reservoir by means of a booster pump station. There were three 22kW motors with pumps

originally installed, but only one was on a variable speed drive (VSD) and never seemed to stop operating. The energy consumed was high. Due to the storage of water in a large reservoir, no free chlorine was being read in the supply water. As a result, a solution had to be urgently found. Due to drought conditions in the area, a solution had to be found in order to produce potable water from a high yield borehole in order to secure water for the Estate's residents and operations.

TOPIC: Water Utilities

LOCATION: Port Elizabeth, South Africa

COMPANY: Grundfos



The installations solved the challenges associated with water security on the Estate, while helping make the staff's lives easier.

THE SOLUTION

The main sewer was equipped with two Grundfos 28.5kW SLV pumps, together with two CUE drives to prevent water hammer. The new pumps are more energy efficient and produce the same results as the older 48kW pumps. The smaller pump station is now equipped with two SEG Cutter Grinder pumps, and the issue of blockages has been resolved. The 15 boreholes have been equipped with MP204 control units in conjunction with the GRM CIU 271 units. The system is online and is far more reliable than the older system that was in place. No more labour is needed to check the boreholes every day as the information is available online. Furthermore, these borehole pumps have all been replaced with Grundfos SP Pumps.

A new Grundfos MPCE 2 Hydro Booster Pump set has been installed in place of the older pumps and motors. The pumps are all variable speed and the energy savings have justified the purchase of the new pump set. Grundfos was able to supply their Oxiperm unit to supplement the water supply with chlorine dioxide, thus resolving the issue of the free chlorine in the water.

The unit is safe to operate as compared to operating gas chlorine systems. Grundfos supplied pumps and dosing equipment for our water treatment works. On the borehole water that is fed to the plant, a new SP Pump was installed in combination with a CUE drive to manage the pressure to the plant.

THE OUTCOME

The installations solved the challenges associated with water security on the Estate, while helping make the staff's lives easier: requiring fewer man hours, saving energy and operating more efficiently. The enormous burden of physically checking pumps everyday is now a thing of the past with the intelligence of the GRM. Concludes the St Francis Links team: "The backup service locally is excellent from Grundfos, and parts arrive within a day or two. The relationship with the local Grundfos partner Waterhouse Trading has grown over 11 years, and we are pleased to have partnered with them through the evolution of their solutions to help this estate become even better. We will continue to look to Grundfos for solutions as we continue to grow."