



Sands of Luce Holiday Park Sandhead Galloway

Case Study



BACKGROUND

Sands of Luce Holiday Park is a family run park, located in picturesque Sandhead, Galloway. This family business has grown rapidly over the last few years and even had to turn holiday makers away due to the sheer volume of bookings they were receiving. So much so, that the Park Manager, Jack Cooper, decided to convert additional land to make it suitable for camping and caravans, to help sustain their recent growth. This meant having to find a suitable solution to treat the wastewater on site as the holiday park has no connection to any mains drainage. Jack enlisted the help of wastewater treatment specialists, Graf UK, to propose a system large enough to cater for the number of visitors during the peak season and run on the single-phase power available on site.

SOLUTION

Graf UK specified and designed a bespoke 2-line 165PE Klaro sewage treatment plant for Sands of Luce holiday park able to run on single-phase power and meet the stringent effluent levels set out for the site by the Scottish Environment Protection Agency (SEPA). The benefit of using a 2-line system is that one line can be shut down during the off-peak season to cater for the lower visitor numbers during that time, and still maintain a high effluent quality. Torbet Plant Hire, a company local to the holiday park, were then enlisted to install this one of a kind system, along with McClymont Construction, the site's electrical contractor, who were responsible for connecting power to the plant.

RESULTS

This unique system uses 4no. Carat XL 16,000L tanks and 2 compressors and control panels. The initial two 16,000L Carat XL tanks are sludge storage tanks, collecting wastewater from the site. The sewage is then air lifted into the two SBR 16,000L Carat XL tanks, which house diffusers at the bottom of each tank. These diffusers pump air into the tank to help keep the microorganisms alive, these microorganisms then biologically break down the solids. After the aeration has finished, the settlement phase begins, in which the solids inside the SBR tanks settle at the bottom of each tank, creating a clear water pool on top, which is then discharged out of the tank into a soakaway. After the treated effluent has been discharged, the sludge that is left sitting at the bottom of the SBR tanks is then airlifted back into the primary sludge storage tanks. Each SBR tank has its own compressor and control panel, feeding each tank with 4 air hoses, both running on single phase power. Systems of this size usually run on 3-phase power needing only one compressor and control panel.

“ Our project was demanding in two main aspects. Firstly, the location of the plant had a high-water table which was influenced by tidal water, meaning we need a low profile solution and would not require concrete foundations. Secondly, due to our coastal location the plant needed to adhere to the most stringent effluent levels imposed by SEPA. Our contractors and electrician both commented on the intelligent design of the system allowing for a simple install and convenient maintenance. I have been very impressed by the product and service provided by Graf UK, I will certainly use them again in the future and would recommend them to any operator. ”
Jack Cooper, Park Manager at Sands of Luce Holiday Park