

# SEWTREAT TO PROVIDE Eco-Friendly Wastewater Treatment TO THE TOURISM INDUSTRY

*By making use of the latest advancements in sustainable wastewater treatment combined with the creation of their own bacterial strains developed in-house, SewTreat is able to answer the needs of lodges in remote areas with efficient, affordable and eco-friendly wastewater treatment solutions.*



SewTreat is a proudly South African company offering specialised, modular biological wastewater treatment plant designs tailor-made for the South African and African market. Their approach is based on return activated sludge technology incorporating submersed aeration media. This enhanced bacterial action ensures a highly effective treatment process boasting a very low carbon footprint, minimal capital input and low maintenance requirements.

“Our goal is to treat nature with nature through sustainable engineering solutions that are evident in our superior proprietary biological technology. The modular design of our treatment plants makes us a leader in providing wastewater treatment solutions for the African continent,” says SewTreat spokesman, Theunis Coetzer.

Coetzer explains that SewTreat’s products align directly with the trend towards biomimicry that environmentally conscious tourism operations have embraced in recent years. Biomimicry means learning from and then emulating natural forms, processes, and ecosystems to create

more sustainable and healthier human technologies and designs. SewTreat has developed wastewater solutions that use natural biotechnology to create a sustainable green solution that can be tailored to any lodge’s needs.

In terms of the tourism industry there needs to be a solemn drive to ensure that we are custodians of our varied and diverse biospheres. By taking responsibility of the wastewater and recycling 100% of the effluent, lodges can increase their irrigation capacity while being a responsible user of our scarcest resource, water.

“The earth is a closed system so we cannot import the resources we have exhausted, nor can we simply export the waste we create. If we look at clean drinking water from this perspective, it becomes clear that we have to find ways of treating water in a way that makes it reusable,”

Coetzer contends. “SewTreat has developed a highly effective multiple strain bacteria range that gets added to our plants. This specifically bred bacteria, feed on the complex substances in the wastewater, converting them into simpler substances and improving final

effluent with a reduced environmental footprint.”

He notes that globally, the composition of effluents discharged to receiving waters, is regulated by the national environment agencies. The legislation is concerned with the prevention of pollution and therefore sets concentration limits on dissolved organic carbon (as BOD or COD), nitrogen, phosphates and other compounds which cause eutrophication in receiving waters. It also attempts to limit the discharge of known toxic chemicals by setting allowable concentration limits in the effluent. “If we consider that 100% of the effluent can be recycled and if done properly, there is no doubt that through this, we are capable of providing large banks of water that previously may not have been considered as ‘safe’ for the environment or community.”

Biological wastewater treatment is an accepted practice used worldwide. The process involves confining naturally occurring bacteria at a very high concentration in the treatment process, whether it is in plastic type, containerised type or civil constructed type treatment plants. From here this



# Innovations



bacteria, together with some protozoa and other microbes (collectively referred to as activated sludge), are treated in an anaerobic and an aerobic process. They are then returned to the anaerobic phase to eliminate sludge accumulation and waste generation. "In a nutshell, the bacteria digest all impurities and the wastewater is then cleansed. The treated wastewater or effluent can then be discharged to receiving waters as in rivers or the sea or alternatively, used for irrigation, flushing of toilets and general non-potable uses," explains Coetzer.

Besides the environmental benefits, SewTreat's product offering has been tailored to the operational needs of lodges operating in Africa. "We have developed our products and services to embrace our customers' operating environments and the on-going demand for environmental, social and financial sustainable solutions," Coetzer explains. "The team at SewTreat has extensive expertise throughout various disciplines and so we are able to offer turnkey services which incorporate consultation, design, manufacturing, installation, construction and operational support to our clients that meet all legal and industry related compliance."

Their Plastic HDPE Tank wastewater

treatment plant range makes use of plastic 'Jo-Jo' type tanks that are connected in series or parallel depending on site space requirements or layout. The plant is wholly constructed and cold commissioned before delivery to the clients premises. The installation time required on site is minimal – a 50kl per day plant can be assembled on site in less than five days. A guarantee of up to 20 years is offered on the tanks depending on the type of tanks used in the plant. "We developed this range based on a need we saw in the market for a more cost effective solution for sewage treatment," Coetzer explains, although he notes that while the plastic plants are cost effective in terms of capital expenditure, they do carry very high shipping costs and so he does not recommend them for installations outside of South Africa.

SewTreat's DIY plants are a very cost effective alternative solution to septic tanks and soakaways and allow the final effluent to be reused. Coetzer explains, "These plants are designed for small applications such as households and lodges. They are so easy to install that clients could do it themselves which creates even more cost saving, although we can do the installations for them as well." SewTreat offers two types of DIY

plants – above ground installation or below ground installation. The above ground system is the most cost effective and can be installed with minimal excavation and construction required. The below ground installation is more aesthetically pleasing as they can be installed underground and covered with vegetation. The modular construction of the plants means that expanding them in the future is easy and they are gravity fed (depending on the level of the incoming pipe).

Coetzer concludes by saying: "We hope that by offering wastewater management products that are cost effective, easy to install, simple to maintain and provide a green waste solution; we can help lodges move towards a greener future. Preventing further damage to the environment will require a fundamental shift in how tourism operations conduct their business and manage resources. Changing how you treat your wastewater to a method that results in reusable effluent is one step in your contribution to sustainability where the long term beneficiaries will be Africa's nature, wildlife and resources."

For more information, contact SewTreat on +27 (13) 690-3912 or [www.sewtreat.co.za](http://www.sewtreat.co.za)