

WASTEWATER

Innovative wastewater management

Lanseria Airport has commissioned and developed an expert WWTW, which has also attracted the participation of Lanseria Corporate Estate, Gauteng's newest upmarket industrial property development.

Forming part of Lanseria Corporate Estate's large-scale R200 million investment in infrastructure, the new wastewater treatment works (WWTW) is one of the plants in Gauteng that complies with the City of Johannesburg's new and extensive wastewater management regulations. In addition to many other advantages, this green awareness solution means that treated domestic sewage will be reused to irrigate both the airport and Lanseria Corporate Estate, reducing demand on otherwise potable water supplies.

Lanseria Corporate Estate is a joint venture by an investment consortium including Efcon Capital and New Property Ventures. It is marketed by Montagu Property Group and Property Logic.

Industrial property developer Jurgen Erhart of Efcon Capital believes this environmentally focused wastewater solution delivers significant benefits for the estate's growing numbers of investors, which include many top corporates.

The joint wastewater treatment project started when the original ponds that received wastewater across the greater Lanseria International Airport area required relocation owing to runway expansion requirements, effluent requirements and current capacity limitations. At the same time, the bordering Lanseria Corporate Estate was in its planning stages.

According to Erhart, "This presented an ideal opportunity to maximise synergies and create a world-class wastewater treatment solution that would benefit both the airport and Lanseria Corporate Estate. Given Lanseria Corporate Estate's commitment to safeguarding the environment, we also felt strongly that this was a sustainable option that would serve longer-term interests."

Wastewater specialist Tecrover was approached to develop the best solution to meet Johannesburg Water's specifications and other future requirements. This resulted in a dedicated mechanical biological wastewater application, implemented

over three phases. The consultant appointed was Virtual Buro and the civil contractor was Infracore, while the process design, civil geometrical design and mechanical equipment were provided by Tecrover.

"Tecrover provides a turnkey solution to WWTWs, with our focus aligned to provide clean water for future generations, thus every plant is a tailor-made solution to fit the client's specific needs," says Zack van den Berg, managing director of Tecrover.

Based on the worldwide accepted activated sludge principle, the biological process includes key technology features that deliver an efficient and cost-effective solution to reduce organic carbon and nitrogen compounds to environmentally acceptable levels. This helps to protect the surrounding environment further.

PATENTED TECHNOLOGY

Tecrover's patented horizontal aerators transfer oxygen into the biomass for access by the aerobic-dependant micro-organisms and mix wastewater to ensure

Pictures courtesy of Tecrover



Tecrover's patented horizontal aerators/pumps, to satisfy oxygen demand in reactor and pump mixed liquor into the secondary settling tank