

Case Study: Osona Village

Turning Wastewater
into a Green Oasis.

Overview

In the pioneering development of Osona Village, Netvend Metering Solutions has partnered with Calcamite to overcome the lack of standard municipal sewer infrastructure.

Calcamite's expertise was pivotal in designing and implementing a wastewater treatment solution capable of processing 170,000 liters daily. This innovative system not only treats but repurposes wastewater for irrigating the village's green spaces.

Requirements/On-site challenges

Faced with rapid population growth, Osona Village's existing wastewater infrastructure required an upgrade. Calcamite was tasked with extending the current treatment plant's capacity, ensuring that the increased demand would be met without compromising environmental or human health.

The enhanced system was designed to produce effluent suitable for release into the environment through irrigation.

Solution

Calcamite expanded the village's capabilities with additional below-ground septic tanks and Bio-reactors, seamlessly integrating them with the existing system. This expansion ensured the necessary retention time for safe, eco-friendly effluent production. Following treatment, the effluent is disinfected with chlorine to ensure its safety for irrigation use, preventing disease outbreaks.

Results

The upgraded wastewater treatment plant consistently produces effluent that meets or exceeds the National Water Act's General Standards for effluent quality, demonstrating the system's high efficiency and reliability.

Client information

Nestled near Okahandja municipality in Namibia, Osona Village is set to become a vibrant community hub with 10,000 dwellings, educational facilities, commercial areas, and light industry, all crafted with sustainable living at the forefront.



Location

Osona Village, Namibia



Industry

Housing Development



Plant size

170kL per day



Project date

05/07/2019



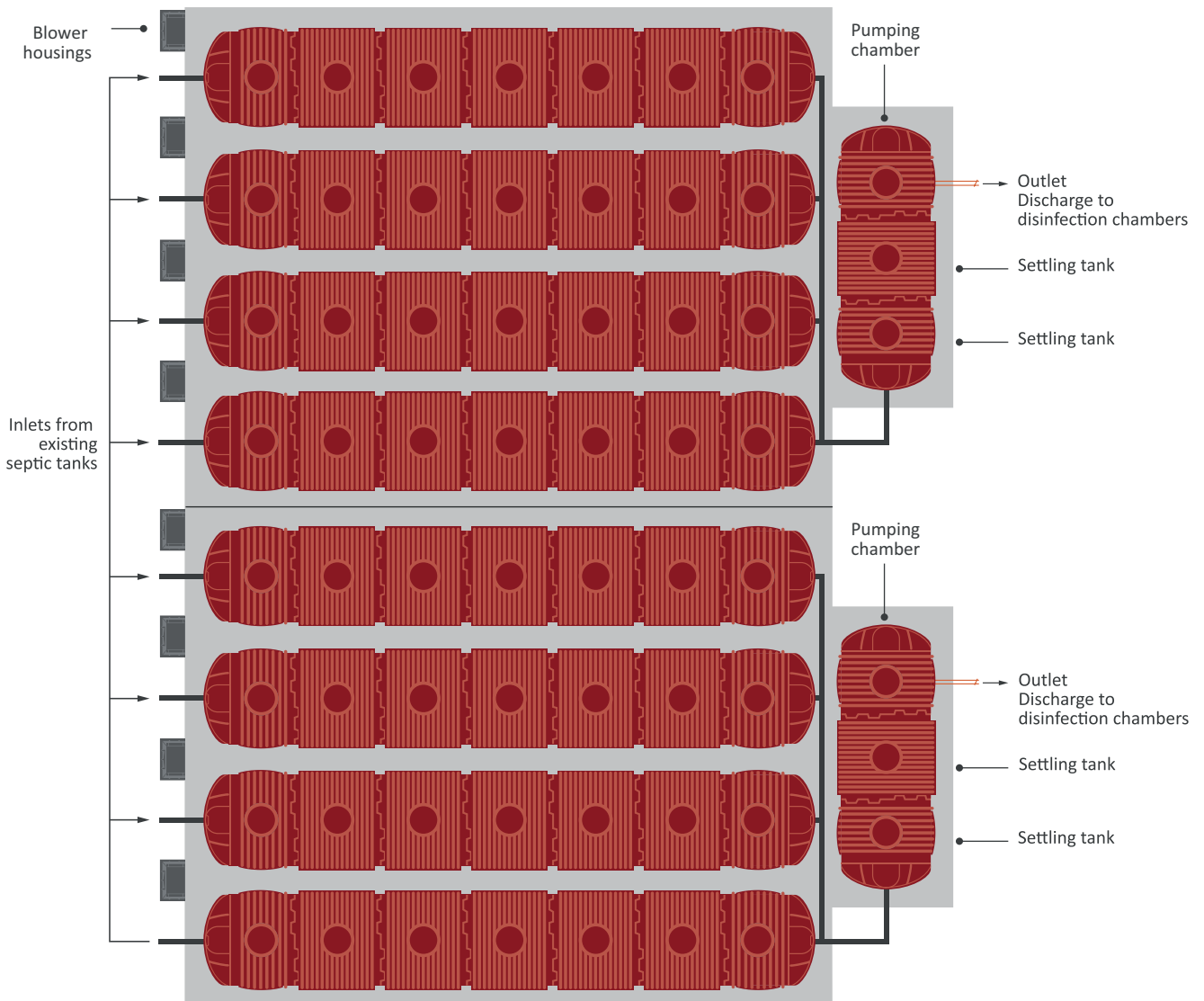
Case Study: Osona Village

Turning Wastewater into a Green Oasis.

Plant specifications

Top view

ADWF: 150m³/day
Plant type: Below ground
(Bio-reactor)



Conclusion

The Calcamite wastewater solution at Osona Village represents a triumph in sustainable development. By converting wastewater into a resource for irrigation, the project conserves fresh water, protects the natural environment, and safeguards the health and well-being of the village's residents, ensuring a green, flourishing community for generations to come.