

LUMWANA COPPER MINE, BARRICK GOLD - ZAMBIA, AFRICA

This large MBR sewage treatment project was prompted by the copper mine's planned expansion, which included the addition of a new conveyor to transport ore to a nearby crusher. The result would be additional mine tailings at the site. With the current tailings pond approaching capacity, and the existing conventional wastewater treatment plant directly in the expansion zone, the mine operator sought a large scale treatment system to address the mine's growth – and the 8,000 person community supporting the project.

Upon consideration of various options, the global mining company selected newterra's modular Membrane Bioreactor (MBR) system for the site. The key factors in the choosing newterra for the project was the scalability and portability of our container-based solution. The system is deployable in discrete 3-container treatment trains that can be added if the mining community grows, and later removed if capacity requirements decrease. This modular design also allows the treatment plant to be moved in the future without leaving any assets in the ground.

Equally important to making the mine a more sustainable operation is newterra's innovative MicroClear™ UF membranes. They treat sewage to the high standards established by the World Health Organization (WHO), thus allowing reuse for irrigation, dust control and other applications, or direct discharge to the local river.

The 26-container system features sludge thickening and dewatering equipment that allows on-site management. The dry filter cakes could ultimately be use as fertilizer for local agriculture. The sophisticated system also incorporates newterra's advanced telemetry for monitoring, control and trouble-shooting half way around the world.

Capacity: 1,500 m³/day
Installed 2013





newterra GmbH, a subsidiary of newterra Group Ltd, is the technical center of development and excellence of the globally successful MicroClear® flat sheet membrane for MBR (membrane bioreactor) applications. The evolution of the filtration module, by specially developed and optimized production machines, to the ISO 9001 certified manufacturing process of the MicroClear® membranes, is 100% produced at the site in Langgoens, Germany (near Frankfurt).