

TRICKLE BIO FILTER BIOLOGICAL WWTP

WAIHOU TOWNSHIP,
MATAMATA-PIAKO DISTRICT COUNCIL

In Mid 2012, Kliptank completed a project for a Trickle Bio Filter Biological WWTP for the Waihou Township, Matamata-Piako District Council.

THE SPECIFICATIONS OF THIS TANK ARE:

- ◆ 7.64m diameter
- ◆ 4.75m high

The Matamata-Piako District Council's existing oxidation pond was oversized, running at only one-third capacity. The addition of the Kliptank Trickle Bio filter insured the WWTP met their resource consent requirements 365 day a year.

The trickle filter consists of a bed of plastic media which pond treated effluent flows via a rotating spray bar causing a layer of microbial slime to grow. Traditionally the tank has been a concrete structure, however the consultants and council engineers chose an innovative design by Kliptank and the results were not only a significant cost saving it resulted in vastly improved project delivery times due to the speed of delivery for the locally manufactured and modular tank.

The consulting engineers process required a concrete base to be built with an integrated trickle spray bar system. Kliptank were able to use this as the base for the tank. The effluent water is sprayed in via the spray bar then "trickles" through the biological filter media drawn downward toward the sump by gravity. As the water flows down through the media, it is exposed to free-moving air, which keeps the water oxygen rich. The high oxygen levels in the water in the tower improves the efficiency of the nitrifying bacteria providing biological filtration. The filtered water then trickles out the holes at the base of the tank and then directed to a UV Filter for final treatment prior to irrigation to land.

This is another demonstration of how the Kliptank design and engineering team along with the Kliptank Operations team worked collaboratively with MWH and Brain Perry Civil to meet theirs and the council's requirements.

CLIENT: Matamata-Piako District Council
CONSULTANT: MWH New Zealand Ltd
MAIN CONTRACTOR: Brain Perry Civil

The series of photos shows the construction process and the workings of the Kliptank.



0800 255 222
WWW.KLIPTANK.COM