

# CLEVER BOLTED ROADTRAIN® PACKAGED PLANT FOR MORO VILLAGE STP

## CASE STUDY



Another of our successful bolted Roadtrain® installations was completed at Moro village within the Oilsearch mining lease in the Papua New Guinea southern highlands, once again demonstrating:

- Ease of installation for logistically difficult sites.
- Scalability for sites where capacity may increase over time.

The Roadtrain® treatment system included:

- Inflow splitter
- Aeration
- Clarifier
- Chlorine detention

The plant is based on the intermittent aeration treatment process.

The incoming sewage is aerated in the aeration tank. During the aeration phase the bacteria enter an aerobic state to oxidise the carbonaceous pollutants. When the blowers cycle off the tank enters into the anaerobic state and bacteria convert nitrites to nitrates.

Aerated liquor is decanted from the tank via a control float and discharged into the acquiescent zone of the clarifier where treatment is split into a sludge train and an effluent train.

For the sludge train, suspended solids settle out of

solution into the bottom of the hopper to be airlifted back into the aeration tank to seed active bacteria into the biological treatment process. Once per week sludge is decanted out of the base of the hopper for disposal to maintain a vibrant biological community. Scum is also skimmed off the top of the clarifier and returned to the aeration tank for further treatment.

For the effluent train, effluent is decanted off, behind a scum baffle, via the effluent weir trough and discharged into the chlorine detention tank where chlorine is dosed and mixed with the effluent for discharge into the local aquatic environment.

The bolted panel Roadtrain® is a flat pack system reducing logistical issues for sites with limited road access or absence of cranes. Installation crews have used Hiab crane trucks on a number of occasions and in one instance by Vertol helicopter replacing cranes.

In the Moro case, the plant installed in 2015 was a capacity building addition by adding a flow splitter to augment an existing identical Hydroflux bolted Roadtrain® installed in 1990.

Item	Value
Capacity	300 EP
Process	Extended aeration
Flow	140 m3/d
Design Configuration	Bolted Tank
Year	2015