



## OFF-SEWER CORRUGATED PACKAGING PLANT ADHERES TO STRICT NEW ZEALAND ENVIRONMENTAL GUIDELINES

A robust wastewater treatment solution from Aerofloat achieves outstanding results against stubborn ink waste

### BACKGROUND

One of the world's largest packaging companies built a new \$100m corrugated packaging plant in New Zealand. The off-sewer plant delivered a significant increase in capacity for the packaging company and used leading technology to ensure sustainability was at the core of its design.

The wastewater from the plant contained a mixture of ink waste, starch solution and boiler blowdown water. The plant was not connected to the mains sewer and therefore a strong focus was placed on finding an environmentally sensitive and suitable treatment solution.

### THE NEED

The installation of a new \$100m off-sewer corrugated packaging plant required a wastewater treatment system to treat the ink waste, starch solution and boiler water to a standard suitable for irrigation or reuse.

### THE SOLUTION

Aerofloat's wastewater treatment system utilised a range of technologies to ensure the wastewater could be reused within the processing plant or irrigated around the site.

### THE BENEFIT

The Aerofloat solution allows the plant to adhere to the strict environmental guidelines set out by the EPA.





## THE AEROFLOAT SOLUTION

Aerofloat was engaged to do extensive design and planning of the wastewater treatment system for the site. Aerofloat's team of engineers used 3D modelling to refine the plant design prior to being awarded the project. This ensured a polished and detailed design was presented with an all-inclusive price, that meant no surprises for the packaging giant.

**Aerofloat's custom solution used the following technologies:**

- Patented Dissolved Air Flotation (DAF)
- Patent-pending Moving Bed Biofilm Reactor (MBBR)
- Sand filtration
- Ultra-filtration
- Reverse osmosis technology

**The clever Aerofloat design enabled the treated wastewater to be 100% recycled within the corrugated box plant, whereby:**

- RO Permeate could be used for boiler makeup water
- RO Reject could be used for starch makeup water

## RESULTS

Uniquely, the Aerofloat solution produced effluent to such a superior quality that 100% of the treated wastewater could be recycled back for reuse within the corrugated packaging plant.

The plant operator also had the choice to irrigate the treated water to the surrounding grounds. The final effluent quality results showed SS, BOD, COD, N, P, TDS and SAR were all below discharge limits set by the local water authority/EPA. This ensured the packaging plant achieved and maintained its commitment to the local New Zealand environment.

