



CONTAINERIZED WATER REUSE PLANT

United Kingdom, 410 m³/d

Aim of the Project

The project involves the treatment of wastewater from a beverage production facility in the UK. As the incoming effluent is already pretreated by the client, the recovered water is returned as process water, reducing brine discharge while increasing the volume of water reclaimed for factory use.

Lenntech engineered and supplied a fully automated containerized treatment unit designed to meet strict quality and performance requirements. The installation includes water conditioning, a Reverse Osmosis (RO) unit, an intermediate storage tank and a distribution skid.

Prior to full-scale design, laboratory tests were carried out at Lenntech's facilities to validate the suitability of RO technology and to determine the optimal process parameters. RO was selected over alternative technologies because it offered the most cost-effective solution while still meeting the client's performance specifications.

The plant is operated via a PLC-based automation system, providing real-time data acquisition, monitoring, and remote operation capabilities.

Key accomplishments

WATER
RECOVERY

75%

CONDUCTIVITY

< 100
μS/cm

WASTEWATER
DISCHARGE
REDUCTION UP TO

75%
WITH WATER
RECLAIM UNIT

Scope of Work

- ▶ Engineering, manufacturing and assembly
- ▶ Proof-of-concept laboratory tests
- ▶ System containerization
- ▶ RO recovery up to 75%
- ▶ Dedicated dosing room
- ▶ Rinse/CIP station
- ▶ Supply of RO Fouling resistant membranes
- ▶ Water quality monitoring
- ▶ Advanced control for fully automatic operation
- ▶ Top brand equipment selected according to client's preferences

▶ FEED WATER QUALITY

Conductivity: 1500 μS/cm
Hardness: 310 mg CaCO₃/L
TOC: 12 mg/L

▶ PRODUCT WATER QUALITY

Conductivity: <100 μS/cm
Hardness: < 20 mg CaCO₃/L