

CASE STUDY

SOLVING INCOMING WATER QUALITY ISSUES ENSURES HIGH STANDARDS FOR SHARP'S BREWERY



With water making up around 95% of the total content of beer, consistent, pure and taste-neutral water is crucial to creating the perfect pint. With municipal supplies delivering changeable quality and imbalanced mineral composition, our customer needed a reliable solution.



'When you're producing a premium product, first-class ingredients are essential. End users expect a repeatable high quality experience and our customer had this at the heart of their business,' explains Bill Denyer, European CEO at Envirogen Group.

Denyer explains: 'Unfortunately municipal water can show huge ranges in mineral composition and in the suspended solid content. Although it will meet the safety standards set for the water companies, the taste can vary widely depending on the location, the time of year and various other downstream issues. Since water is such a major ingredient in beer, even small changes can taint the final flavour.'



A BESPOKE MULTI-STAGE WATER TREATMENT SYSTEM - THE COST EFFECTIVE SOLUTION

Denyer continues: 'Sharp's Brewery was experiencing very specific issues with high suspended solid and colloidal matter concentrations. Additional high trihalomethane (THM) content was producing a flavour taint.

'Analysis of the current plant, and examination of the further plans to double brewing capability, meant that our engineers could design the solution to fit the existing machinery with the expansion strategy in mind. With a toolkit of some of the best filtration systems in the world, we don't deliver a one size fits all approach. Designing the system to solve the exact problems experienced by the client means that they receive the most efficient solution, and it's often the most cost effective too.

'Appointing a dedicated project manager, with extensive water engineering experience, meant that the customer had one point of contact throughout the whole project. Current operational tasks were carefully understood to ensure that installation and commissioning had little impact on the day to day delivery.

'Using 3D modelling software we could demonstrate the entire proposed plant in situ, combining the existing and new technology all within the exact dimensions of the brewery. This ensures that all parties completely understand the planned changes and we can address any variations or issues before manufacturing commences.'

was tight, we used laser measuring to ensure that the exact proportions of the factory were incorporated into the design software.'



OUR SOLUTION INCLUDED:

- Deep bed multimedia iron removal system to remove solid matter, reducing the backwash frequency and increasing capacity
- 24-hour steam sterilisable duplex carbon filtration system – to reduce THM and chlorine and destroy microbes
- 75m³ storage vessel to accommodate buffer store when water supply varies in volume and quality
- PureChlor chlorine dosing system to control microbial content in storage vessels – without introducing further flavour changes
- Reverse Osmosis systems to further increase the water quality as well as recycling water for reuse
- Ongoing service and maintenance contract for peace of mind and optimum operational efficiencies

The entire plant was built with scalability in mind, future-proofing the plant for expansion.



THE ENGINEERING MANAGER,
at Sharp's Brewery stated:

"...Envirogen's knowledge and experience within the Beverage Industry is excellent. They understand the way we operate, the standards and quality we require and as a consequence have provided us with an efficient, cost effective water treatment solution."

KEY OUTCOMES:

- Periodic flavour taints eliminated
- Effluent production reduced
- Overall running costs decreased
- Brewing capability increased from 5m³/ hour of incoming water to 10m³/hour
- Production capability ensured with buffer supply of water
- The system is scalable to meet the requirements for growth at the factory



ABOUT THE CLIENT

Sharp's Brewery is a British brewery founded in 1994 in St Minver Lowlands, Rock, Cornwall, by Bill Sharp. Since 2011, the brewery has been owned by Molson Coors. It is best known for its flagship ale Doom Bar, the UK's best-selling cask and bottled ale.



ABOUT ENVIROGEN

Envirogen is a leading international provider of water and wastewater treatment solutions. We solve complex challenges relating to water availability and quality, and help our customers to increase productivity, reduce costs and meet environmental and sustainability targets.

We do this through offering:

- Best in class water and wastewater treatment and process filtration technology
- Expertise in design, project management and engineering
- World class manufacturing and servicing capability



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