

A tale of ancient and modern as Alfa Laval celebrates Stonehenge sustainability success with partners

Membrane bioreactor at Stonehenge

Introducing the latest technology to revolutionize visitor facilities at one of England's most ancient historic sites has been at the heart of an enduring Alfa Laval sustainability success story.

Stonehenge, in Wiltshire, is a protected World Heritage Site, managed by the English Heritage Trust, which attracts more than a million visitors a year.



Nijhuis approached Alfa Laval to provide a solution for recycling final effluent for non-potable uses, with some key requirements, including the installation of an aboveground system and the provision of a sufficient supply of high quality recycled (grey) water for use in toilet flushing and irrigation.

These solutions had to meet the UK Environment Agency's permit requirements for discharge to a field drain and minimize any potential odor and noise emissions due to the system's proximity to the Visitor Centre and surrounding landscape of the historic monument.

The installation of an MBR (Membrane bioreactor) plant was identified as the most suitable solution, with its compact design, high effluent quality capacity, and ease of operation, making it a robust solution to accommodate the growing numbers heading to the tourist attraction.

Ten years on and the system has proved to be a stunning success – with Alfa Laval ensuring over the years that it is running with the latest technology, replacing the original MFM100-100 module with a LowResist MFM080 two years ago.

"The MFM-80 module can handle seasonal fluctuations in capacity exceptionally well and has consistently delivered high-quality effluent at this exceptional site, preserving the local environment. For a company like ours, which specializes in adaptive solutions for sustainable and resilient water use, energy, and resource recovery worldwide, this achievement is crucial," says Nathan Jones, Operational Contracts Coordinator at Nijhuis Industries.

Emmanuel Joncquez, Environmental and Process Engineer with 15 years of experience in working with MBR wastewater treatment, has been the key Alfa Laval contact on the project, ensuring the integration of the innovative membrane technology has effectively minimized the impact of pollutants coming from wastewater, achieving a remarkable positive environmental impact.

Alfa Laval takes pride in its historic success with Nijhuis Industries at Stonehenge and anticipates many more years of fruitful collaboration as enduring as the stones themselves!

MBR - Membrane bioreactor

MBR technology is a future-proof solution for the treatment of both municipal and industrial wastewater.

Alfa Laval's membrane modules for MBR bring together the advantages of hollow fibre and flat-sheet technologies, and offer trouble-free wastewater treatment at a low operating cost.

The systems offer maximum resource recovery, minimal costs and a circular-economy operational model.



Alfa Laval LowResist MBR technology



Alfa Laval LowResist MFM080 module

When you have between 8,000 and 11,000 people visiting your treasured historic site every day during the hot summer months, managing the attraction in a sustainable way is absolutely key.

That's why MBR, with its compact and containerized process – producing solid-free, high-quality effluent that enables water re-use – has proved the perfect solution for Stonehenge.

Alfa Laval is proud to be part of that robust solution, which is set to continue delivering results in 2024 – even if Stonehenge beats its record of 1.57 million visitors in a year!



Compact and containerized technology



Sustainable water re-use solution