

Case Study



BIOMARBLE FROM WARDEN BIOMEDIA RANGE SELECTED BY WPL FOR THEIR LARGEST TERTIARY TREATMENT PLANT PROVIDED FOR YORKSHIRE WATER'S DANESMOOR SITE

WPL were challenged with the task to design and manufacture the largest bespoke modular steel wastewater process solution (N-SAF) the company have ever supplied. The unit had to handle 50 l/sec FFT, almost twice the average, so something out of the ordinary was devised.

Yorkshire Water's Danesmoor site required a tertiary treatment plant to treat the residual ammonia from the wastewater being discharged to watercourse. As part of a £2 million upgrade at Yorkshire Water's site, the revision was imposed to meet the latest regulations on water quality set by European legislation (the Freshwater Fish Directive).

The Yorkshire Water contracts delivery partner Byzac Entec commissioned WPL after a formal tendering process against the Yorkshire Water asset standard and taking into account whole life costs.

WPL's design engineers came up with eight modular tanks manufactured from steel, as per specification, which were assembled off-site in the factory.

Biomarble was selected from Warden Biomedica random filter media range to provide ultra-efficient and cost-effective tertiary treatment in the WPL Ltd wastewater process solution (N-SAF).

With the philosophy of increased surface area, the eco-friendly trickling filter and biological filter media are injection-moulded in recycled polypropylene with specific design features to increase the efficiency of the effluent treatment process.

The excellent ventilation and high voidage performance of Warden's Biomarble media make them extremely effective in wastewater treatment applications. Triangular fins increase the total surface area and encourage the formation of the biological films of bacteria, protozoa and fungi which will eat and biologically break down the organic content. The shape of the media has a significant influence on application and must be considered along with specific surface area and void ratio. The design also ensures high voidage to prevent blocking that might otherwise slow down the process. The serrated edges of the fins enable them to interlock in the filter bed giving excellent mechanical strength.



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Andrew Heywood, Sales Manager at WPL Ltd said, “**We are very pleased with the business relationship we share with Warden. Their Biomedica range has been a great asset in the design process of our wastewater treatment plants and has always met expectations for efficiency and performance**”.



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