Warden Biomedia

Home of Random Biological Filter Media

Case Study

WARDEN BIOMEDIA CHOSEN FOR LAUNDE ABBEY ESTATE WASTEWATER TREATMENT UPGRADING PROJECT BY MARSH INDUSTRIES

The Launde Abbey estate, which dates back to the 12th century, is established in 450 acres of outstanding rural Leicestershire countryside. Extensive redevelopment on the estate has involved the building of new conference, dining and accommodation facilities, necessitating updating of its sewage treatment facilities.

Consideration in the final specification of the product was given to the need of the final effluent to be of a high standard to meet the required low Ammonia & BOD levels. The estate is surrounded by lakes with high levels of fish and wildlife. Marsh Industries was chosen and provided detailed design schedules to the Consultant Engineers. Due to the variations in daily loadings a Marsh Ultra Polylok 135PE was specified.

Biomarble was selected from Warden Biomedia random filter media range to provide ultra-efficient and cost-effective aerobic treatment in the Marsh sewage treatment plant.

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.

In a choice of spherical and tube formats, to suit the application, the random filter media provide excellent ventilation to speed-up the aerobic reaction, and also have high voidage to prevent blocking (and the resulting slowing-down) of the wastewater treatment process that might occur.
With purpose-designed features, the media in the Warden Biomedia filter range are an excellent alternative to traditional mineral-based media and are ideal for improved performance in new wastewater treatment plants. In addition they are perfect for overcoming problems in established trickling filter beds. Polypropylene biological filter media of the relevant dimensions can replace all or part of the mineral-based media to improve system efficiency where it has become impaired by overloading.

The excellent ventilation and high voidage performance of the Warden Biomarble media make them extremely effective in wastewater treatment applications. They are injection-moulded in polypropylene with specific design features to increase the efficiency of the biological process.

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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 specific surface area and void ratio. The surface area of media will be covered with biofilm. Attached growth bacteria will function cooperatively with suspended bacteria, thus its efficiency is higher when compared with other systems. 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.

Steve Boyer, Director at Marsh Industries said, **"Marsh Industries works closely with Warden Biomedia and the two companies have a long established working relationship. Warden's filter media have always met all of our expectations for efficiency and performance in our wastewater treatment package plants".**

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