

Case Study

C&L FABRICATION SELECT WARDEN BIOMEDIA TO INSTALL NEW WASTEWATER TREATMENT PLANT AT DARVER CASTLE

Based in County Louth on the east coast of Ireland, Darver Castle sits in 50 acres of fine parkland, and provides hotel and wedding facilities.

The existing wastewater treatment plant at Darver Castle was experiencing challenges in operating at the level of consent limit set by the Environment Protection Agency (EPA). It was clear that the existing treatment plant needed to be replaced with a new system which could cope with the consent limit set by the EPA. Viltra Wastewater Technology, Irish distributor of the Matrix Sewage Treatment System manufactured by C&L Fabrication Ltd was commissioned to enhance the existing wastewater treatment plant.

C&L Fabrication designed, manufactured and supplied a purpose built Matrix biozone unit for the project to incorporate some elements of the existing system in order to achieve the extremely stringent effluent quality standard required by the EPA and approached Warden Biomedica to supply Bioball random filter media for ultra-efficient and cost-effective aerobic treatment.

The excellent ventilation and high voidage performance of the Warden Bioball 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. 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 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.

With these purpose-designed features the Bioball media in the Warden Biomedica range are an excellent alternative to traditional mineral-based media and are perfect for overcoming problems of overloading in established aerobic treatment units.

Tim Cumming, Director at C&L Fabrication said, **“The installation of Bioball from the Warden Biomedica range has virtually eliminated the concerns of our wastewater treatment plant efficiency. The media are also very cost-effective and long-lasting.”**

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Results Achieved

	Consent limit Set by EPA	Result Achieved
BOD (Biochemical Oxygen Demand)	10	2.64
Solids (suspended at 105C)	10	4
Ammonia	5	0.07
Phosphate (PHOS_ORTHO)	2	2



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