



STEDS PROJECT- KILTILANE

Pilot Project to Review New Technology Appropriate for Cluster Developments

Client: North Tipperary County Council

SUMMARY:

Value: €720,000
Population Served: 100 p.e.
Procurement: Traditional
Status: Complete

Services Provided:
Detailed Design
Management of Tender Process and Evaluation
Construction / Operation Supervision

The STEDS project in Kiltillane originated from a Water Services National Training Group trip to Norway to explore the design and construction of Septic Tank Effluent Discharge Systems (STEDS). This alternative collection/treatment system is considered appropriate for use in small rural communities with low population density and site specific environmental conditions such as shallow bedrock, high groundwater conditions and limited effluent discharge locations.

With a STEDS system, raw sewage flows from the house to a watertight underground interceptor tank, where it is pretreated. Suspended solids remain in the interceptor tank (within the boundary of the property) for passive natural treatment and require to be desludged only once every 10 to 12 years. Only the filtered liquid is discharged (by either pump or gravity) through small bore collection lines to a central treatment system. The filtered effluent is treated in low cost, low maintenance recirculating filters that utilise packed bed technology. The STEDS system has low O&M costs and low maintenance costs with running costs approximately 25% of normal activated sludge systems. Substantial construction costs savings result from the use of small bore collection lines at minimum depth.

The new plant at Kiltillane was designed to cater for a population equivalent of 100 with a BOD effluent standard of 5 mg BOD/l. The STEDS system at Kiltillane commenced construction in March 2007. Individual interceptor tanks and rising mains were installed at 29 No. houses to connect into a main pressurised sewer on the Templemore to Rathdowney road. Directional drilling was utilised to minimise construction nuisance. The treatment plant was successfully commissioned and operational from July 2007. An online control system is used to notify the system operator of any issues at the individual interceptor tanks such as pump blockages or high water levels. The plant is operating successfully with an average effluent standard of 5.3 mg BOD/l.

