



ALLENWOOD SEWERAGE SCHEME

First time provision of sewerage infrastructure including Ireland's first municipal vacuum installation

Client: Kildare County Council

SUMMARY:

Value: €4,500,000

Population Served: 1,500 p.e.

Procurement: Traditional

Status: Complete

Services Provided:

Preliminary Report / Designs

Detailed Design and Contract Documents

Management of Tender Process and Evaluation

Construction Supervision

Allenwood is a dispersed rural community in north County Kildare. The area is relatively flat with peat and silt the predominant ground encountered. The preliminary designs provided sewerage infrastructure to the entire area but value for money criteria restricted the development of the scheme to the core village area. It was the core area that was advanced to the detailed design stage. Due to the flat nature of the area and the poor ground series of gravity pipes and pumping stations were designed to minimise the depth of excavation.

During the construction period ground conditions were encountered that were worse than anticipated but this issue was resolved through the provision of a pile/beam pipe support installation. However in one particular area the ground conditions severely deteriorated to the extent that a single movement of the excavator caused a ground vibration that could be clearly felt in a house more than 50m away.

Work was immediately stopped and alternatives investigated. The solution proposed involved the installation of a vacuum sewerage system, Ireland's first municipal installation. Vacuum sewers are small bore and laid at minimum depth and are therefore ideal for use in areas of bad ground.

The system proved successful and was well suited to the nature of the area which is flat with poor ground.

The treatment plant incorporating Sequencing Batch Reactors was completed on programme and encountered unforeseen ground also in the way of an unrecorded underground stream. This was diverted and the ground pressure grouted in discrete areas to avoid settlement as a result of fines wash-out.



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