

## Case Study

# Crosshill Landfill Leachate Treatment Plant



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**Client:**  
Eastwood  
Envirowaste Ltd

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**Location:**  
Crumlin,  
Northern Ireland

**Project:**  
Leachate  
Treatment

Colloide was contracted by Eastwood Envirowaste Ltd to undertake a significant project at Crosshill Landfill in Crumlin, Northern Ireland. The task at hand was to install and commission a state-of-the-art Leachate Treatment Plant.

Leachate, a contaminated liquid resulting from water percolation through a solid waste disposal site, requiring efficient treatment for environmental sustainability.

This project encompassed the installation of a leachate treatment tank which would receive flow directly from the existing cell pumps, with a continuous operational proving period.

# Technical information

## The main components of the system

The system is designed to treat Leachate from the landfill to a standard where it can be tankered offsite.

**This is achieved in three steps.**

The first step is to collect the raw Leachate from the landfill and collect it in a common tank(lagoon) where it can be pumped forward in a controlled manner. The collection tank is called the Raw Leachate Balance Tank (RLBT).

Submerged in this tank, there are two pumps which pump on a duty/standby basis into the SBR in 30 min intervals.

The Sequential Batch Reactor (SBR) is the Second Step of the treatment.

Within the SBR the raw Leachate comes in contact with the biomass and is treated using oxygen provided by a number of fine bubble-diffused aerators which are fed by adjacent blowers. Within the SBR the level, pH, temperature and Dissolved Oxygen are monitored.

The treated leachate from the SBR decants into the adjacent Leachate Balance Tanks (TLBT) once per day. The treated effluent is then tankered from the TLBT to NI Water subject to meeting the appropriate consents.

