



➤ CLIENT OVERVIEW

Veolia Environmental Services is a world leader in waste management and serves nearly half a million industrial and tertiary sector customers in 35 countries. Its services include the collection, treatment and recycling of solid and liquid waste for both local authorities and industrial clients

Veolia Environmental Services manage numerous disposal and treatment sites in mainland Britain to the highest environmental standards ensuring safe disposal and legislative compliance.

➤ CLIENT'S REQUIREMENTS

Veolia Environmental Services main objectives were to implement a suitable leachate treatment facility to meet discharge consent to sewer in respect of pesticides, ammonia and methane, minimise environmental impacts, optimise leachate monitoring and produce non-fossil fuel energy for sale into the National Electricity network.

➤ OUR SOLUTION

Veolia Water Industrial Outsourcing (VWIO) designed and installed a state of the art leachate treatment plant. VWIO owns this facility and will be operating and maintaining it for 15 years.

The plant operates under automatic control at a flow rate of up to 150m³/day from differing raw leachate sources with a daily ammoniacal nitrogen output limited to no more than 60kg/day to sewer.

The different phases of treatment include:

- Adsorption of pesticides using Granular Activated Carbon
- pH control and adjustment
- Recovery of thermal energy as steam from bio-gas generator exhaust gases
- Ammonia and methane thermal distillation, non condensable gas treatment and ammonia solution separation for export from site as a sustainable product.

The treated leachate is then metered and analysed so that it meets the environmental requirements prior to discharge to sewer under the terms of a consent to discharge between Veolia Environmental Services and the local sewerage company.

The sustainable ammoniacal product is sold into the market for water treatment in high pressure power station boilers. The product being used as a feedstock for chemical synthesis and as a neutralising agent for waste treatment.

The process of ammonia solution separation reduces emissions by capturing the ammoniacal component of the leachate which was previously burnt in the biogas flare.

“ I was pleased to find in house expertise to fulfil our requirements. We have successfully worked together for the past five years to overcome the difficulties of combining all the treatment options mentioned above. The latest phase of development uses power from the gas generation to treat the leachate and to negate the problems with emissions. The system will also provide added value through the production of sustainable products.

Bryan Pinder, General Manager – Landfill, Veolia Environmental Services