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## **Project Profile**

**Sector:** Landfill Gas  
**Project:** Landfill Gas Engine Exhaust and Flare Emissions  
**Client:** EB Nationwide and the Landfill Gas Association  
**Period:** August 2000 – August 2001



*Photo: Norweb Generation*

The Environment Agency is currently developing technical guidance on measuring and managing landfill gas emissions via flares, engines and landfill surfaces. This project will review for EB Nationwide and the Landfill Gas Association existing standards for gas engine emissions and will measure emissions from various types of landfill gas engines and flares. This research will seek to establish the baseline environmental impact of landfill gas engines, and will help provide information on the environmental impact and net benefits of gas utilisation compared to uncontrolled emissions, landfill flares, and other generation technologies.

This project will address the following objectives.

- Selection of landfill sites with power generation schemes utilising different designs of spark ignition and dual-fuel engines.
- Begin the development of standard, reliable and repeatable emission monitoring protocols for both flares and engines.
- sampling and analysis of inlet gas and outlet exhaust compositions to quantify the destruction efficiency of the gas engines and flares.
- Review of information held by gas engine and flare manufacturers etc on plant performance and emission characteristics.
- Review of current standards for landfill gas engine emissions in modern European and other countries.
- Review of current policy requirements for methane reduction strategies following the Kyoto agreement, and assessing the relative impact of landfill gas engine emissions compared with other power generation plant and air quality standards.