

Project Profile

Sector: Waste Policy

Project: Guidance on Best Practice Management of Landfill Gas

Client: Environment Agency

Period: 1999 – 2000



Internal view of a high temperature flarestack for landfill gas combustion.

The Environment Agency's National Landfill Gas Task and Finish Group, as a subgroup of the Agency's National Waste Scientific and Technical Group, is charged with considering priorities for the management of landfill gas, and needs to ensure the UK waste management industry follows best practice for managing landfill gas. The T&F Group considered the revision of the 1991 Edition of Waste Management Paper 27 *Landfill Gas* (WMP27) was overdue.

WMP27 is relied on and often quoted by waste management licence holders and the Environment Agency when consultations take place on waste planning, landfill operations and management, and redevelopment on closed landfills. The aim of this project is to revise and update this guidance to provide the regulator, the waste management industry, planners and developers with a comprehensive and reliable best practice (non-statutory) guidance document on the safe management and control of landfill gas.



Much work has been spent over the last decade to improve the following aspects of landfill gas management:

- developing a better understanding of gas generation and emission characteristics, including methane oxidation in the capping layers of landfills;
- consolidation of the LFG control and utilisation sector with better flares and engines;
- improved methods for LFG analysis and data collection;
- improved understanding of protection methods for lateral migration and protection of development on gassing landfills;
- improved capabilities for air and odour monitoring, and prediction of dispersion patterns; and
- better (though by no means complete) understanding of the potential health risks from landfill gas and its constituent compounds.

Notwithstanding these developments, much remains to be understood concerning the hazards and risks of landfill gas. Proposed legislation, including the UK implementation of the Landfill Directive, and current draft guidance on flaring of landfill gas, will significantly change the approaches required for landfill gas management in the future.

This project will review and update all relevant information within WMP27, existing and planned interim Agency guidance and policy on landfill gas management, the findings from national landfill gas R&D projects, and other relevant guidance and research to produce a best practice document. It will also need to consider the future impact of the EC Landfill Directive and other impending UK legislation on landfill gas management. New revised planning guidance (PPG10), just published (September, 1999), will also look for up to date advice on best practice landfill gas management.

This guidance will consolidate the advice in various sources and will serve as current best practice for regulators, planners, operators and developers alike.

Land Quality Management Ltd are the lead contractors on this project. We are ably supported by Entec UK Ltd, Berwick Manley Associates Ltd, Knox Associates Ltd, and Card Geotechnics, each organisation bringing specialist knowledge to the project consortium.