

Former Bethell's Tip, Sale, Manchester

Our Services

- Desk Study
- Data Review
- Risk Assessment
- Supplementary Ground Investigation
- Gas Monitoring
- Design of Gas Control System



Investigation and Remediation of Gassing Site

The Bethell's Tip site in Sale, near Manchester forms part of the M60 widening scheme, is planned to be used for public open space.

A licensed landfill forms part of the north western area of the site and along the site's south western boundary is a residential area.

An initial review by **CGL** of the existing gas, soil and groundwater data and subsequent environmental risk assessment indicated an unacceptable level of risk posed to the houses, particularly that caused by methane migration from the underlying Made Ground and alluvial deposits. The gas concentrations recorded on the site also exceeded the Landfill License surrender conditions.

Further ground investigation and ongoing gas monitoring led to the design of a unique gas venting system that reverses the gas pressure gradient and direction of gas migration. This removes the potential risk to the existing houses and, at the same time, will enable the former Bethell's Tip to be restored for public use.

Instead of a conventional deep venting trench and barriers, which would have been costly to install, the **CGL** system is based on a system using gas wells to form a virtual barrier and passive venting system. The dimensions and spacing of the wells are optimised in relation to the gas permeability of the ground.

Client: AMEC – Alfred McAlpine Joint Venture