



GROUND GAS SCREENING SURVEYS

harrisongroup
ENVIRONMENTAL

DATA SHEET

INTRODUCTION

Conventional ground gas monitoring from boreholes is generally a requirement for the assessment of the ground gas regime, in accordance with CIRIA guidance document C665 (2007). However, ground gas screening surveys can offer a useful initial examination, or a tool to analyse spatial variation of ground gas concentrations. Two field methods are generally employed: gas vapour probing and gas spike surveying.

GAS VAPOUR PROBING

Gas vapour probing utilises the AMS™ gas vapour probe - which has been specifically designed for representative sampling of soil gases - for monitoring of ground gas without dilution from ambient air.



Sections of 12mm diameter hollow steel rods with a perforated end-cone section are driven up to 2m into the ground using a hand-held slide-hammer attachment. A gas tap is then attached to enable as monitoring with either the Geotechnical Instruments® GA2000 infrared analyser, or other chemical-specific field screening method.

GAS SPIKE SURVEY

The **gas spike survey** is another similar method for the sampling of soil gases.

In this case a hand held slide hammer with a spike ended rod is driven up to 1m into the ground. It differs from gas vapour probing in that the spike is removed from the ground and replaced by a perforated plastic tube with gas tap. The tube is then left for a short period of time to equilibrate with the soil gas. Gas monitoring is again carried out with the Geotechnical Instruments® GA2000 infrared analyser or other chemical-specific field screening method.



GENERAL

These methods can be operated in confined spaces and locations that may be inaccessible for other equipment. Also, by producing a large number of gas monitoring points, large areas can be screened, enhancing the information obtained from a more limited number of boreholes. In addition to this other advantages of using these methods are: -

- Ease of mobilisation and set up on site
- Ideal for sites with working restrictions and limited accessibility
- No machine noise or fumes
- Useful tools for initial and remediation investigations
- Ground gas is not compromised with the vapour probe