

Virtual Gas Curtain System

Lateral Gas Migration Barrier



Ground Gas Protection



Sel Environmental
Real Innovation.

Virtual Gas Curtain System

Lateral Gas Migration Barrier

KEY ADVANTAGES

Engineering & Environmental

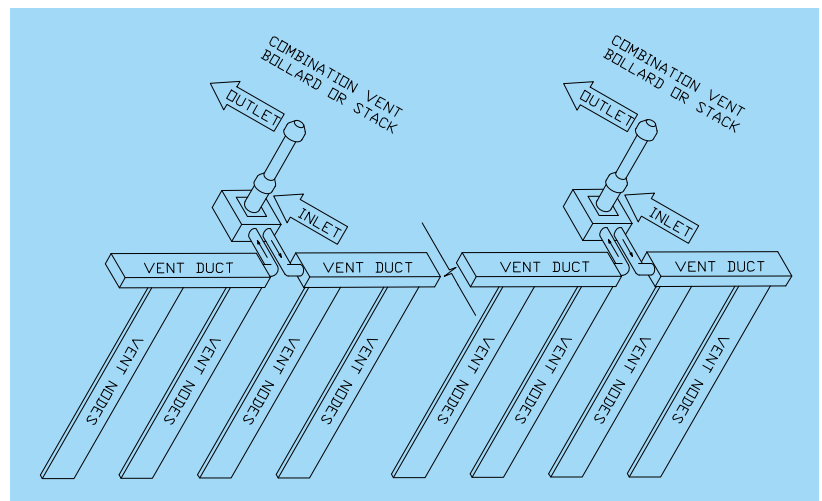
- Predominantly a no-dig solution with a minimal generation of excavated material that is generally from the upper inert capping layer.
- Contaminated ground remains in place.
- Any arisings are used to backfill over the top duct with any surplus arisings regraded to suit original ground levels.
- No dewatering requirements.
- No impact on site hydrogeology.
- No impact on existing foundations.
- Replaces the requirement for aggregate venting media.
- Reduces site traffic on existing roads as the venting composites used are up to 100 times more efficient than gravel venting media.
- Uses recycled and recyclable materials.

Health & Safety / CDM

- Minimal exposure to contamination (e.g. asbestos) for workforce and public.
- Gas dispersal is controlled and diluted with fresh air prior to dispersal.
- Reduced risk from less vehicle movements and lower plant requirement.
- Shallow excavations, less than 0.65m deep.
- Minimal open trench required as the installation progresses.
- Small working zone made fully secure at the end of each shift.
- Robust, vandal resistant dedicated vent terminations, designed for a school environment.

Financial Benefits

- Low mobilisation / start-up costs.
- Rapid installation will enhance site programme.
- Negates the off-site disposal of contaminated material.
- Minimises importation of granular materials.
- Low maintenance requirements post installation.
- Minimal site disruption of other trades.
- Can be installed while other earthwork operations take place, such as ground improvements.



Sustainability

- Reduces the environmental impact of your development as it uses recycled and recyclable materials.
- Reduces impact of quarrying through low reliance on aggregates.
- Reduces impact of tipping / landfill through no-dig installation method.
- Requires significantly less lorry movements than alternatives considerably reducing your carbon emissions.



'NO-DIG' GAS MIGRATION BARRIER

The SEL Virtual Curtain Gas Migration System is the ideal solution to intercept, treat and control lateral migrating ground gases. The system has been used on numerous commercial and residential projects, on and near brownfield development sites over the last 20 years and is a realistic alternative to gas barriers and gravel vent trenches.



This unique patented system comprises a series of vertical vent nodes connected together to create a zone of low pressure within the ground that attracts and dilutes ground gases to acceptable levels, provide an appropriate pathway break and conduit for controlled and safe passive venting to atmosphere. The virtual curtain system can form a fundamental part of any remediation strategy to satisfy the requirements of Part 2A of the Environmental Protection Act (1990) determination and enable developments on contaminated land or near it.

Containments

The Virtual Curtain System is devised to mitigate ground gases such as:

- Methane (Ch4)
- Carbon dioxide (Co2)
- Carbon monoxide (CO)
- Diesel range organics (DRO)
- Petroleum range organics (PRO)
- Volatile organic hydrocarbons (VOCs)

Design Requirements

To develop a site specific designed solution for your project the following information would be required:

- All site investigation data, including historical investigations to enable us to undertake a comprehensive review and desk study.
- All gas monitoring and groundwater monitoring information including all historical monitoring information.
- Detailed site survey.
- All details of services, drainage or any other manmade structures that exist on or beneath the site.
- Any other relevant information, anecdotal or otherwise that may affect or influence our proposals.
- A copy of the part 2A determination document.



SEL offer a CPD accredited seminar which reviews a new methodology for migrating gas protection from landfill and brownfield sites. The seminar comprises a 30 minute presentation followed by questions and answers.



Canal House, Bonsall Street, Blackburn, BB2 4DD
T: 01254 589987 E: info@selenvironmental.com W: www.selel.co.uk