

Our Ref C5402/25/E/8536
4th December 2025

Whistlestop Valley Limited
Park Mill Way
Huddersfield
West Yorkshire
HD8 9XJ



For the attention of Chris Raby,

Ref: Ground Gas Assessment

Dear Chris,

Further to the issue of the phase one desk study, continuous gas monitoring has been undertaken within the structure at Whistlestop Valley. The phase one desk study had identified a potential ground gas risk, however the development had already been assembled prior to the issue of the desk study. The ground gas source identified was attributed to localised spoil produced and deposited by a historical colliery that was closed ~35 years ago; Park Mill Colliery. Given the age of this feature a moderate risk had been assigned within the desk study risk assessment. Therefore, as the structure was already insitu, it was deemed appropriate for internal gas monitoring to substitute external (ground) monitoring.

Continuous Gas Monitoring

Continuous gas monitoring commenced on the 3rd of October 2025 and was curtailed on the 24th October 2025. Throughout this period, the barometric pressure ranged between 988mb and 1034mb. The pressure trends for Leeds¹ reveal that a significant period of falling pressure was recorded between the 15th October and 20th of October 2025, when a fall in pressure ranged from 1032mb to 988mb over a 5 day period. Thereafter, another fall in pressure occurred on the 22nd and 23rd of October when the pressure fell from 994mb to 990mb. It should be appreciated that we (RGS) have a barometer installed in our Huddersfield office and the pressures trends measured on our device correlate with those captured in Leeds. As such, a worst-case condition is considered to have been captured during the monitoring period.

The structure comprises a large open area, with a smaller storeroom in the south-eastern corner. As this storeroom represented the most likely area for gas accumulation, the monitoring unit was placed within this room for three weeks. It is understood that the structure was not utilised throughout the monitoring period for business. Notwithstanding this, it should be appreciated that the client was informed that all windows had to be closed throughout the monitoring period and where possible the door be left closed. During the visits conducted by RGS, on each occasion all windows were closed and doors were locked.

¹ Sources: Weather Online; Leeds Bradford Airport Pressure Trend [online resource from <https://www.weatheronline.co.uk/weather/maps/city?LANG>]



A MultiRAE Lite (serial number M01C020115) was utilised for the monitoring period; see appended photographs for the placement of the machine. The monitor was set up to detect concentrations of oxygen, methane and carbon dioxide at minute intervals. Full records can be issued upon request, but a summary of the results is issued below:

Table 1: Continuous Gas Monitoring – Max and Min Values				
Location	Value	CH ₄ (ppm)	CO ₂ (ppm)	Comments
Storeroom	Max	0.0	300	Equivalent of 0.03% CO ₂
	Min	0.0	200	Equivalent of 0.02% CO ₂

Discussion

As mentioned above, the phase one desk study was commissioned post-construction, upon which a potential ground gas source was identified. The client informed us that a gas barrier had not been installed, nor were gas protection measures actively intended as part of the construction. The client has informed us that the development included the following:

- A bed of crushed stone was installed at surface.
- A layer of Visqueen (damp proof membrane) was placed above the stone.
- No anchorage and no footings were installed.
- A marquee framework was constructed, with scaffold board flooring. Metal wall cladding and windows were subsequently installed.
- A stone layer forms a ~300mm wide decorative perimeter around the building, beyond which permanent hard-standing (asphalt) is insitu.

In view of the above, it would appear that the client has inadvertently installed a good performance dispersal layer.

In view of Table 1 above, it is apparent that ground gases are not rising and accumulating in significant concentrations within the building. The continuous gas monitoring has only detected up to 0.03% carbon dioxide within the buildings, which is anticipated to represent natural background levels. Typically atmospheric gas contains 0.04% carbon dioxide.

Conclusions

The internal monitoring suggests that the provisions in place are sufficient and/or there does not exist a ground gas source. Therefore, it is considered that there is a low risk to end users and no further action is required.

We trust that this information is of interest and should you have any other requirements do not hesitate to contact us.

For Rogers Geotechnical Services Ltd,

Yours Faithfully

Rob Palmer MSc FGS ACIEH
Engineering Director



Photo 1: Structure constructed at Whistlestop Valley. Stone layer can be seen externally.

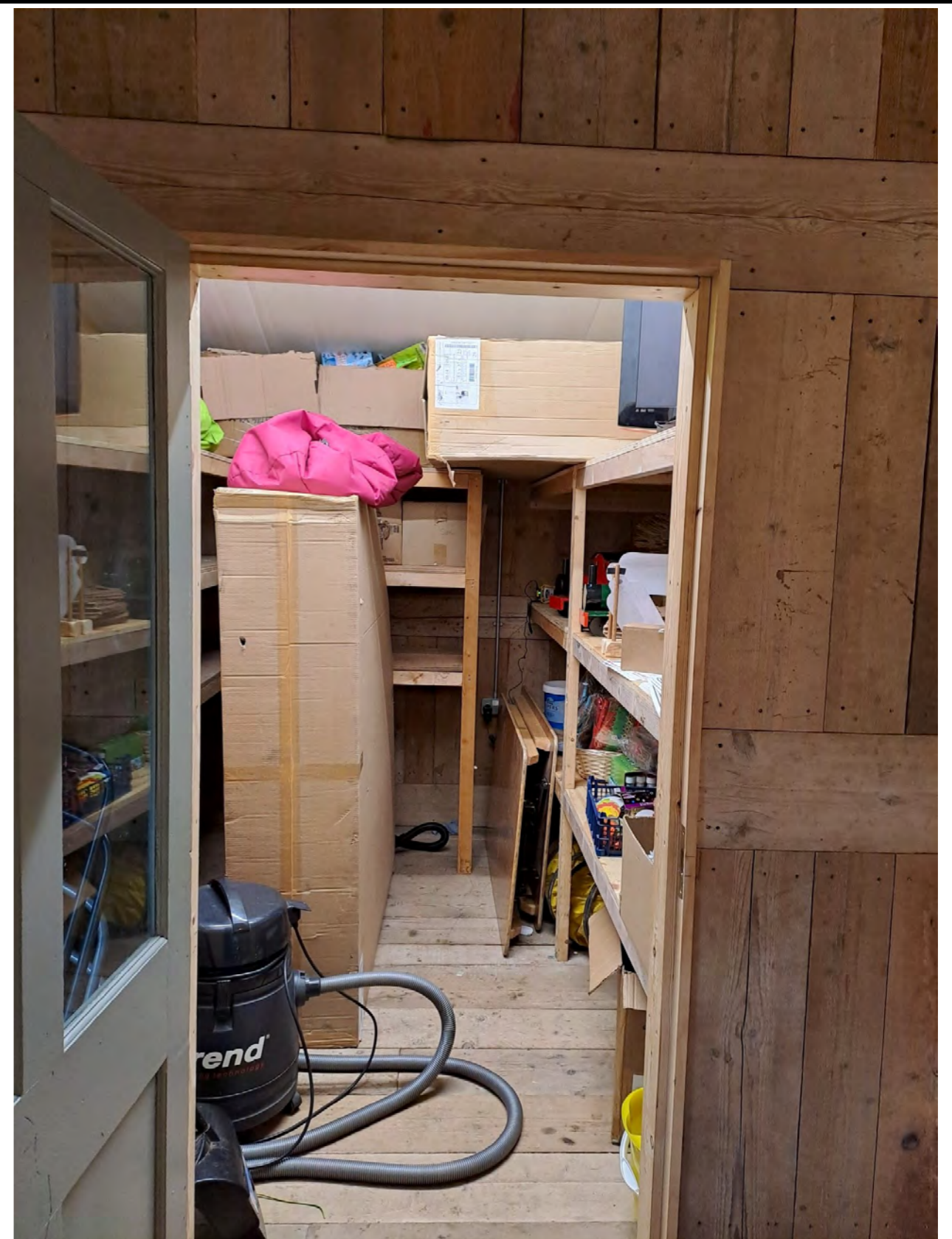


Photo 3: Storeroom.



Photo 2: Walking in from east, it is evident that the majority of the structure is open plan.



Rogers Geotechnical Services Ltd

Offices 1 & 2, Barncliffe Business Park,
Near Bank, Shelley,
Huddersfield,

Job No:

C5402/25/E/8536

Site:

Whistlestop Valley,
Clayton West

Client:

Whistlestop Valley Limited

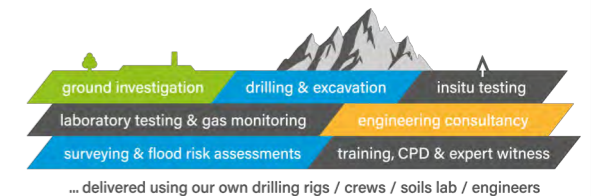




Photo 4: Monitor placed on shelf at the back of the storeroom.



Photo 5: Monitor remained at this location and was collected 3 weeks after installation.



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