

Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2019/90486 - 120, Laund Road, Salendine Nook, Huddersfield, HD3 3TY		
Demolition of existing dwelling and erection of 8no. dwellings		
Date Responded: 21 Nov 2019	Responding Officer: Richard Hume	Responding Ref: WK/201903882
In our last response dated 14 Nov 2019 we commented on the recently submitted Phase 2 Contaminated Land Report. We considered that the report was unsatisfactory and recommended that a condition requiring a satisfactory Phase 2 report was still required for the new application. In response to our comments, an email from Adam Czarnecki of Earth Environmental dated 15 Nov 2019 and an email from Abdul Hafiz dated 20 Nov 2019 have been received. Mr Czarnecki comments on the recently published paper that he referred to in his Phase 2 report and the origins of the widely accepted guidance regarding assessments of ground gas situation at sites. He suggests that the recognised guidance is based on the recently published papers. His comments are inaccurate. A paper “<i>Reliability and risk in gas protection design</i>” by Wilson & Card was published in 1999. A guidance document CIRIA C657 was published in 2006 and as I understand replaced shortly after by CIRIA C665 “<i>Assessing risks posed by hazardous ground gases to buildings</i>” 2007. Wilson and Card are both included in the Authors of the guidance. The guidance refers to the 1999 paper and other documents. CIRIA C665 continues to be recognised guidance. British Standard BS 8576:2013 “<i>Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)</i>” refers extensively to CIRIA C665 for definitions and further guidance. Also BS 8485:2015+A1:2019 “<i>Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings</i>” published in January 2019, also refers to CIRIA C655 several times including saying “<i>Guidance on how to conduct risk assessment can be found in CIRIA C665</i>” The paper referred to in the submitted Phase 2 report “<i>Risk and reliability in gas protection design – 20 years on</i>” was published in 2 parts in Ground Engineering magazine. Wilson & Card were included in the authors of the paper. This is however, just a paper published in a magazine. It cannot be considered to be a replacement to the existing recognised guidance in CIRIA C665, BS 8576:2013 and BS 8485:2015+A1:2019. Therefore we continue to assess reports in accordance with the currently recognised guidance. The duration of the ground gas monitoring carried out at the site does not meet the recommendations in recognised guidance. The interpretation of the existing monitoring in the submitted report varies significantly from that in recognised guidance. The report suggests that the site should be classified as CS1, no gas protection required. This compares to the guidance which, based on the highest carbon dioxide measurement of 15.2% and the highest		

measured flow rate of 37 l/hr, gives a gas screening value (GSV) of 5.624 l/hr which table 8.5 of C665 advises should be classed as CS4

Alternatively, Table 8.7 of C665 recommends classification as Red. Box 8.4 of C665 advises for Red classification *"It is considered that standard residential housing would not normally be acceptable without a further gas risk assessment and/or possible remedial mitigation measures to reduce and/or remove the source of gas"*.

There is therefore a significant difference in the interpretation of the results depending whether recognised guidance is used or a recently published paper in a magazine is used. We consider that the recently published paper does not supersede the recognised guidance.

In the email from Mr Hafiz he comments on having to lay off building workers because we have not accepted the Phase 2 report. He comments on the monitoring that has been carried out and considers that it is sufficient and that *"the radon gas was of no concern"*.

Mr Hafiz clearly has no understanding of the guidance regarding the assessment of ground gas at a site which is understandable as it is a specialist subject. As discussed above and previously the duration of the monitoring does not meet the recommendations in recognised guidance. Also, the ground gas that is the subject of the disagreement is in fact carbon dioxide and not radon that he refers to.

It should also be noted that condition 13 on the decision notice for application 2014/90491 for this site dated 25 June 2015 required a phase 2 contaminated land report. Also, in our consultation response dated 18 Oct 2018 for application 2018/90491 for the site we accepted the submitted Phase 1 report and advised that a Phase 2 report was still required. The applicant should therefore have been fully aware for a considerable time that a Phase 2 report was required for this site and that any delays in the construction process are due to the timing and unsatisfactory nature of the submitted Phase 2 report.

It should also be noted that Condition 13 is a pre-commencement condition clearly stating *"development shall not commence until a Phase II Intrusive Site Investigation Report has been submitted to and approved in writing by the Local Planning Authority"* This means that no development works should have commenced at the site. Therefore any works that have been carried out do not yet have planning consent.

I understand that one building has already been constructed and that further buildings are under construction. I have significant concerns that adequate gas protection measures may not have been provided as part of the existing construction work, or alternatively the applicant is unable to adequately verify that any gas protection measures installed have been installed to a satisfactory standard. If this is the case it will be almost impossible to rectify any shortcomings without demolishing what has been constructed and rebuilding it.

Ground gas, including carbon dioxide, can present a very significant risk to health; the incident in Gorebridge in 2014 is an important example. There, at a new development of 64 dwellings, 22 residents of the development made contact with healthcare services all suffering from similar symptoms. It was discovered that seepage of carbon dioxide into the houses was the cause. It resulted in all the occupiers having to be rehoused and the whole development was demolished.

Recommendations

Our opinion on the submitted phase 2 report remains unchanged, we continue to consider it to be insufficient, mainly because of the insufficient amount of gas monitoring and also the interpretation of the ground gas monitoring results. In the absence of a satisfactory Phase 2 report, a condition requiring a one continues to be necessary along with other contaminated land conditions.

I would also recommend consideration of the expediency of enforcement action to formally prevent any further development on the site until the ground gas situation at the site has been resolved.