

Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2021/92427 - 48, Stile Common Road, Primrose Hill, Huddersfield, HD4 6DE		
Discharge conditions 9 and 10 on previous permission 2020/91228 for demolition of existing dwelling and erection of residential development to form student accommodation with associated access and parking		
Date Responded: 22nd December 2021	Responding Officer: Natalie Heaney	Responding Ref: WK/202125277
Conditions 9 and 10 were recommended by the Coal Authority and relate to the Coal Mining legacy. Environmental Health were not originally consulted on previous permission 2020/91228. We acknowledge there is an overlap with Condition 9 as the coal mining legacy features may present an environmental health risk (e.g. from mine gases or combustion). Condition 10 relates to surface stability. This is outside the remit of Environmental Health. Condition 9 – Intrusive Site Investigation Works (Coal Mining Legacy) To date Environmental Health has commented the following documents: • A Coal Investigation report by Rogers Geotechnical Services Ltd, dated 10th June 2021 (ref: C337/20/E/1956). • An Addendum titled 'Gas Monitoring at Stile Common Road, Newsome, Huddersfield' by Rogers Geotechnical Services Ltd, dated 23rd August 2021 (ref: C337/19/E/GM). • An email from Rogers Geotechnical Services Ltd, dated 7th September 2021 In our last response dated 5th October 2021, we acknowledged that very shallow workings made the intrusive works difficult and that voids on-site may have impacted the investigation in the northern section of the site. However, we indicated that readings from only one borehole are deemed unsatisfactory and it is unlikely we will accept any additional data from only one borehole given the sensitivity of the site and the proven coal mining legacy on-site. To move forward, we requested that a desk study should be undertaken to develop a conceptual site model that identifies all potential and existing sources of ground gas, pathways and receptors. We indicated that we expect the additional information to detail the extent of the workings and include an updated conceptual model that addresses the remediation proposals and potential changes to gas pathways. Since then, a Gas Risk Assessment by Rogers Geotechnical Services Ltd, dated 18th November 2021 has been provided. The report includes geo-technical information which is outside the remit of Environmental Health, this consultation response therefore only relates to the land contamination aspects of the report. The report advises that the site was undeveloped between 1854 and 1918. From 1930, the site was developed with a detached residential property. However, by 2020 the property was demolished. The surrounding historical land uses within 250m include the Ashing Hirst Plantation and a former quarry. It is then detailed that three local coal seams outcrop within the local area, Hard Bed Coal, Middles Band Coal and Soft Bed Coal at depths between 1m below ground level to 31m below ground level. No made ground or infilled ground is shown to		

be present beneath the site or within the immediate vicinity of the site.

The report then revisits the ground gas monitoring undertaken between the 4th of June and the 29th of June 2021. Briefly, from one standpipe, peak carbon dioxide and methane concentrations reported were both 0.1% v/v. The minimum oxygen concentration reported was 20.9% v/v and peak flow was 0.1 l/h. As such, the report considers the gas screening value to be 0.0001 l/h for both carbon dioxide and methane, therefore characterising the site as Characteristic Situation 1 (CS1). However, the report states that gas protection measures will be installed in line with Characteristic Situation Level 2 (CS2) as a '*precautionary remedial measure*'.

The report suggests that sources of gas are limited to coal workings beneath the site and the shallowest workings are going to be removed through excavation, with concrete plugs installed on the site boundary. Table 5 of the report then shows the conceptual site model and site-specific risk assessment. The conceptual model identifies that there is a pollutant linkage present and assigns this as a '*low to moderate*' rating for end-users.

The report continues to list the combinations of gas protection elements for CS2 that should be considered. The current development proposals currently include the installation of a basement. As such, the report advises that at least Grade 2 waterproofing be installed, this would mean that the only other requirement would be either a good passive sub-floor dispersal layer to achieve a total score of 3.5 in accordance with BS8485 or a gas resistant membrane to achieve a total score of 4.0 in accordance with BS8485. Indeed, with option 1), a total score of 3.5 would be achieved. The report closes by indicating that a total score of 4.5 would be required for Characteristic Situation Level 3 (CS3) protection but this is not deemed necessary.

We have read the report provided and whilst we recognise that remedial measures are proposed to treat the shallow mine workings, we do not accept the proposals for CS2 gas protection measures. We consider the data set to remain limited as the readings were taken from one borehole only and at barometric pressures >1000mBs. As such we do not have confidence in the dataset.

Moving forward, we would accept the installation of Characteristic Situation Level 3 (CS3) gas protection measures at the site to secure safe occupation of the site. The combination of protection elements to be installed must also be confirmed and proposals for validation put forward. Until we receive revised proposals, we cannot recommend the discharge of Condition 9.

Recommendations

The information provided in support of Condition 9 is unsatisfactory. We recommend that Condition 9 is not discharged.