

Consultation Response from: KC Environmental Health (Pollution & Noise Control)
2024/92079 - 672, Bradford Road, Birkenshaw, BD11 2EE
Discharge details reserved by conditions 7 (Phase II Intrusive Site Investigation Report), 8 (Remediation Strategy) on previous permission 2023/93178 for demolition of existing dwelling and erection of 2 detached dwellings with integral garages
Date Responded:
21st August 2024
Responding Officer:
NH
Responding Ref:
WK/202424121
Conditions 7 and 8 – Contaminated Land Conditions

A Phase 2 Geo-Environmental Report authored by RGS dated 12th July 2024 (ref: C4182/24/E/6783) has been received in support of the application to discharge Condition 7 (Phase II Investigation Report) and Condition 8 (Remediation Strategy). The report is a combined report and includes geotechnical information, which is outside the remit of Environmental Health. Therefore, this consultation response only relates to the land contamination aspects of the reports.

The field investigation included the drilling of four windowless sample boreholes and the installation and monitoring of three gas monitoring standpipes. The ground conditions were confirmed as topsoil overlying Pennine Lower Coal Measures.

Gas monitoring was conducted on four occasions between 20th June and 10th July 2024, with barometric pressure ranging from 989 mb to 1004 mb during periods of falling, rising, and steady conditions. Peak methane and carbon dioxide concentrations recorded were 0.1% v/v and 7.1% v/v, respectively. The minimum oxygen concentration was 10.1% v/v, with flow rates varying from 0.1 l/h to 3.3 l/h. Groundwater levels fluctuated between 0.63 m bgl and 2.05 m bgl.

The gas monitoring data were used to calculate Gas Screening Values (GSVs) of 0.0033 l/h for methane and 0.2343 l/h for carbon dioxide. Based on these results, RGS characterised the site as Characteristic Situation Level 2, after four visits over a one-month monitoring period. Additional commentary on the cessation of monitoring was provided by RGS.

Several ground samples were collected from boreholes BH02, BH03, and BH04 for chemical analysis and the results were compared against residential with plant uptake assessment criteria. The analysis confirmed contamination by lead (16 mg/kg to 400 mg/kg), naphthalene (<0.05 mg/kg to 1.50 mg/kg), benzo(a)anthracene (0.7 mg/kg to 13 mg/kg), benzo(b)fluoranthene (0.75 mg/kg to 15 mg/kg), benzo(a)pyrene (0.63 mg/kg to 14.0 mg/kg), dibenz(a,h)anthracene (0.08 mg/kg to 2 mg/kg), and aromatic TPH (>C10 to C12, <1.0 mg/kg to 2.70 mg/kg). The report concludes that clean cover is necessary to protect end-users. A provisional remediation strategy has been provided in the report.

Comments

We have read the reports provided. In Section 11.1.2 of the Phase 2 report, RGS have provided justification for the cessation of the ground gas monitoring. Yet, in section 12 of the report it is recommended that gas monitoring is completed, and a gas monitoring report be issued. This appears contradictory. We would also expect to see commentary on the flow rate fluctuations given the range reported 0.1 – 3.3 l/h. For these reasons, we recommend that Conditions 7 and 8 remains until further notice.

Recommendations

Conditions 7 and 8 – Contaminated Land Conditions

We recommend that Conditions 7 and 8 remain until additional information has been received in relation to the above comments.