

Consultation Response from: KC Environmental Health (Pollution & Noise Control)

2024/93226 - land at, St Luke's, Bierley Marsh, East Bierley, BD4 6PL

Discharge of details reserved by conditions 3 (Ecological Design Strategy), 4 (Condition Survey of Bierley Marsh), 6 (Construction Management Plan), 7,9 (Intrusive Investigation Phase2 SI), 14,15 (Boundary Treatment, Hard and Soft Landscape) on previous permission 2020/94345 (APP/Z4718/W/21/3289729) for erection of 5 dwellings

Date Responded:
6th May 2025

Responding Officer:
NH

Responding Ref:
WK/202510782

Condition 7 - Phase 2 Intrusive Investigation

A Ground Gas Risk Assessment by ARP (16th October 2024, ODL/01/L3/JP) has been received in support of the application to discharge Condition 7. The report includes geotechnical information, which is outside the remit of Environmental Health, this consultation response therefore only relates to the land contamination aspect of the report.

ARP presents ground gas monitoring results for the development site. Gas monitoring wells were installed in boreholes WS1, WS5, and WS6 at depths ranging from 1.0m to 4.0m (0.5m in WS5). Each installation consisted of a slotted pipe with a gravel surround, with the upper 0.5m to 1.0m comprising plain pipe, sealed with bentonite and secured with a lockable flush cover. Monitoring was conducted six times over a ten-week period between 9th August 2024 and 9th October 2024, under varying atmospheric pressures, including two visits below 1000mb. Atmospheric pressures recorded during the monitoring ranged from 988mb to 1017mb.

Peak methane and carbon dioxide concentrations were 0% v/v and 3.0% v/v, respectively. The peak steady borehole gas flow rate was 0.3 l/h. Depleted oxygen levels corresponded with elevated carbon dioxide concentrations, with a minimum oxygen concentration of 17.2% v/v recorded. ARP calculated worst-credible and worst-possible borehole hazardous gas flow rates at 0 l/h for methane and 0.007 l/h to 0.009 l/h for carbon dioxide, categorising the site within Characteristic Situation CS1. Consequently, ARP conclude that no ground gas protection measures for carbon dioxide and methane are necessary for the site.

We have read the Ground Gas Risk Assessment by ARP (16th October 2024, ODL/01/L3/JP) and it is accepted. Together with the Stage 2 Geoenvironmental Report authored by ARP (September 2024, ODL/01r1), these documents satisfy the requirements of Condition 7 and we recommend that the condition be discharged.

Condition 8 - Remediation Strategy

A Contamination Remediation Statement by ARP (16th September 2024, ODL/01/rem1) has been received in support of the application to discharge Condition 7. The report includes geotechnical information, which is outside the remit of Environmental Health, this consultation response therefore only relates to the land contamination aspect of the report.

ARP summarise the contamination identified in the Phase 2 intrusive investigation. Contamination testing showed the made ground at WS6 to have elevated arsenic (240mg/kg), and the topsoil was shown to have widespread (95% UCL and no outliers) slightly elevated benzo[b]fluoranthene (5.5mg/kg) and benzo[a]pyrene (5.3mg/kg), as a result of the presence

of coal fragments. One outlier location (WS3) was also shown to have elevated arsenic (59mg/kg) and lead (2,000mg/kg).

ARP state that the topsoil is unsuitable for reuse, however, it is proposed that additional sampling including resampling of WS3 for arsenic, lead and speciated PAH is undertaken 'to provide more accurate representative concentrations for these determinands' to see whether any materials can be retained onsite.

Regarding made ground (found at WS6 only), ARP propose that where gardens or landscapes overly existing made ground, a minimum thickness of 0.6m clean cover should be provided comprising a minimum thickness of 0.1m topsoil and 0.45m subsoil. ARP advise that if the made ground be moved in its entirety, the cover system will not be required.

Validation proposals are provided in the report and include testing of the excavation base and faces where materials have been removed and depth verification. A report will be issued detailing the remediation undertaken once work has been completed.

For any soils used in the cover system, whether imported or site-won, ARP advise that these need to be verified as suitable by inspection and testing, in accordance with YALPAG guidance. Two proposals are given in terms of when testing should take place, either once on site before placement or during placement.

Comments

We have read the report provide and it is generally considered acceptable. In addition, we also make the following comments:

We note that there is reference to older YALPAG guidance and that there are two options regarding the characterisation of materials. The applicant should ensure that imported or site won materials are characterised as early as possible to avoid the costly exercise of re-excavating unsuitable material and the possibility of cross contamination and ensure remediation activities are in accordance with good practice guidance, including the YALPAG Verification requirements for cover systems guidance (version 4.1, June 2021).

We also seek clarification in relation the testing and reuse of materials from WS3 as part of soft landscaping or gardens on this site. To clarify, we do not support the reuse of materials from the vicinity of WS3. However, from the report it is unclear what is suitable for re-use. Whilst the report does mention additional testing, the delineation activities specific to WS3 are somewhat unclear, and we are of the opinion that there is the potential for cross-contamination. We request that the consultant provide additional commentary to clarify where any impacted materials are to be retained, what delineation activities are planned (including the lateral and horizontal extents) and the measures to limit cross-contamination.

For these reasons, we are currently unable to accept the report in support of the application. We will be able to reconsider our position on receipt of new information.

Recommendations

Condition 7 - Phase 2 Intrusive Investigation

We have read the Ground Gas Risk Assessment by ARP (16th October 2024, ODL/01/L3/JP) and it is accepted. Together with the Stage 2 Geoenvironmental Report authored by ARP

(September 2024, ODL/01r1), these documents satisfy the requirements of Condition 7 and we recommend that the condition be discharged.

Condition 8 - Remediation Strategy

We are currently unable to accept the Contamination Remediation Statement by ARP (16th September 2024, ODL/01/rem1) in support of the application, and request clarification in relation to the testing and reuse of materials onsite.

We will be able to reconsider our position on receipt of new information.