



**DEPARTMENT OF
OPERATIONS**

Tom Beirne
Bury Council Planning Department

Date 26 February 2024
Reference CL1050.260224.1

Dear Tom

Outwood Gate Farm, Ringley Road West, Radcliffe, Manchester, M26 1DL, Planning Application: 68546 – Contaminated Land

I write regarding the request to discharge Condition 8 of the above planning application. The Environment Section has received a copy of the following report:

- Geoenvironmental Site Investigation Report, Outwood Gate Farm, Radcliffe, Earth Environmental and Geotechnical Ltd, Reference: A5693/SI/V1 B.0, December 2023.

The Environment Section has reviewed the above information in order to assess the following points:

1. The adequacy of the desk study information available for this site.
2. The adequacy of the site investigation.
3. The adequacy of the final risk assessment.
4. The acceptability of the proposed remediation strategy.
5. Whether the information submitted is sufficient to determine that the site presents a low risk to human health and the environment.

The site has historically been in use as farmland and farm buildings including a farmhouse. The site is currently disused. The site is not within 250m of a registered landfill site, but a pond and a tributary to the River Irwell are located to the south. The site is situated above the Manchester Marls Secondary Aquifer and Sherwood Sandstone Principal Aquifer which are overlain by Glaciofluvial Deposits of Sand and Gravel. The site is not situated within a Radon Affected Area.

The proposal is for the demolition of the existing dwelling and the construction of 1 no. new dwelling.

1. The adequacy of the desk study information available for this site

The following desk study and preliminary risk assessment has previously been reviewed and commented upon in our letter dated 30 June 2023:

- Phase 1 GeoEnvironmental Desk Study, 73 Higher Lane, Whitefield, Aedeptus, A230401-R01, April 2023.

2. The adequacy of the site investigation

The site investigation was undertaken in November 2023 following a site vegetation strip. The investigation comprised the following:

Technique	No.	Comments
Window sample boreholes	4	Excavated to depths of between 3.7 and 5.0m bgl (WS1-WS4).
Soil sampling	4	Samples analysed for a suite of analysis that included metals, speciated PAHs, TPH CWG, BTEX, MTBE and asbestos: - WS1 0.9m (relict topsoil) - WS2 0.15m (granular made ground) - WS3 1.8m (cohesive made ground) - WS4 0.7m (relict topsoil)
Ground gas monitoring	4 visits over 3 weeks	Monitoring wells installed in all 4 boreholes with the following response zones: - WS1 1-5m (relict topsoil/natural sand and clay). - WS2 0.7-3.7m (natural sand and clay). - WS3 1-3m (made ground/natural sand and clay). - WS4 1-3m (relict topsoil/peat/natural sand and clay) – flooded on 2 out of 4 occasions.

Site Ground Conditions: Ground conditions at the site comprise of granular made ground to between 0.6 and 2.10m bgl containing sandstone, brick and concrete. A band of cohesive made ground was encountered in WS3 containing wood, brick and concrete. In WS1 and WS4 made ground was underlain by relict topsoil. The natural strata comprises of interbedded sand and clay deposits, with a band of peat encountered in WS4 at between 1.45 to 1.60m bgl (glacial deposits). Bed rock was not encountered.

Site Water Conditions: During the investigation groundwater was encountered at 2.0m bgl in WS3. During the gas monitoring programme groundwater was encountered at between 0.15m (WS4) and 4.5m (WS1). No groundwater testing was carried out.

Site Ground Gas Conditions: A total of 4 visits have been carried out over a period of 3 weeks (24th, 28th November and 5th, 12th December 2023) with atmospheric pressure (AP) less than 1000mb on 3 occasions. It is usually recommended that a minimum of 6 visits over 3 months is carried out in order to ensure that monitoring takes place in a variety of atmospheric conditions including worst-case (low and falling AP). However, on this occasion as 3 out of the 4 visits can be considered worst-case scenario conditions (AP <1000mb), further monitoring is not required.

No methane was encountered. Elevated concentrations of carbon dioxide and depleted oxygen were recorded in WS1 and WS4 associated with relict topsoil deposits. Flow rates were negligible (<0.1 l/h). The response zone in WS4 was flooded on 2 out of the 4 visits and only 0.1m of the slotted section was above groundwater level on the other 2 occasions.



3. The adequacy of the final risk assessment

Ground Assessment: The soil analysis results have been compared to the Defra C4SLs, CIEH/LQM S4ULs and CLAIRE GACs for residential with homegrown produce land use (1% SOM).

No elevated concentrations of contaminants were identified. No asbestos was encountered.

The consultant has concluded that the risks to human health are low, and consequently, no remedial measures are required. This assessment appears reasonable.

Controlled Waters Assessment: The preliminary risk assessment concluded that the risks from gas ingress were moderate to low. No elevated concentrations of mobile contamination were identified in the soil samples taken during the site investigation, therefore, the risks to the underlying aquifer are considered low. This assessment appears reasonable.

Please note that the Environment Agency is the regulator of controlled waters.

Ground Gas Assessment: The consultant has used the methodology set out in CIRIA 665 and BS8485:2015 to assess the gas regime at the site. A worst-case Gas Screening Value of 0.0095 l/h has been calculated (9.5%v/v carbon dioxide and <0.1 l/h flow).

Where the maximum concentration of carbon dioxide exceeds 5%v/v, the consultant should consider increasing the gas regime at the site to Characteristic Situation 2. Consequently, a detailed gas risk assessment has been completed. Ground gas ratio plots have been completed which indicate that the source of the elevated levels of carbon dioxide encountered in WS1 and WS4, are due to microbial respiration and naturally occurring oxidation of organic material in the relict topsoil identified in both locations. (Although the results from WS4 have been considered unrepresentative due to the response one being flooded for much of the monitoring period). No elevated levels of carbon dioxide were encountered in the other two boreholes including WS3 which is situated within the footprint of the proposed new dwelling.

Consequently, the consultant considers that the gas regime at the site is representative of Characteristic Situation 1 and that no special gas protection measures are required. This assessment appears reasonable.

4. The acceptability of the proposed remediation strategy

Although the consultant considers that no specific remedial measures are required to deal with contamination at the site, the following actions have been recommended:

- Watching brief to identify and deal with any previous unforeseen contamination at the site.
- Consultation with the local water company (United Utilities) to confirm whether barrier pipe is required.

Additionally, the following actions should also be undertaken:

- Chemical testing of any imported material for use in soft landscaped or garden areas to demonstrate that the material is suitable for use.
- Excess soil material to be disposed of at a suitable waste disposal facility.

Confirmation is required that the above actions will be completed during the development.

A verification report will be required on completion of the development which includes the following information:

- Confirmation that no unforeseen visual or olfactory contamination was encountered during the development. This should include a photographic record of the development and should focus particularly on the excavations for the foundation in order to illustrate the ground conditions encountered.
- Details of any topsoil / subsoil imported to site including details of the source site for the soils, any chemical testing carried out and assessment criteria used to show that the material is suitable for use. A minimum of 3 samples is required which should be tested for a suite of analysis that includes metals, speciated PAH and asbestos. The test results should be compared to suitable generic assessment criteria.
- Details of any soil material excavated and removed from site including copies of waste management records.
- Confirmation that United Utilities did not require the use of barrier pipe at the site.
- Confirmation that any asbestos containing materials identified in the current property have been removed, this should include copies of the asbestos survey and waste transfer documentation.

Please note that if the CL:aire Definition of Waste Protocol is to be used, a copy of the Materials Management Plan will be required.

5. Whether the information submitted is sufficient to determine that the site presents a low risk to human health and the environment

In order for this Section to be satisfied that this development does not pose a risk to human health or the environment, the following information needs to be submitted to the Council for approval:

- (i) Confirmation that the following remedial actions will be undertaken:
 - Watching brief to identify and deal with any previous unforeseen contamination at the site.
 - Consultation with the local water company (United Utilities) to confirm whether barrier pipe is required.
 - Chemical testing results of any imported material for use in soft landscaped or garden areas to demonstrate that the material is suitable for use.
 - Excess soil material will be disposed of at a suitable waste disposal facility.
- (ii) After completion of site works, a verification report is required to validate that the work undertaken conforms to the remediation proposals received and agreed by this Section.



This Section cannot recommend discharge of Condition 8 until item (i) above has been submitted and approved.

Condition 9 requires the submission and approval of a verification report.

All parties involved with waste and soil movement at the site should be aware that materials illegally deposited or deposited at inappropriate sites may be subject to relevant landfill taxes, payable by all parties. Only robust due diligence is a defence against joint liability. Illegal deposits can include moving waste soil material on sites, or between sites, without the appropriate permits, exemptions or duty of care.

Please Note: The Environment Section has used all reasonable endeavours to determine the risk from contaminated land and ground gas based upon the information available to it. However, the comments made above should not be taken to imply that the land is safe or otherwise suitable for this or any other development. The ultimate responsibility for safe implementation of the development scheme resides entirely with the landowner and/or Planning Applicant.

Please do not hesitate to contact me if you require any clarification of the above.

Yours sincerely

Rebecca Jones
Environmental Protection Officer

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