



**DEPARTMENT OF
OPERATIONS**

Claire Booth
Bury Council Planning Department

Date 11 October 2023
Reference CL1047.111023.1

Dear Claire

11 Malvern Close, Prestwich, M25 1PH, Planning Application: 69104 – Contaminated Land

I write regarding the above planning application. The Environment Section has received copies of the following reports:

- Intrusive Investigation, 11 Malvern Close, Prestwich, M25 1PH, Reference: Malvern Close/M25 1PH/2023, 6 September 2023.
- Remediation Strategy, 11 Malvern Close, Prestwich, M25 1PH, Reference: Malvern Close/M25 1PH/2023, 6 September 2023.

The Environment Section has reviewed the above information in order to assess the adequacy of the following items:

1. The adequacy of the Site Investigation and Risk Assessment Report.
2. The adequacy of the Remediation Strategy.
3. 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.

The site is currently a vacant plot following the demolition of the previous property. Prior to the site being developed for housing, along with the surrounding area, the site was previously open fields. The site was developed as a house during the 1930s or 1940s. The site is not within 250m of a registered landfill or in close proximity to any major surface watercourse. The site is situated on the Middle Coal Measures Secondary A Aquifer which is overlain by Glaciofluvial Sand and Gravel Deposits. The site is not located within a Radon Affected Area.

The proposal is for a replacement attached dwelling.

1. The adequacy of the Site Investigation and Risk Assessment Report

The site investigation was undertaken in August 2023 and comprised the following:



Technique	No.	Comments
Trial holes	5	Excavated to between 0.6 and 1.0m bgl (THA, THB, THC, TPD, THE).
Soil sampling	6	5 samples of made ground/topsoil analysed for a suite of analysis that included metals, phenol, speciated PAHs, BTEX, TPH CWG and asbestos (THA 0.25m, THB 0.25m, THC 0.25m, THD 0.25m and THE 0.25m). A sample of peat from THD at 0.9m was tested for phenol, BTEX, TPH C5-10, chlorinated solvents, VOC, SVOC.
Soil leachate samples	2	Samples (THC and THD) were tested for a suite of analysis that included lead and speciated PAHs.

Site Ground Conditions and Human Health Assessment: Ground conditions at the site comprise topsoil or topsoil-like made ground containing brick, glass, gravel and roots to between 0.3 and 0.4m bgl. The natural strata comprises peat to in excess of 1.0m bgl. The underlying glacial deposits and bed rock was not encountered.

The soil analysis results have been compared to the Defra C4SLs and CIEH/LQM S4ULs where available for residential with homegrown produce land use.

The following elevated concentrations of contaminants were found in the made ground:

- Lead – Samples THC 0.25m (300mg/kg) and THD 0.25m (440mg/kg), based on C4SL of 200mg/kg.
- Benzo(a)pyrene - Samples THC 0.25m (4.5mg/kg) and THD 0.25m (4mg/kg), based on S4UL of 3mg/kg.
- Benzo(b)fluoranthene - Samples THC 0.25m (5.1mg/kg) and THD 0.25m (5.1mg/kg), based on S4UL of 3.7mg/kg.
- Dibenzo(a)anthracene - Samples THC 0.25m (0.52mg/kg) and THD 0.25m (0.48mg/kg), based on S4UL of 0.3mg/kg.

No asbestos was encountered.

The consultant considers that there is a potential risk to human health from the elevated concentrations of lead and PAHs in the vicinity of THC and THD. Therefore, remedial action is proposed. This assessment appears reasonable.

A United Utilities water supply pipe risk assessment has been completed which concluded that barrier pipe was not required.

Site Water Conditions and Controlled Waters Assessment: No groundwater was encountered during the investigation.

The soil leachate analysis results have been compared to the UK Drinking Water Standards and Environmental Quality Standards. No elevated concentrations of leachable contaminants were

identified in the two samples THC and THD were lead and PAHs were identified in the made ground. Additionally, the site is not located within close proximity to any surface water features or source protection zones and abstractions. Consequently, the consultant considers that the risks to controlled waters is low. This assessment appears reasonable.

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

Site Ground Gas Conditions and Ground Gas Assessment: No gas monitoring has been completed.

Peat was identified beneath the site in all locations, which is a potential source of methane and carbon dioxide, but usually with low flow rates. The consultant considers that the installation of precautionary gas protection measures within the property will protect the future site users from any ground gas ingress. On this occasion, this proposal appears reasonable.

2. The adequacy of the Remediation Strategy

The following measures are proposed so that the contamination identified on site no longer presents a risk:

- **Watching brief** to identify and deal with any previous unforeseen contamination at the site, a watching brief will be kept during the development. If any visual or olfactory evidence of contamination is encountered, further investigation and assessment will be required. Details of any contamination encountered will be included in the validation report. A photographic record will be kept.
- **Removal and off-site disposal of made ground to 600mm bgl (or base) in the vicinity of THC and THD** located at the front of the property (southern part of the site) where elevated levels of lead and PAHs were found. Validation sampling of will be undertaken (two samples taken from the NE face of excavation and tested for lead and PAHs).
- **Placement of clean cover system** - to comprise the following:
 - In garden areas - 150mm topsoil (gardens), 450mm sub-soil (gardens), geotextile (or similar) warning barrier.
 - In driveway area – hardstanding.
- **Chemical testing of materials imported to site** to be carried out at the following rates and for the following suites of analysis:
 - Virgin quarried material – 1 or 2 samples - metals.
 - Crushed hardcore, stone, brick – minimum of 1 sample per 1000m³ - metals, speciated PAH, asbestos, TPHs.
 - Greenfield/manufactured soils – minimum of 3 tests or 1 test per 250m³ (whichever is greater) - metals, speciated PAHs, asbestos, TPHs.

- Brownfield/screened soils – minimum of 6 tests or 1 per 100m³ (whichever is greater) – metals, speciated PAHs, asbestos, TPHs and any additional analysis dependant on the history of the donor site.

The results of the chemical analysis will be compared to GAC (1% SOM) for residential with home grown produce.

- **Gas Protection Measures** (CS2/Amber 1) to comprise:
 - Visqueen Gas Barrier (blue with foil core) suitably lapped and sealed and continuous across the cavity wall.
 - A well-constructed reinforced concrete ground bearing slab or suspended floor.
 - Minimum penetration of the floor slab and service entries sealed using pre-formed top hats.

Installation of protection measures will be validated.

The proposed remediation strategy is acceptable to this Section. The remedial works should be fully implemented in accordance with the strategy's recommendations.

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.

3. 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

It is under that a verification report will be submitted on completion of the remedial measures.

Conclusion

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) 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. The report would be expected to include the following:
 - Summary of desk study, site investigation report and remediation strategy.
 - Details of who carried out the work.
 - Details and justification of any changes from original remediation strategy.
 - Substantiating validation data that should include where appropriate:
 - 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 material excavated and removed from site, including made ground from the vicinity of THC and THD, including copies of waste management records. Validation sampling of the sides of the excavation.
 - Validation information for all imported soil material, which includes:
 - Details of the source site for the imported material/topsoil i.e. the name and address of the site where the material comes from.
 - Delivery notes for all material.
 - Chemical analysis results for imported material to demonstrate that it is clean and suitable for use.
 - A photographic record of imported material being placed.
 - Validation information for the depth of clean cover material installed.
 - Photographic record.
 - Trial hole records.
 - Full inspection of the installation of the ground gas protection measures (if required). This will need to include photographs displaying the membrane in situ, the sealing of any service entries and how the gas protection measures span wall cavities. For guidance on the information needed please refer to the YALPAG Guidance on the Verification of Gas Protection Systems.
- Confirmation that remediation objectives have been met.

This Section is satisfied that the requirements of Condition 3 have been met and that this condition can now be recommended for discharge.

Condition 4 requires the submission and approval of a validation report.

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

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rebecca Jones', with a stylized, flowing script.

Rebecca Jones
Environmental Protection Officer

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 responsibility for safe development rests with the developer.

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