



**DEPARTMENT OF
OPERATIONS**

Date 7 September 2023
Reference CL032.070923.1

Helen Pressley
Bury Council Planning Department

Dear Helen

Fairfield General Hospital, Rochdale Old Road, Bury, BL9 7TD, Planning Application: 69513 – Contaminated Land

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

- Ground Investigation at Fairfield General Hospital Emergency Department, Letter Report, GRM, Reference P10147/LetRep.1, 17th November 2022
- Gas Addendum Letter for Fairfield General Hospital Emergency Department, GRM, Reference: P10147/GAL.1
- Additional Ground Gas Risk Assessment for Fairfield General Hospital Emergency Department, GRM, Reference: P10147/GRA, 17 August 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.
6. If pre-commencement or pre-occupation planning conditions are required.

The site has historically been in use as a Workhouse followed by the hospital. Surrounding historical uses have included a burial ground. The site is within 250m of a registered landfill site known as Jericho Landfill and is situated above the Woodhead Hill Rock Secondary A Aquifer which is overlain by glacial till.

The site is currently a three storey hospital building surrounded by hardstanding.

It is understood that the proposed development comprises an extension to the Emergency Department and landscaping.



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

The report includes a description of the site including its past historical uses. An appraisal of the site environmental setting is presented including its geology, hydrogeology and hydrological regime, mining activities, waste management issues, and identification of additional environmental sources, pathways and receptors. This information has been used to compile a clear site conceptual model, which identifies potential sources, pathways and receptors and likely pollution linkages.

A shaft has been recorded 25m to the east of the site, although it is not recorded to be a coal mining shaft it has been recommended that it is located and treated.

2. The adequacy of the site investigation

The site investigation was carried out on the 10th, 19th and 20th October 2022 and comprised the following:

Technique	No.	Comments
Windowless Boreholes	2	WS01 – WS02 to depth of 4.00mbgl. Gas and groundwater monitoring standpipes installed. Response zones were in the natural strata due to lack of made ground.
Foundation inspection pits	4	HDP01 – HDP04 to 1.00mbgl.
Soil sampling	10	Metals – Cd, CrVI, Cu, Hg, Ni, Pb, V and Zn, Semi and Non-Metals - As, Se, CN- and Phenols, Polycyclic aromatic hydrocarbons (PAHs), Petroleum hydrocarbons (TPHs), pH, and water soluble sulphate, Asbestos

Site Ground Conditions: Made ground was found from 0.1m to 0.25m of tarmacadam/asphalt underlain by 0.25 and 0.4m of gravelly sand with cobbles of sandstone and mudstone. 0.1m of cobbles were present at the base of the made ground. The underlaying natural strata was slightly gravelly, sandy clay with gravel of mudstone, sandstone and coal to depths of 1.4mbgl and 2.5mbgl. This material was underlain by silty, slightly gravelly sand with gravel of sandstone and was found to depths of 2.0mbgl and 3.2mbgl.

Confidential Borehole Records have been obtained from BGS which record a variable thickness of made ground (0.6m to 2.7m) overlying strata consistent with that of the weathered Woodhead Hill Rock. Two rotary boreholes were advanced to depths between 35.0m and 38.0m. Two seams of coal were recorded at 24.95m – 25.24m and 31.8m – 32.41m. No comments on the drilling logs suggest any loss of flush due to mining or the presence of broken ground therefore the coal seams are considered to be not worked.



Site Water Conditions: The site is not considered to pose a risk to controlled waters. Water seepage was noted in WS02 between 2.5mbgl and 3.2mbgl, and in HDP03 and HDP04 at the base (1.00mbgl).

Site Ground Gas Conditions: Potential sources of ground gas were found to be made ground and mine workings.

Gas monitoring was carried out between 18th October and 11th November 2022 and consisted of four visits. Atmospheric pressure was above 1000mb on all occasions and was rising on three occasions.

No methane was detected and maximum carbon dioxide was found to be 1.50%v/v, no flow was recorded.

Further gas monitoring was carried out 18, 27 July and 2 August 2023 in two further gas monitoring locations (FGH-ED WS01 and WS02) to depths between 1.0 and 2.0m. Similar ground conditions were encountered. Three rounds of gas monitoring have been completed and two during periods of low and falling pressure. No elevated concentrations of methane and a maximum carbon dioxide concentration of 1.9%v/v were found along with a maximum flow rate of 0.1l/hr.

3. The adequacy of the final risk assessment

Ground Assessment: The soil analysis results have been compared to TACs for residential without plant uptake. None of the contaminants reported concentrations in excess of the TAC. One sample from HDP02 found concentrations of TPH above the threshold for standard water supply pipes. Confirmation is required from the local water company on the need for upgraded water supply pipes.

No asbestos was encountered.

Controlled Waters Assessment: As there is no significant source of contamination identified the risk to controlled water is assessed as low.

Ground Gas Assessment: The consultant has used the methodology set out in BS8485:2015+A1:2019 to assess the gas regime at the site and produce a Gas Screening Value (GSV). As no methane or flow rates were recorded, the gas monitors lower level limit of detection was used and a gas flow rate of 0.0001l/hr was calculated. The maximum recorded steady rate for carbon dioxide was used along with flow rate of 0.1l/hr flow rate to get a GSV of 0.0015l/hr.

Further gas monitoring has now been carried out and based on the maximum concentrations found a GSV of 0.0019l/hr has been calculated.

The BGS boreholes did not encounter old coal workings therefore the risk to end users from mine gas is considered to be very low.

Therefore, the site has been assessed as Characteristic Situation 1 for which gas protection measures are not required.

The gas assessment is acceptable to this Section.

4. The acceptability of the proposed remediation strategy

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

- Consultation with United Utilities regarding the need for protective water supply pipes.
- A watching brief to be carried out during works to identify and deal with any unforeseen contamination.

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

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.

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:

- (1) 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.
 - Confirmation of the consultation with United Utilities and the water supply pipes used.
 - Details of the watching brief.
 - Substantiating validation data that should include where appropriate:
 - Laboratory and *in-situ* test results.
 - Monitoring results for groundwater and gases.
 - Summary data plots and tables relating to clean-up criteria.
 - Plans showing treatment areas and details of any differences from the original remediation strategy.
 - Photographic and other media records.

- Waste management details and records.
- Confirmation that remediation objectives have been met.

The above information will be required by a planning condition, if permission is granted.

6. If pre-commencement or pre-occupation planning conditions are required

In line with the National Planning Policy Framework, there is the potential for contamination on this site, therefore, we recommend that the following contaminated land condition is placed on any grant of permission:

CLA2 (amended) - Contaminated Land implementation of Remediation Strategy and Site Verification Report.

The approved remediation proposals set in the council's response reference CL032.060923.1 must be carried out to the satisfaction of the Local Planning Authority within agreed timescales; and A Site Verification Report detailing the actions taken and conclusions at each stage of the remediation works, including substantiating evidence, shall be submitted to and approved in writing by the Local Planning Authority prior to the development being brought into use.

Reason - To secure the satisfactory development of the site in terms of human health, controlled waters and the wider environment and pursuant to Planning Policy Statement 23 - Planning and Pollution Control.

Reason - This is to secure the satisfactory development of the site in terms of human health, controlled waters and the wider environment and pursuant to the National Planning Policy Framework.

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 'J Scott', written in a cursive style.

Judith Scott
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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