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Department for Operations

Jennie Townsend
Bury Council Development Control

Dear Jennie

5 Knowsley View, The Haven, Knowsley Road, Radcliffe, BL2 5PT, Planning Application: 66836 & 68665 – Contaminated Land

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

- Phase 1: Preliminary Risk Assessment, Ainsworth Nursing Home, Radcliffe, LK Consult, Reference: CL-602-LKC 20 1567-01 R1, 30 July 2020.
- Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy, The Haven, Former Ainsworth Nursing Home, Radcliffe, LK Consultant, Reference: CL-602-LKC 22 1186-01, April 2022.

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 was formerly occupied by Ainsworth Nursing Home. Current uses in the surrounding area include open land and residential properties. Previous uses at the site have included a former farm/country house known as Broom Field followed by Ainsworth Hospital for Infectious Diseases and Smallpox. Previous uses in the surrounding area have included potentially infilled features including ponds and filterbeds. There are no registered landfills within 250m of the main site. The site is not located in close proximity to any major surface watercourses, but there are a number of land drains in the surrounding area and reservoirs 260m to the north east. Drift deposits are thought to be absent beneath the main part of the site with deposits of glacial till present further south. This is underlain by the Lower Coal Measures Secondary A Aquifer.

It is understood that the proposal is to convert a former Wash House to a residential property with a small extension and extensive landscaping.

The proposed demolition and conversion of The Haven is part of a wider development of 7 residential plots on the site of the former Ainsworth Nursing Home. It is understood that they comprise:

- The Wash House (Application: 65412),
- The Bungalow (Application: 65626 & 66467),
- The Gate House (Application: 68661),
- The Stables,
- The Haven (Application: 66836 & 68665),
- Knowsley House (Application: 66142),
- Knowsley Manor.

It is understood that the proposed development comprises the demolition and conversion of the building known as 'The Haven' to 1 no. private residential dwelling, with associated garden curtilage and parking.

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

The desk study submitted covers the entire Ainsworth Nursing Home site, which includes The Haven.

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 site walkover was carried out which identified the following potential sources of contamination: a fuel tank (located towards the centre of the site), a septic tank (located towards the south east) and a 5m tall chimney (located in the east of the site). Evidence of brick made ground was identified in the vicinity of the Wash House and evidence of a past bonfire was noted in the central area of the site. Two hand dug trial holes were excavated (TH1 and TH2), evidence of made ground was noted at both locations.

The desk study information provided appears to be sufficient to assess the potential risks at the site.

The consultant considers that there is the potential for made ground and contamination to exist at the site associated the possible use of asbestos containing materials (ACM) in buildings, ash and clinker from boiler house and hearths, and hydrocarbons associated with the above ground fuel tank. Additionally, there is the potential for ground gases associated with on-site made ground, infilled features in the surrounding area and the underlying Coal Measures strata.

Consequently, there is a potential risk to future site users and the environment and therefore, an intrusive investigation was recommended by the consultant.

It is recommended that a pre-refurbishment and demolition asbestos survey is carried out prior to any demolition of the existing building. Validation information, including

waste transfer documentation, will be required to demonstrate that any asbestos containing materials have been removed.

2. The adequacy of the site investigation

The site investigation was carried out on 23 March 2022 and comprised the following:

Technique	No.	Comments
Hand dug trial holes	3	Excavated to a depth of between 0.5m and 0.95m bgl (HD101, HD102 and HD103).
Soil sampling	3	Samples of made ground were analysed for a suite of analysis that included metals, speciated PAHs and asbestos: • HD101 0.0-0.20m • HD102 0.15-0.6m • HD103 0.3-0.85m

Site Ground Conditions: Ground conditions at the site comprise of cohesive made ground to between 0.2 and 0.85m bgl containing brick, coal and metal. At location HD102 the made ground was overlain by flagstones set in sand. The natural strata comprises of clay and silt deposits (glacial till) to in excess of 0.95m bgl. Bed rock was not encountered.

No olfactory or visual evidence of contamination was noted.

Site Water Conditions: Groundwater was not encountered during the investigation.

Site Ground Gas Conditions: No evidence of deep made ground or putrescible material was noted during the site investigation therefore gas monitoring was not considered necessary.

3. The adequacy of the final risk assessment

Ground Assessment: The soil analysis results have been compared to the Defra C4SLs, CIEH/LQM S4ULs, where available, for residential with homegrown produce land use. Benzo(a)pyrene has been used as surrogate markers for carcinogenic PAHs and naphthalene for volatile and soluble PAHs.

Elevated concentrations of benzo(a)pyrene were identified in HD101 0.0-0.20m (7.3mg/kg) and HD102 0.15-0.6m (23mg/kg) compared to a C4SL of 5mg/kg. No asbestos was found.

The consultant considers that there is a potential risk to human health from soil contamination at the site and consequently, remedial action is required. This assessment appears reasonable.

Controlled Waters Assessment: Although PAHs were found within the made ground at the site, they are generally of low mobility and the underlying Secondary A aquifer is overlain by low permeability clay and silt deposits. Consequently, the consultant

considers that the risk to controlled waters is low and that no remedial action is required. This assessment appears reasonable.

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

Ground Gas Assessment: Relatively shallow made ground was identified on site and no putrescible material was identified in the made ground. Consequently, the consultant considers that the risks from ground gas ingress are low and that no protection measures are required. This assessment appears reasonable.

4. The acceptability of the proposed remediation strategy

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

- **Clean cover system** in garden and soft landscaped areas to comprise one or more of the following options:
 - Option 1 - Removal of all made ground and raise levels (as required) with suitably chemically validated subsoil and topsoil.
 - Option 2 – Where made ground remains in place and install a 600mm thick environmental cover system comprising: either 100mm physical break layer (MOT type 1 material, 20-30mm, minimal fines) and at least 500mm comprising clean inert fill and sufficient topsoil for a growing medium. Or geotextile membrane and at least 600mm comprising clean inert fill and sufficient topsoil for a growing medium.
 - Option 3 - ‘Concreted in’ hard landscaping such as a patio or parking area to comprise, 100-150mm of compacted granular material (such as MOT) and 50mm of concrete is required below the paved area.
- **Validation testing of imported topsoil/subsoil/recycled stone** at a rate of 1 per 50m³ (topsoil), 1 per 150m³ (subsoil) and 1 per 500m³ (physical break layer - recycled stone/6F2) with a minimum of 3 samples per source. Samples will be tested for a suite of analysis with that includes metals, speciated PAH and asbestos as a minimum, with brownfield, recycled or unknown sources also tested for TPH CWG, BTEX and MTBE.
- **Depth validation** using hand dug pits to ensure that a sufficient depth of topsoil/subsoil has been placed.
- **Disposal of unsuitable soil material** to a suitably licenced waste disposal facility, copies of waste disposal documentation will be obtained.
- **Watching brief** to identify and deal with any previously unforeseen contamination.

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

Additionally, it is recommended that United Utilities are contacted, and a potable water supply risk assessment is undertaken to ensure that barrier pipe is not required at the site.

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

Please note that 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:

- (i) Pre-refurbishment/demolition asbestos survey report and confirmation asbestos containing materials have been removed.
- (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.

For application 66836, this Section is satisfied that the requirements of Condition 5 have been met and that this condition can now be recommended for discharge. Condition 6 will require the submission and approval of a validation report.

For application 68665, the above information will be required by planning conditions, if permission is granted.

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

Yours sincerely



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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