



GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting

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Ref: BEK-25026-1

20 August 2025

FAO Hassan Isaji

MULBERRY WASTE LIMITED

117-118 Clydesdale Place

Moss Side Industrial Estate

Leyland

PR26 7QS

Dear Hassan

Phoenix House, Stockpit Road, Knowsley Industrial Park, Kirkby, Knowsley, L33 7TQ

BEK is in receipt of Knowsley Council's comments (dated 18 August 2025 from Helen Bradshaw) following their review of the BEK Phase 1 – Preliminary Risk Assessment prepared for the above site (Ref: BEK-25026-1, April 2025). The report was prepared to satisfy (in part) Condition No 3 of the Planning Permission (Ref: 24/00509/FUL).

Knowsley Council has requested clarification on the following points:

1. The Phase 1 report includes recommendations for the intrusive site investigation works. Whilst MEAS are broadly in agreement with the proposed approach, several matters require clarification as set out below. It would be prudent for these matters to be addressed, and the approach agreed with the Local Planning Authority prior to undertaking the site investigation:
 - The Proposed Window Sample Borehole and Well Installations (Figure 2) do not appear to target the location of the above ground storage tank noted to be present in the southeastern corner of the site.
 - It is proposed that 8no. soil samples will be subject to chemical analysis. MEAS advise that additional analysis may be required, based on the nature of the ground conditions encountered, to ensure that sufficient representative sampling and analysis is undertaken. MEAS acknowledge that it is noted that additional testing may be required if visual or olfactory evidence is encountered during the site investigation.
 - Section 5.6.5 of the Phase 1 Report indicates there could be a risk from volatile organic contaminants, however, this is not included within the proposed analytical suite shown in Section 6.9.
 - Any positive asbestos identification result should be followed by quantification analysis.
 - Details of the proposed risk assessment evaluation criteria to be adopted should be provided
 - Whilst it is stated that gas monitoring will be undertaken over a 3-month period, the proposed frequency of monitoring is not provided; this requires clarification. Both the frequency and duration of ground gas monitoring must be justified with reference to best-practice guidance.



- Owing to the site's location within a former munitions factory, and the site being recorded as a Luftwaffe target, as a minimum a Preliminary UXO Risk Assessment should be undertaken. This should be followed by a Detailed UXO Risk Assessment if required based on its findings of the Preliminary Assessment. Any recommendations for risk mitigation measures to be employed to support intrusive works undertaken at the site should be implemented.

BEK Comments

Each of the points raised above has been addressed by BEK in the commentary below:

The Phase 1 Assessment prepared by BEK includes proposals for site investigation works and includes a borehole location plan (Drawing No 25026-3, copy attached). Borehole WS101 is located in the south-east of the site and has been located to target the location of the above ground fuel storage tank. We have also allowed for a gas/vapour/groundwater probe to be installed in this location.

The site investigation proposals has initially allowed for 8 samples to be tested for the contaminants of concern. The Phase 1 report also states that *'testing of additional samples and/or the inclusion additional testing suites may be required based on the findings and nature of the ground conditions encountered. This will include an assessment of any visual/olfactory evidence for the presence of contamination'*.

The test suite proposed is presented in Table 1 of the Phase 1 report and is reproduced below:

Contaminants Associated with Made Ground	
Arsenic	Zinc
Cadmium	Cyanide
Chromium	Phenols
Copper	Sulphate
Lead	Polycyclic Aromatic Hydrocarbons (PAHs)
Mercury	Total Petroleum Hydrocarbons (TPHCWG)
Nickel	pH
Selenium	Asbestos
Contaminants Associated with Diesel Tank/Past Industrial Activities	
VOCs	SVOCs
BTEX & MTBE	

The proposed suite includes TPHCWG in all samples recovered which includes volatile organic fractions. We have also allowed for samples recovered from the location of the tank (Borehole WS101) to be tested for VOCs and SVOCs. In line with the previous comment, *'testing of additional samples and/or the inclusion additional testing suites may be required based on the findings and nature of the ground conditions encountered. This will include an assessment of any visual/olfactory evidence for the presence of contamination'*.

If asbestos is encountered in any sample (and all samples submitted for testing will include asbestos ID testing) then the asbestos quantification testing will be automatically carried out to facilitate the risk assessment. This is stated in the Phase 1 Assessment as *'any sample that proves positive for the presence of asbestos; it will be necessary to undertake quantification testing in order to further inform on risk'*.

In terms of the proposed risk assessment evaluation criteria to be adopted, this is presented in the Phase 1 Assessment where it states *'the chemical test results will be initially compared against a range of generic assessment criteria for a commercial end-use'*.



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These will include the use of the Land Quality Management and Chartered Institute of Environmental Health assessment criteria (S4ULs), the Contaminated Land: Applications in Real Environments assessment criteria (CL:AIRE) Category 4 Screening Levels (C4SLs) and the ATKINS ATRISK Screening Criteria'.

The gas risk is described as high and ground gas monitoring is recommended to inform a quantitative ground gas risk assessment. The Phase 1 Assessment recommends that *'the monitoring wells will be monitored on 6 occasions over a 3-month period for gas flow rates, gas concentrations, and groundwater levels (in accordance with CIRIA 665)'.*

In terms of UXO the Phase 1 Assessment states that *'although the regional unexploded bomb risk map from Zetica (2025) has identified the site as being as LOW risk from Unexploded Ordnance, the site is known to be located within a former munitions factory and a potential Luftwaffe target, likely owing to the aforementioned munitions factory - considering this, further assessment with respect to UXO is likely to be required. BEK recommended a Preliminary UXO Risk Assessment be undertaken at the site, potentially followed by a Detailed UXO Risk Assessment based on the findings'.*

I trust that the above satisfies the comments raised by Knowsley Council. However, would be happy to open a dialogue if any further issues need to be resolved.

Your sincerely

A handwritten signature in blue ink, appearing to read 'Michael Buckley'.

Michael Buckley

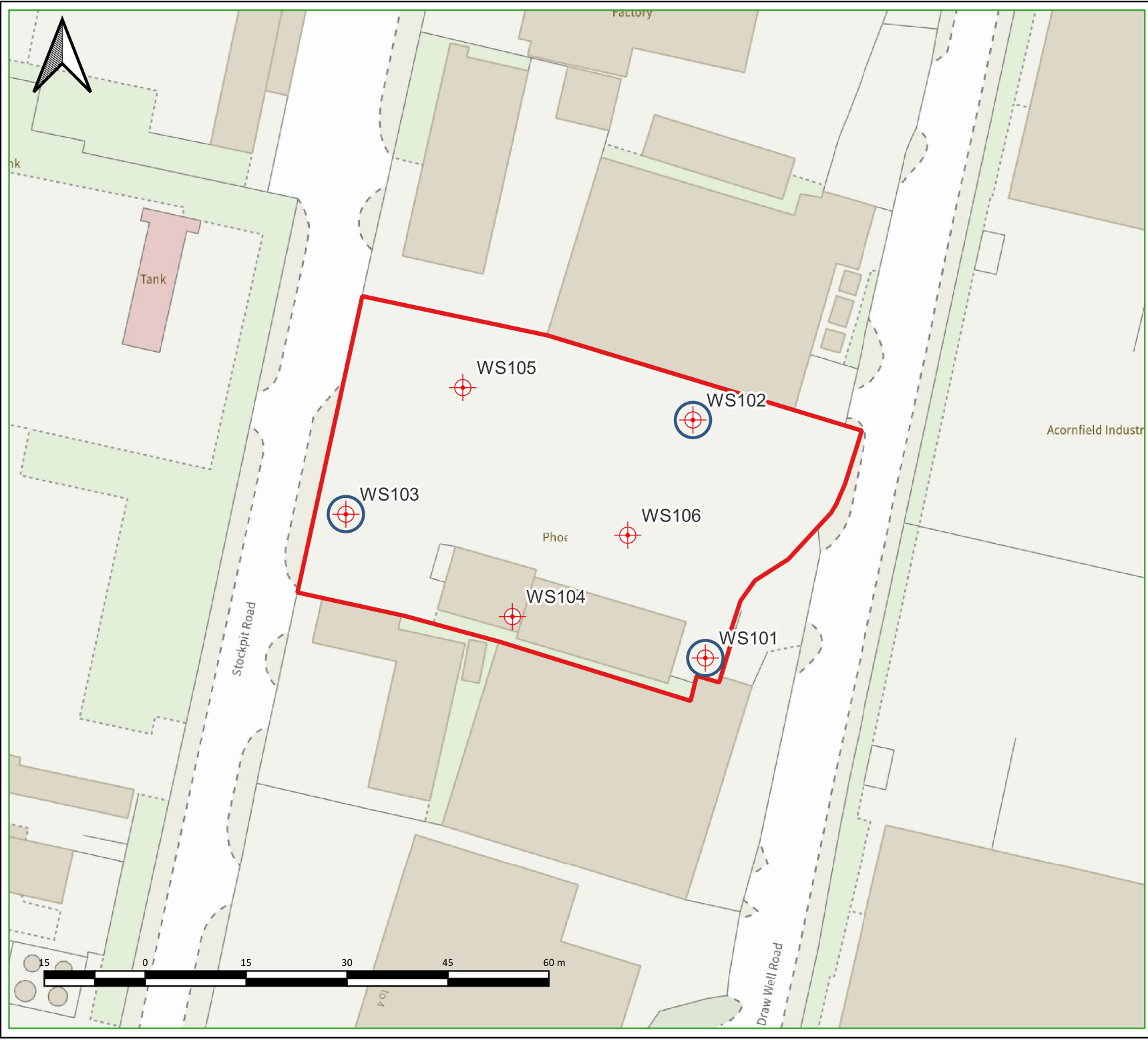
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ANNEX A

DRAWING



Key

- WS Locations
- Well Installations
- Site boundary

The client must not amend any drawing, design or other intellectual property produced by BEK without permission in writing from BEK in advance of any amendments being made.

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Rev:	Description	Date	BY

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Client:
Mulberry Waste Limited

Job Title:
Land at Phoenix House, Stockpit Road

Drawing Title:
Intrusive Location Plan

Scale @ A3	Drawn By: PC	Approved By: MB	Date: 12/06/25
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Drawing No: 25026-3	Rev: B
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