OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
Company No: 06537088
VAT No: 369 2662 60
Tel: 0800 433 2906
oakshireenvironmental.co.uk

# Phase 2 Intrusive Site Investigation

07 June 2026

**Mr A and S Forshaw**
Bolton Fold Farm, Alston Lane, Longridge, PR3 3BN

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

**CONTENTS**

# 1. Introduction

The following document is a Phase 2 Intrusive Site Investigation carried out by Oakshire Environmental, and includes details of the site, sampling methodology, ground conditions, an evaluation of risk and an assessment of further investigations.

## 1.1 Project Overview

The client's proposed project involves the erection of 2 no. self-build agricultural workers dwellings with access and parking at Bolton Fold Farm, Alston Lane, Longridge, PR3 3BN. Following the identification of potential contaminant linkages at the site, an intrusive site investigation has been recommended. Oakshire Environmental will carry out a Phase 2 Intrusive Site Investigation, as described below.

## 1.2 Purpose of Investigation

The objectives of the Phase 2 Intrusive Site Investigation will be to:

- Establish the context and setting of development at the site.
- Identify and assess the nature and extent of contamination risk at the site.
- Determine the requirement for further investigations, remediation or mitigation measures.

## 1.3 Scope of Work

- Assess the site and previous investigations, to establish the context and setting of development.
- In order to identify the nature and extent of contamination, 4 x samples (2 x trial pits) will be taken down to a maximum depth of ~1m and analysed for Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (USEPA 16), BTEX & MTBE, Total Petroleum Hydrocarbons CWG (Aliphatic/ Aromatic), pH, Organic Matter and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Ground conditions encountered at the site, including identification of groundwater and made ground, will be noted and used to inform recommendations and conclusions.
- Results of laboratory testing will be assessed with reference to suitable screening values, including LQM/CIEH Suitable 4 Use Levels (S4ULs), CL:AIRE Category 4 Screening Levels (C4SLs) and Generic Assessment Criteria (GAC).
- This information will be used to update the Conceptual Site Model, produced as part of previous investigations to categorise the severity of consequence and probability of identified contaminant linkages, and conduct an evaluation of contamination risk to determine the requirement for further investigations, remediation or mitigation measures.
- Supporting appendix to include photographs, maps and plans of the site.

## 1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

## 2. Site

The following section provides a description of the site and location, proposed project and previous investigations, utilising information obtained from the client and publicly available sources.

### 2.1 Site Description and Location

The site is located at Bolton Fold Farm, Preston Road, Preston, PR3 3BN, and comprises an approximately 0.18 hectare parcel of undeveloped agricultural land, currently formed of grazed grassland with trees and hedgerows along the boundaries, with no buildings, structures, or hardstanding present. The site is generally flat and has remained agricultural land throughout its recorded history.

The site is surrounded by residential dwellings to the north and west, Bolton Fold Farm to the east, and agricultural land to the south, within a predominantly rural setting with some local commercial uses.

National Grid Reference: E 360090, N 435334

### 2.2 Proposed Development

The client's proposed development involves the erection of 2 no. self-build agricultural workers dwellings with access and parking at the site.

### 2.3 Previous Investigations

A Phase I Geoenvironmental Site Assessment was undertaken by E3P in December 2023. The assessment concluded that, given the site has remained undeveloped agricultural land, there are no significant sources of contamination likely to pose a risk to human health, although the presence of localised made ground cannot be entirely discounted, resulting in an overall low risk.

The report recommended that a Phase II intrusive site investigation be undertaken to confirm the findings of the desk study and to characterise the underlying soils, including assessment for potential contaminants such as heavy metals, hydrocarbons, and asbestos where made ground may be present

Based on the findings of the Phase I Geoenvironmental Site Assessment, Oakshire Environmental has carried out sampling of soil at the site, which has been tested for a comprehensive suite of contaminants including Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH, Organic Matter and Asbestos (Qualitative).

## 3. Methodology

### 3.1 Sampling Work

Two trial pits were excavated at the locations shown on plans in the appendix, with ground conditions noted during the sampling process to inform recommendations and conclusions.

Two soil samples were collected from each trial pit, by a qualified Oakshire Environmental consultant, using a window sampler and soil was then collected from the sampler and placed into sealed sample containers. Samples collected for VOC analysis were filled as much as possible to minimise air spaces, as volatile compounds can be lost into these spaces. Sampling equipment was wiped clean between sample locations to minimise cross contamination.

### 3.2 Sampling Strategy

Four samples was considered to be a sufficient sample size, based on the size of the site, proposed use areas and the low potential contamination risk. Locations were chosen to focus on the proposed soft landscaping areas, while providing coverage across the site.

Shallow soil was sampled as this will represent the soil that is most likely to impact future site users through inhalation, ingestion and dermal contact pathways, in addition, deeper samples also collected to allow identification of variability through the soil profile.

### 3.3 Health & Safety

When collecting soil samples on a potentially contaminated site it must be assumed that the soil is contaminated in order to protect the health of the assessor. Protective rubber gloves were worn at all times as well as substantial footwear. Equipment was washed thoroughly before and after use and kept in a container when transported to avoid the spread of any possible contamination. Sample containers were packed with biodegradable fill for protection and placed in a sealed plastic container for transportation to the laboratory.

## 4. Ground Conditions

Ground conditions identified in both trial pits comprised grass overlying dark brown silty sandy clay with frequent roots and very occasional gravel to a depth of 0.40m and light greyish and yellowish brown sandy clay with very occasional gravel to the bottom of the trial pit at 0.50m.

Detailed trial pit logs are provided in the Appendix.

# 5. Evaluation of Results

## 5.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening levels used for risk assessments. Screening levels used include the DEFRA Category 4 Screening Levels (C4SLs) based on Low Level of Toxicological Risk and the LQM/CIEH S4ULs for Human Health Risk Assessment. These levels cover multiple Soil Organic Matter (SOM) contents (1%, 2% and 6%) and assume a pH of 8. The ‘residential with homegrown produce’ screening values were used to assess results. This land use considers direct soil and indoor dust ingestion and inhalation, skin contact with soils and dust, inhalation of vapours and ingestion of homegrown produce as exposure pathways. These levels take a conservative approach to assessing potential risk and concentrations below these screening values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk to human health based on the proposed land use.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation under the UK’s planning regimes. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

## 5.2 Summary of Results

- Heavy metal concentrations were low and were below residential with homegrown produce land use screening values in all samples
- pH was alkaline in all samples
- Phenols concentrations were below the laboratory limit of detection in all samples
- Total Organic Carbon value was low, suggesting the soil has a low organic matter content
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were low in samples S01 and S03 and were very low with most below the laboratory limit of detection in samples S02 and S04
- BTEX & MTBE concentrations were below the laboratory limit of detection in all samples
- Total Petroleum Hydrocarbons (TPHs) concentrations were below the laboratory limit of detection in samples S01, S02 and S04 and were very low in sample S03
- No Asbestos was detected in sampled soil

### 5.3 Risk Assessment Methodology

The potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on the receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

Severities are categorised from Minor to Severe and probabilities are categorised from Unlikely to High Likelihood to give a potential level of risk output.

Table 1: Risk Matrix

| **Probability** | **Severity of Consequence** | | | |
|---|---|---|---|---|
| | Severe | Medium | Mild | Minor |
| High Likelihood | Very High Risk | High Risk | Moderate Risk | Low / Moderate Risk |
| Likely | High Risk | Moderate Risk | Low / Moderate Risk | Low Risk |
| Low Likelihood | Moderate Risk | Low / Moderate Risk | Low Risk | Very Low Risk |
| Unlikely | Low / Moderate Risk | Low Risk | Very Low Risk | Very Low Risk |

*Very High Risk*

There is a high probability that severe harm could arise to a designated receptor from an identified source; or there is evidence that severe harm to a designated receptor is currently happening.

*High Risk*

Harm is likely to arise to a designated receptor from an identified source.

*Moderate Risk*

It is possible that harm could arise to a designated receptor from an identified source. It is relatively unlikely that any such harm would be severe or if any harm were to occur it is more likely that the harm would be relatively mild.

*Low Risk*

It is possible that harm could arise to a designated receptor from an identified source, however, it is likely that this harm, if realised, would normally be mild.

*Very Low Risk*

There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

### 5.4 Conceptual Site Model

The information in this section has been compiled to produce an updated conceptual site model outlining the potential sources, pathways and receptors to consider at the site. The level of risk was categorised by considering the severity and probability, as outlined in the previous section.

Table 2: Conceptual site model

| Sources | Pathways | Receptors | Severity | Probability | Potential Level of Risk | |
|---|---|---|---|---|---|---|
| Potentially contaminated soil and made ground | Ingestion/inhalation of contaminated soil dust<br><br>Dermal contact with contaminated soil<br><br>Inhalation of soil vapours<br><br>Ingestion of homegrown produce<br><br>Permeation into drinking water pipes | Residential end users<br><br>Construction workers | **Medium** | **Unlikely** | **Low** | Identified contaminant concentrations were low or very low in all samples and no exceedances of the residential with homegrown produce land use screening values or UKWIR thresholds were identified, therefore, the risk to residential end users and construction workers is considered to be low. |

## 6. Conclusions

### 6.1 Risk Evaluation

The conceptual site model has identified the following contaminant linkages present at the site and the following conclusions have been drawn:

- There is a **low risk** to residential end users and construction workers from the ingestion/inhalation of contaminated soil dust, dermal contact with contaminated soil, inhalation of soil vapours, ingestion of homegrown produce and permeation into drinking water pipes from potentially contaminated soil and made ground at the site.

### 6.2 Further Investigation

Based on laboratory testing of soil samples from the site, the updated conceptual site model and the currently proposed development plan, the risk at the site to identified receptors is considered to be low, therefore, further investigation or remediation is not considered necessary, however, if visible or olfactory evidence of contamination is identified during excavations at the site, work should cease in order to allow further investigation to be carried out.

## 7. References

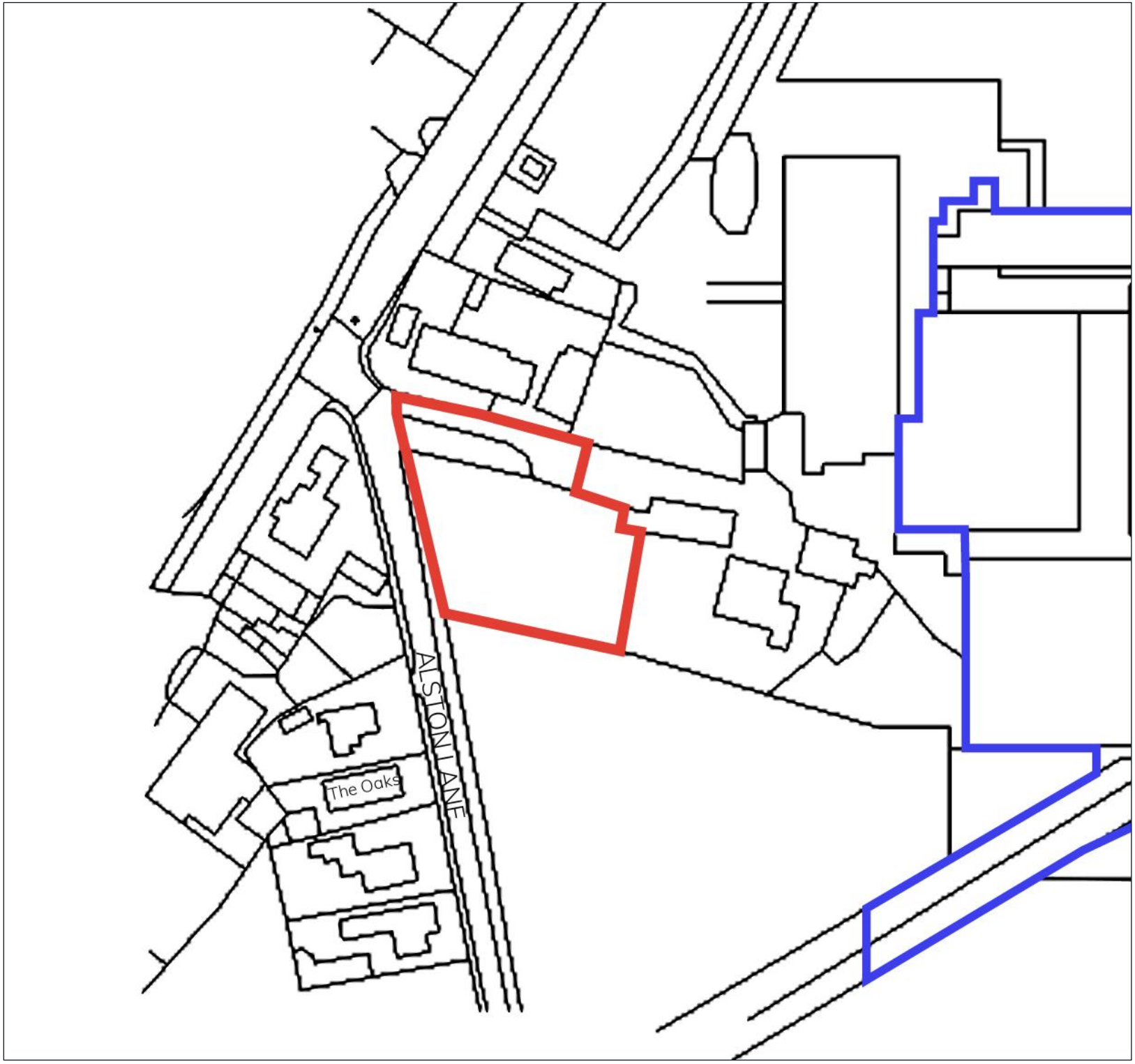

**CL:AIRE, 2014.** *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*. London: Department for Environment, Food and Rural Affairs.

**Environment Agency, 2025.** *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

**Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F., 2015.** *The LQM/CIEH S4ULs for Human Health Risk Assessment*. Nottingham: Land Quality Press.

**E3P, December 2023.** *Phase I Geoenvironmental Site Assessment*.

**Oakshire Environmental.** Available at: <oakshireenvironmental.co.uk>.




| Appendix - Site Maps & Plans | |
|---|---|
| Description | |
| Site location plan | |
| Sources | |
| Contains OS data © Crown copyright and database rights | |
| Key | |
| | Site boundary |
| ▲ | North |


| Appendix - Site Maps & Plans | |
|---|---|
| Description | |
| Site plan showing trial pit locations | |
| Sources | |
| Oakshire Environmental | |
| Key | |
| | Site boundary |
| | Trial pit location |
| ▲ | North |

| Appendix - Site Photos |
| --- |
| Description |
| Photo showing the location of trial pit TP01 |
| Sources |
| Oakshire Environmental |

| Appendix - Site Photos |
| --- |
| Description |
| Photo showing the location of trial pit TP02 |
| Sources |
| Oakshire Environmental |

| Appendix - Site Photos |
| --- |
| Description |
| Photo showing the depth of trial pit TP01 |
| Sources |
| Oakshire Environmental |

| Appendix - Site Photos |
| --- |
| Description |
| Photo showing the depth of trial pit TP02 |
| Sources |
| Oakshire Environmental |

| Site | Bolton Fold Farm, Alston Lane, Longridge, PR3 3BN | Reference | TP01 | **Appendix - Ground Conditions** |
|---|---|---|---|---|

| Samples | | Description of Strata | Thickness (m) | Depth (m) | Symbol |
|---|---|---|---|---|---|
| Depth (m) | ID | | | | |
| 0.20 | S01 | Dark brown silty sandy CLAY with frequent roots and very occasional gravel | 0.40 | 0.40 | |
| 0.50 | S02 | Light greyish and yellowish brown sandy CLAY with very occasional gravel | 0.10 | 0.50 | |

| Remarks and comments |
|---|
| No groundwater identified |

| Site | Bolton Fold Farm, Alston Lane, Longridge, PR3 3BN | Reference | TP02 | **Appendix - Ground Conditions** |
|---|---|---|---|---|

| Samples | | Description of Strata | Thickness (m) | Depth (m) | Symbol |
|---|---|---|---|---|---|
| Depth (m) | ID | | | | |
| 0.20 | S03 | Dark brown silty sandy CLAY with frequent roots and very occasional gravel | 0.40 | 0.40 | |
| 0.50 | S04 | Light greyish and yellowish brown sandy CLAY with very occasional gravel | 0.10 | 0.50 | |

| Remarks and comments |
|---|
| No groundwater identified |

# ANALYTICAL TEST REPORT

| | |
|---|---|
| **Report Number** | 26-06037, issue number 2 |
| **Contract name:** | Lloyd-Haydock |
| **Client reference:** | Not Supplied |
| **Clients name:** | Oakshire Environmental |
| **Clients address:** | Oakshire Environmental<br>6 Vine Close<br>Bottesford<br>Nottingham<br>NG13 0FW |
| **Samples received:** | 26/05/2026 |
| **Analysis started:** | 26/05/2026 |
| **Analysis completed:** | 01/06/2026 |
| **Report issued:** | 03/06/2026<br>2. Replaces Analytical Report number 26-06037; issue no.1 |

**Key**

U UKAS accredited test
M MCERTS & UKAS accredited test
(B) Analysis performed at Southampton Site
I/S Insufficient sample to carry out test
U/S Sample not suitable for testing
NAD No Asbestos Detected
Full key available on Information page

**Approved by:**

Georgia Hunter
Senior Reporting Administrator

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB

Telephone: (01207) 528578, Email supportsquad@chemtech-env.co.uk

# Re-Issue Summary

Client: Oakshire Environmental
Address: 6 Vine Close, Bottesford, Nottingham, NG13 0FW

**Date:** **03-Jun-26**

**Report No.:** **26-06037**

**Issue:** **2**

This report replaces 26-06037, issue: 1, issued: 02 June 2026

**Reason for Change**
amended sample dates

E - Result Edited*
R - Work Repeated*

*If a result changed, please refer to the previous report for the old result. The new result will be shown in this report.

**Re-issued by:** Georgia Hunter
Senior Reporting Administrator

**Approved by:** Georgia Hunter
Senior Reporting Administrator

## SAMPLE INFORMATION

**MCERTS (Soils):**

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
% Moisture reported as MCERTS drying at 30°C

| Lab ref | Sample ID | Depth (m) | Sample description | Material removed | % Removed | % Moisture |
|---|---|---|---|---|---|---|
| 108072 | S01 | 0.20 | Brown Loamy Sand with Gravel and Vegetation. | - | - | 23.6 |
| 108073 | S02 | 0.50 | Brown Clay with Gravel and Vegetation. | - | - | 17.1 |
| 108074 | S03 | 0.20 | Brown Loamy Sand with Gravel and Vegetation. | - | - | 21.6 |
| 108075 | S04 | 0.50 | Brown Clay with Gravel and Vegetation. | - | - | 14.4 |

# SOILS

| Lab Number | | | | | 108072 | 108073 | 108074 | 108075 |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** | | | | | S01 | S02 | S03 | S04 |
| **Depth (m)** | | | | | 0.20 | 0.50 | 0.20 | 0.50 |
| **Sampling Date** | | | | | 28/05/2026 | 28/05/2026 | 28/05/2026 | 28/05/2026 |
| **Test** | **Method** | **Accred** | **LoD** | **Units** | | | | |
| **Asbestos** | | | | | | | | |
| Asbestos Identification | SUBCON | SU | 0 | - | NAD | n/t | NAD | n/t |
| **Metals** | | | | | | | | |
| Arsenic | CE264 | M | 2.3 | mg/kg | 9.0 | 4.6 | 8.5 | 7.4 |
| Beryllium | CE264 | M | 0.1 | mg/kg | 0.6 | 0.5 | 0.6 | 0.9 |
| Cadmium | CE264 | M | 1.1 | mg/kg | < 1.1 | < 1.1 | < 1.1 | < 1.1 |
| Chromium | CE264 | U | 1.3 | mg/kg | 24.8 | 29.9 | 25.5 | 33.4 |
| Copper | CE264 | M | 1.2 | mg/kg | 25.2 | 5.6 | 24.5 | 13.6 |
| Lead | CE264 | U | 2.4 | mg/kg | 51.1 | 6.8 | 60.7 | 9.7 |
| Mercury | CE264 | M | 0.6 | mg/kg | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Nickel | CE264 | M | 1.6 | mg/kg | 15.5 | 18.8 | 16.0 | 29.0 |
| Selenium | CE264 | M | 3 | mg/kg | < 3.0 | < 3.0 | < 3.0 | < 3.0 |
| Vanadium | CE264 | M | 1.6 | mg/kg | 33.1 | 34.2 | 33.7 | 34.6 |
| Zinc | CE264 | M | 2.4 | mg/kg | 88.7 | 23.5 | 79.2 | 30.1 |
| **Colourimetric** | | | | | | | | |
| Water Soluble Chromium VI | CE263 | N | 0.04 | mg/kg | < 0.040 | < 0.040 | < 0.040 | < 0.040 |
| Total Monohydric Phenols | CE078 | N | 0.5 | mg/kg | < 0.50 | < 0.50 | < 0.50 | < 0.50 |
| Chromium III | CE208 | N | 2 | mg/kg | 24.8 | 29.9 | 25.6 | 33.4 |
| **Combustion** | | | | | | | | |
| Moisture Content | CE001 | N | 0.1 | % | 23.6 | 17.1 | 21.6 | 14.4 |
| Total Organic Carbon | CE197 | M | 0.1 | % | 4.77 | 0.69 | 4.99 | 0.88 |
| **Polyaromatic hydrocarbons** | | | | | | | | |
| Naphthalene | CE087 | M | 0.016 | mg/kg | 0.017 | < 0.016 | < 0.016 | < 0.016 |
| Acenaphthylene | CE087 | M | 0.015 | mg/kg | 0.020 | < 0.015 | < 0.015 | < 0.015 |
| Acenaphthene | CE087 | M | 0.013 | mg/kg | < 0.013 | < 0.013 | < 0.013 | < 0.013 |
| Fluorene | CE087 | U | 0.013 | mg/kg | 0.013 | < 0.013 | < 0.013 | < 0.013 |
| Phenanthrene | CE087 | M | 0.014 | mg/kg | 0.357 | < 0.014 | 0.091 | 0.017 |
| Anthracene | CE087 | U | 0.017 | mg/kg | 0.027 | < 0.017 | 0.018 | < 0.017 |
| Fluoranthene | CE087 | M | 0.017 | mg/kg | 0.545 | < 0.017 | 0.328 | 0.036 |
| Pyrene | CE087 | M | 0.016 | mg/kg | 0.485 | < 0.016 | 0.303 | 0.032 |

# SOILS

| Lab Number | | | | | 108072 | 108073 | 108074 | 108075 |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** | | | | | S01 | S02 | S03 | S04 |
| **Depth (m)** | | | | | 0.20 | 0.50 | 0.20 | 0.50 |
| **Sampling Date** | | | | | 28/05/2026 | 28/05/2026 | 28/05/2026 | 28/05/2026 |
| **Test** | **Method** | **Accred** | **LoD** | **Units** | | | | |
| Benzo(a)anthracene | CE087 | U | 0.012 | mg/kg | 0.217 | < 0.012 | 0.160 | 0.022 |
| Chrysene | CE087 | M | 0.028 | mg/kg | 0.245 | < 0.028 | 0.162 | < 0.028 |
| Benzo(b)fluoranthene | CE087 | M | 0.02 | mg/kg | 0.371 | < 0.020 | 0.235 | 0.025 |
| Benzo(k)fluoranthene | CE087 | M | 0.025 | mg/kg | 0.157 | < 0.025 | 0.100 | < 0.025 |
| Benzo(a)pyrene | CE087 | U | 0.019 | mg/kg | 0.289 | < 0.019 | 0.182 | < 0.019 |
| Indeno(1,2,3-cd)pyrene | CE087 | M | 0.019 | mg/kg | 0.268 | < 0.019 | 0.173 | < 0.019 |
| Dibenzo(a,h)anthracene | CE087 | M | 0.017 | mg/kg | 0.044 | < 0.017 | 0.030 | < 0.017 |
| Benzo(g,h,i)perylene | CE087 | M | 0.019 | mg/kg | 0.194 | < 0.019 | 0.122 | < 0.019 |
| Total PAH(16) | CE087 | N | 0.28 | mg/kg | 3.25 | < 0.280 | 1.91 | < 0.280 |
| **BTEX** | | | | | | | | |
| Benzene | CE267 | U | 0.001 | mg/kg | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Toluene | CE267 | U | 0.001 | mg/kg | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Ethylbenzene | CE267 | U | 0.001 | mg/kg | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| MTBE | CE267 | N | 0.002 | mg/kg | < 0.002 | < 0.002 | < 0.002 | < 0.002 |
| Total BTEX | CE267 | N | 0.007 | mg/kg | < 0.007 | < 0.007 | < 0.007 | < 0.007 |
| m,p-Xylene | CE267 | U | 0.002 | mg/kg | < 0.002 | < 0.002 | < 0.002 | < 0.002 |
| oXylenes | CE267 | U | 0.002 | mg/kg | < 0.002 | < 0.002 | < 0.002 | < 0.002 |
| **Total Petroleum Hydrocarbons** | | | | | | | | |
| >C5-C6 Aliphatic (HS_1D_AL) | CE267 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| >C6-C8 Aliphatic (HS_1D_AL) | CE267 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| >C8-C10 Aliphatic (HS_1D_AL) | CE267 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| >C10-C12 Aliphatic (EH_2D_AL) | CE250 | N | 1 | mg/kg | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| >C12-C16 Aliphatic (EH_2D_AL) | CE250 | N | 0.5 | mg/kg | < 0.5 | < 0.5 | 0.9 | < 0.5 |
| >C16-C21 Aliphatic (EH_2D_AL) | CE250 | N | 0.7 | mg/kg | < 0.7 | < 0.7 | 1.3 | < 0.7 |
| >C21-C35 Aliphatic (EH_2D_AL) | CE250 | N | 4 | mg/kg | < 4.0 | < 4.0 | 5.4 | < 4.0 |
| >C35-C40 Aliphatic (EH_2D_AL) | CE250 | N | 0.5 | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| >C5-C7 Aromatic (HS_1D_AR) | CE267 | N | 0.01 | mg/kg | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| >C7-C8 Aromatic (HS_1D_AR) | CE267 | N | 0.01 | mg/kg | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| >C8-C10 Aromatic (HS_1D_AR) | CE267 | N | 0.01 | mg/kg | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| >C10-C12 Aromatic (EH_2D_AR) | CE250 | N | 0.6 | mg/kg | < 0.6 | < 0.6 | 1.0 | < 0.6 |

# SOILS

| Lab Number | | | | | 108072 | 108073 | 108074 | 108075 |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** | | | | | S01 | S02 | S03 | S04 |
| **Depth (m)** | | | | | 0.20 | 0.50 | 0.20 | 0.50 |
| **Sampling Date** | | | | | 28/05/2026 | 28/05/2026 | 28/05/2026 | 28/05/2026 |
| **Test** | **Method** | **Accred** | **LoD** | **Units** | | | | |
| >C12-C16 Aromatic (EH_2D_AR) | CE250 | N | 1 | mg/kg | < 1.0 | < 1.0 | 2.3 | < 1.0 |
| >C16-C21 Aromatic (EH_2D_AR) | CE250 | N | 2 | mg/kg | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| >C21-C35 Aromatic (EH_2D_AR) | CE250 | N | 4.5 | mg/kg | < 4.5 | < 4.5 | < 4.5 | < 4.5 |
| >C35-C40 Aromatic (EH_2D_AR) | CE250 | N | 1.5 | mg/kg | < 1.5 | < 1.5 | < 1.5 | < 1.5 |
| **Wet Chem** | | | | | | | | |
| pH | CE004 | M | 0.1 | pH units | 8.9 | 7.1 | 8.1 | 6.6 |

# SOIL SVOCS

| Lab Number | | | | | 108072 | 108073 | 108074 | 108075 |
|---|---|---|---|---|---|---|---|---|
| Sample ID | | | | | S01 | S02 | S03 | S04 |
| Depth (m) | | | | | 0.20 | 0.50 | 0.20 | 0.50 |
| Sampling Date | | | | | 28/05/2026 | 28/05/2026 | 28/05/2026 | 28/05/2026 |
| **Test** | **Method** | **Accred** | **LoD** | **Units** | | | | |
| **SVOC** | | | | | | | | |
| Phenol | CE189 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Cresols | CE189 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Xylenols | CE189 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Naphthols | CE189 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Trimethylphenols | CE189 | N | 0.1 | mg/kg | < 0.10 | < 0.10 | < 0.10 | < 0.10 |

# METHOD DETAILS

| METHOD | TESTNAME | METHOD SUMMARY | ANALYSIS BASIS |
|---|---|---|---|
| CE267 | VPH in Soil | HS-GCFID | As submitted sample |
| CE250 | GCXGC in Soil | DCM Extraction and GCxGC-FID | As submitted sample |
| SUBCON | Asbestos Soil | HSG248 | Air Dried Sample |
| CE189 | SVOC in solids | DCM Extraction and GCMS | As submitted sample |
| CE264 | Metals by ICP in Soil | ICPOES | Air dried sample |
| CE267 | BTEX in Soils | Analysis by HSGCFID | As submitted sample |
| CE263 | ChromiumVI by Discrete Analyser in Soil | Gallery | Air dried sample |
| CE087 | PAH in Soil | DCM Extraction and GCMS | As submitted sample |
| CE078 | Phenols in Soil | Continuous Flow Analyser | As submitted sample |
| CE208 | Chromium Hexavalent in Soil | Colorimetry | Air dried sample |
| CE197 | TOC In Soil | PRIMACS Combustion Analyser | Air dried sample |

# DEVIATING SAMPLE INFORMATION

**Comments**

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

**Key**

| | |
|---|---|
| a | Sampling date not provided |
| b | Sampling time not provided (waters only) |
| c | Sample not received in appropriate containers |
| d | Storage Temperature |
| e | Headspace present in sample container |
| f | Sample exceeded sampling to receipt |
| g | Sample exceeded holding time(s) |

| Lab ref | Sample ID | Depth (m) | Deviating | Tests (Reason for deviation) |
|---|---|---|---|---|
| 108072 | S01 | 0.20 | N | |
| 108073 | S02 | 0.50 | N | |
| 108074 | S03 | 0.20 | N | |
| 108075 | S04 | 0.50 | N | |

# REPORT INFORMATION

**Report No.:26-06037, issue number 2**

| Key | |
|---|---|
| U | ISO17025 Accredited Result |
| M | ISO17025 and MCERTS Accredited Result |
| N | Do not currently hold accreditation |
| ^ | MCERTS accreditation not applicable for sample matrix |
| * | ISO17025 accreditation not applicable for sample matrix |
| S | Subcontracted |
| I/S | Insufficient Sample |
| U/S | Unsuitable sample |
| N/T | Not tested |
| < | Means "less than" |
| > | Means "greater than" |

LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

This report shall not be reproduced except in full, without prior written approval.
Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.
The results relate only to the sample received.
Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.
Moisture Content Calculated on a Wet Weight basis (at 30°C)
Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.
Where sampling was undertaken by Chemtech Environmental Limited it is outside the UKAS accreditation scope.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.

BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.

For soils and solids, all results are reported on a dry basis (30°C). Samples dried at no more than 30°C in a drying cabinet.
For soils and solids, analytical results are inclusive of stones and 'inert' material, where applicable.
'Client Reference', 'Sample ID', 'Sample Location', 'Sample Type', 'Depth', 'Sample Date' and 'Sample Time' information is provided by the customer

**Sample Retention and Disposal**

All soil samples will be retained for a period of 4 weeks from the point of receipt
All water samples will be retained for a period of 2 weeks from the point of Reporting
Charges may apply to extended sample storage

**TPH Classification - HWOL Acronym System**

| | |
|---|---|
| HS | Headspace analysis |
| EH | Extractable Hydrocarbons - i.e. everything extracted by the solvent |
| CU | Clean-up - e.g. by florisil, silica gel |
| 1D | GC - Single coil gas chromatography |
| Total | Aliphatics & Aromatics |
| AL | Aliphatics only |
| AR | Aromatics only |
| 2D | GC-GC - Double coil gas chromatography |
| #1 | EH_Total but with humics mathematically subtracted |
| #2 | EH_Total but with fatty acids mathematically subtracted |
| _ | Operator - underscore to separate acronyms (exception for +) |
| + | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total |
| MS | Mass Spectrometry |

Unless specifically identified (noted as "(B)" in analyte name) all internal analysis performed at Durham site