



Castledine Environmental

LAND CONTAMINATION SURVEYS

Phase 2 Intrusive Contamination Risk Assessment & Soakaway Tests

for

Detached Dwelling

On land adjacent to

**No.15 Shelley Woodhouse Lane,
Huddersfield HD8 8NB**

Date: June 2026

Status:

Final Report

Reference:

4276 P2 Britology – Shelly Woodhouse Lane, HD8 8NB

Date:

09/06/2026

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EXECUTIVE SUMMARY

Proposed Development	A single detached dwelling with garage, driveway and soft landscaping to the front and rear.
Geology	Thin made ground topsoil or aggregate over residual mudstone, or sandstone in one location.
Contamination Assessment	
Contamination	Lead concentrations were found to exceed screening values in all topsoil samples. PAH concentrations generally elevated.
End Users	Contaminated soils are in proposed garden areas.
Site Workers	Contamination unlikely to impact site workers using standard PPE and site hygiene practices.
Services	Elevated PAH concentrations possibly in area of installed pipes.
Ecology	Contamination unlikely to migrate to adjacent properties, no sensitive ecology identified.
Controlled Waters	Watercourse not close enough to be impacted, residual soils not considered sufficiently permeable to allow migration of contaminants.
Ground Gas & Vapour	No sources of ground gas or vapour identified in desk study. Low radon risk.
Geotechnical Assessment	
Soakaway Testing	Soakaway tests not successful; infiltration rate determined to be low.

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **MODERATE** level of risk to receptors with respect to the proposed development.

It is recommended that this report is submitted to the local planning authority for approval before further works are carried out. Selected further recommendations include a Phase 3 Remediation Strategy to advise on remediation options; consultation with the statutory water providers, and; a watching brief for further works.

TABLE OF CONTENTS

<u>EXECUTIVE SUMMARY</u>	<u>I</u>
<u>TABLE OF CONTENTS</u>	<u>I</u>
<u>LIST OF TABLES II</u>	
<u>1.0</u>	<u>QUALITY ASSURANCE</u>
<u>2.0</u>	<u>LIMITATIONS</u>
<u>3.0</u>	<u>INTRODUCTION</u>
<u>4.0</u>	<u>SCOPE 2</u>
<u>5.0</u>	<u>SITE DESCRIPTION</u>
<u>6.0</u>	<u>CHEMICAL ASSESSMENT CRITERIA</u>
6.1	HUMAN HEALTH
<u>7.0</u>	<u>FINDINGS AND RECOMMENDATIONS FROM PREVIOUS REPORTS</u>
7.1.1	SUMMARY OF PHASE 1 REPORT
7.1.2	SUMMARY POTENTIAL SOIL CONTAMINATION
7.1.3	SUMMARY OF POTENTIAL GROUND GAS HAZARDS
7.1.4	SUMMARY OF POTENTIAL VAPOUR HAZARDS
<u>8.0</u>	<u>FIELDWORK: APRIL 2026</u>
8.1	TRIAL PITS
8.2	HAND PITS
8.3	SOAKAWAY TESTING
<u>9.0</u>	<u>SITE WORK RESULTS</u>
9.1	GROUND CONDITIONS ENCOUNTERED
9.1.1	MADE GROUND
9.1.2	SUPERFICIAL DEPOSITS
9.1.3	RESIDUAL BEDROCK DEPOSITS
9.2	CONTAMINATION
9.3	SOAKAWAY TESTING
<u>10.0</u>	<u>QUANTITATIVE RISK ASSESSMENT</u>
10.1	ANALYSIS OF RESULTS
10.2	ORIGIN OF CONTAMINATION
<u>11.0</u>	<u>CONCEPTUAL SITE MODEL</u>
<u>12.0</u>	<u>REVISED ENVIRONMENTAL RISK ASSESSMENT</u>
12.1	RESIDENTS / END USERS
12.2	SITE WORKERS
12.3	CONTROLLED WATERS
12.4	FLORA AND FAUNA
12.5	GROUND GAS & VAPOUR
12.6	POTABLE WATER SUPPLY PIPING
<u>13.0</u>	<u>WASTE CLASSIFICATION</u>
<u>14.0</u>	<u>RECOMMENDATIONS</u>
<u>15.0</u>	<u>FURTHER ENVIRONMENTAL INVESTIGATION</u>
<u>16.0</u>	<u>REFERENCES</u>
16.1	LEGISLATION AND REGULATIONS
16.1.1	ACTS
16.1.2	PLANNING REGULATIONS
16.1.3	CONTAMINATED LAND REGULATIONS
16.2	STATUTORY GUIDANCE
16.3	BRITISH STANDARDS
16.4	NON-STATUTORY TECHNICAL GUIDANCE

16.4.1	ENVIRONMENT AGENCY	19
16.4.2	CIRIA PUBLICATIONS	19
16.4.3	CL:AIRE	19

APPENDICES 20

APPENDIX A	PHASE 1 REPORT	20
APPENDIX B	SITE INVESTIGATION PLAN	21
APPENDIX C	EXCAVATION LOGS	22
APPENDIX D	SOAKAWAY REPORTS	27
APPENDIX E	SITE WORK PHOTOGRAPHS	28
APPENDIX F	TEST RESULTS	31
APPENDIX G	WATCHING BRIEF	32
APPENDIX H	DISCOVERY STRATEGY	34

LIST OF TABLES

TABLE 1	RISK CLASSIFICATION MATRIX	12
TABLE 2	CLASSIFICATION OF RISK	13
TABLE 3	SUMMARY OF SIGNIFICANT POLLUTION LINKAGES	14

1.0 QUALITY ASSURANCE

Castledine Environmental can confirm that all reasonable efforts have been made to ensure that the information outlined within this report is accurate.

Castledine Environmental would further confirm that due care, attention and technical skill were used in the creation of this report.

2.0 LIMITATIONS

This report should be read alongside the Phase 1 Desk Study Report which it follows. Recommendations made in the Phase 1 report are not fully reproduced here.

The conclusions and recommendations made in this geoenvironmental report are limited to those based on the findings of the investigation. Where comments are made based on information obtained from third parties, Castledine Environmental assumes that all third-party information is true and correct. No independent action has been undertaken to validate the findings of third parties. The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at the time.

This survey has not included asbestos within existing structures, invasive plant species, geotechnical considerations or any elements unconnected with potential ground contamination at the site.

There may be other conditions prevailing at the site which have not been encountered by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

3.0 INTRODUCTION

Castledine Environmental have been appointed by Britology Ltd to undertake a Phase 2 investigation of the land adjacent to No.15 Shelley Woodhouse Lane, Huddersfield HD8 8NB.

The Client proposes to develop the site for residential use with a new detached dwelling with a drive and private gardens.

A Phase 1 report was carried out by RB Geotechnical Ltd.

- Phase 1 Land Contamination Risk Assessment for Land Next to 15 Shelley. Reference RBG473. Dated August 2025.

The development has been changed since the Phase 1 report, to be for a single residence. The site plan in Appendix B has not yet been update but is similar to the latest revision.

4.0 SCOPE

Castledine Environmental have prepared this report for the sole use and reliance of Britology Ltd and appointees for the purpose of ensuring compliance with:

- National Planning Policy Framework (NPPF) February 2025;
- Part C1 of the building regulations;
- Support of a Planning Application.

This report should be read in conjunction with the reports listed in section 3.0. This report may not be used or relied upon by any unauthorised third party, or for any other proposed use than that specified above, without the explicit written agreement of Castledine Environmental.

This report is to be regarded as an Intrusive Site Investigation in accordance with the Environment Agency's Land Contamination Risk Management (LCRM – 2025), which replaces CLR11 *“Model Procedures for the Management of Land Contamination”*, carried out in accordance with BS 10175:2011+A2:2017, *“Investigation of Potentially Contaminated Land -*

Code of Practice” and relevant sections of BS5930:2015+A1:2020, “*Code of Practice for Ground Investigations*”.

The objectives of the report are:-

- To assess historical activities at the site with respect to their potential impact on the site environment;
- To characterise the environmental setting of the site, identify migration pathways and vulnerable receptors for contamination originating at the site, focusing on potential soil and groundwater liabilities;
- To assess historical and current surrounding land use in relation to known or potential off site contamination issues that may impact on the subject site; and;
- To develop a preliminary conceptual site model (CSM).

This report has been produced in order to discharge any relevant planning conditions outlined by the Local Authority and Environment Agency; however, further requirements may be imposed after the findings of this report that may need to be addressed at a later date.

5.0 SITE DESCRIPTION

The site is located in a hamlet between Shelley and Skelmanthorpe, approximately 10m southeast of Huddersfield. The site is approximately 0.13ha in area.

The site is irregular in shape, and includes a combined drive to the southwest from Shelley Woodhouse Lane which enters the site and runs along the western site boundary to an incomplete stone structure. The remainder of the site is covered with dense vegetation. There is a slight slope to the south and southeast.

To the north is an open agricultural field also owned by the site owner. To the south and west are dwellings with private gardens and drives, and to the east is an agricultural field.

6.0 CHEMICAL ASSESSMENT CRITERIA

On establishing the presence of pollutant linkages, it is then necessary to assess whether or not any of the linkages are significant, whereby significant harm is being caused or there is significant possibility of significant harm being caused to human health or the environment. In the absence of any evidence of 'significant harm', the risks will be assessed on the basis of a 'significant possibility of significant harm' being caused. In order to initially assess the risks, appropriate Tier 1 assessment criteria are derived which represent benchmark contamination concentrations with respect to relevant receptors. Concentrations recorded in excess of these levels **may** represent a significant risk to a specific receptor when considered as part of a pollutant linkage.

6.1 HUMAN HEALTH

The Environment Agency, through its Contaminated Land Exposure Assessment (CLEA) framework, published toxicological reports (TOX) and soil guideline values (SGVs).

SGVs are science-based generic assessment criteria that indicate human health risks from long-term exposure to soil contaminants. They are set at levels where there are 'no appreciable' or 'minimal' risks to human health. For each substance, different SGVs are applicable according to land use, for example, whether residential, allotment or commercial. They have been widely seen as over precautionary and offering councils a very weak indication of whether sites represent a "significant possibility of significant harm" (SPOSH) requiring determination under the contaminated land regime.

Following publication of the revised Part IIa Statutory Guidance DEFRA has commissioned the creation of Category 4 Screening levels (C4SLs) They are set at levels where there is a "Low" risk to Human Health (i.e. higher than that of SGVs but still sufficiently low to defiantly not be "Contaminated Land" as defined by section 78A of the Environmental Protection Act 1990 as amended). The C4SLs are calculated using the CLEA model using less

conservative exposure and toxicological assumptions than the SGVs. C4SLs have also been calculated for Open Space land use. Atkins Ltd has derived ATRISKsoil Soil Screening Values SSVs using the 2009 guidance (SC050021/SR3 (the CLEA Report) and SC050021/SR2 (the TOX report)) for commercial/industrial, residential without home grown produce, residential with home grown produce and allotment land uses. These are based these on the default assumptions provided in the CLEA framework. Atkins SSVs for 6% soil organic matter (SOM) have been derived in line with the new guidance using the CLEA model.

LQM in association with the CIEH have produced S4ULs are reproduced with permission; Publication Number S4UL3693

The pathways considered for the standard land uses include:

- Ingestion of soils;
- Ingestion of household dust;
- Ingestion of contaminated vegetables (residential with plant uptake only);
- Ingestion of soil attached to vegetables (residential with plant uptake only);
- Dermal contact with soils;
- Dermal contact with household dust;
- Inhalation of fugitive dusts from soils;
- Inhalation of fugitive household dust;
- Inhalation of vapours in outdoor air; and
- Inhalation of vapours in buildings.

These exposure routes have been evaluated independently of one another to identify the most sensitive exposure route. The SSV adopted for a given land use scenario is the most stringent screening value of all those relevant to the site.

The current proposals are to develop the site for a residential dwelling. It is considered appropriate to compare the chemical testing results to those SGVs/SSVs with 'residential with private gardens (home grown produce)'.

7.0 FINDINGS AND RECOMMENDATIONS FROM PREVIOUS REPORTS

7.1.1 SUMMARY OF PHASE 1 REPORT

The geology on site was anticipated to be Pennine Lower Coal Measures with no artificial or superficial deposits. These are designated a Secondary A Aquifer. The nearest surface water was a small inland river 148m to the east.

Historically the site has been occupied by Shelley Woollen Mill in the south with an outbuilding in the north. There were no longer present by 2010. There was a mill pond 90m to the south, and a railway tunnel 80m to the south.

The Phase 1 Desk Study Report is included as **Appendix A**.

7.1.2 SUMMARY POTENTIAL SOIL CONTAMINATION

Historical uses of the site were considered to have potentially led to placement of made ground on the site, which could contain contaminants.

7.1.3 SUMMARY OF POTENTIAL GROUND GAS HAZARDS

No sources of ground gas were identified by the desk study.

7.1.4 SUMMARY OF POTENTIAL VAPOUR HAZARDS

No sources of hydrocarbon vapour were identified by the desk study.

8.0 FIELDWORK: APRIL 2026

Castledine Environmental attended site on 30th April 2026 with the intention of forming trial pits across the site and carrying out soakaway tests. The locations of all exploratory holes formed during the investigation were laid out by Castledine Environmental and agreed with the client on site. A representative of the client was on site on the day to identify services.

A location plan of the exploratory hole locations can be found as **Appendix B**.

8.1 TRIAL PITS

A total of four trial pits were excavated using a JCB 3CX backhoe excavator to depths of between 2.00m 3.25mbgl; and one by hand to 0.50mbgl. Trial pits were formed to allow an assessment of ground conditions on site, i.e. the texture and depth of made ground or natural deposits, and for taking environmental samples for laboratory analysis.

The purposes of the locations are tabulated below:

Location	Purpose
TP01	Proposed rear garden area for contamination assessment in areas where soils are most likely to be exposed to receptors. 5.00m from site boundaries and proposed building footings for placement of soakaway.
TP02	Rough location of historical outbuilding.
TP03	Area adjacent to drive and possible made ground.
TP04 (off site)	Requested to offer a broader picture of site geology.

8.2 HAND PITS

A hand pit (TP05) was excavated using a spade, breaker bar and post-hole excavator to 0.50m.

This was excavated in a proposed garden area and near the historical southern structure to identify any made ground and/or contaminants.

8.3 SOAKAWAY TESTING

TP01 and TP02 were excavated to sufficient depth to allow a reasonable area of the residual mudstones, as gravel in TP01 and as clay in TP02, to soak away through the strata.

The pits were measured, a level made across the width, and then filled rapidly using a tractor-towed tanker over approximately one minute. Once full the level of water was measured over time.

Testing was carried out roughly to BRE365 standards and best practices. Logs are included in Appendix D.

9.0 SITE WORK RESULTS

9.1 GROUND CONDITIONS ENCOUNTERED

The ground conditions on site can be broadly summarised as made ground topsoil or coarse granular stockpiles overlying residual mudstone in the form of clay, becoming gravel with depth. Residual sandstone was also encountered in TP04, overlaying the mudstone.

All soil descriptions, logging and sampling were carried out in accordance with BS:5930:2015+A1:2020. Logs are included in **Appendix C**.

9.1.1 MADE GROUND

In TP01, TP03, TP04 and TP05 made ground topsoil was encountered. This contained gravel of mudstone and sandstone as well as anthropogenic fragments; ceramic, brick, wood and glass in TP01, plastic and concrete in TP02, ceramic and brick in TP03 and TP05, and brick in TP04. Thickness was between 0.50m and 0.70m.

In TP02 only was 0.60m of clayey gravel and cobbles of sandstone, concrete and plastic.

9.1.2 SUPERFICIAL DEPOSITS

No superficial deposits were encountered.

9.1.3 RESIDUAL BEDROCK DEPOSITS

TP01, TP02 and TP03 encountered stiff mottled clay with varying proportions of mudstone gravel to proven depths up to 2.70mbgl. In TP04 this clay contained sandstone gravel and terminated at 1.50mbgl depth.

Beneath the clay with mudstone gravel within the site boundary was mudstone recovered as gravel. Beneath the clay with sandstone gravel in the field to the north was sandstone recovered as gravel.

9.2 CONTAMINATION

Evidence of contamination on the site was limited to some anthropogenic inclusions in the made ground topsoil, including sharps in TP01.

9.3 SOAKAWAY TESTING

Soakaway testing found a very low infiltration rate, and 25% effective depth in the first test was not obtainable over the course of a working day in either pit. In TP02 water movement was imperceptible.

The tests were considered to have failed, and the faster draining of the two, infiltration rate would likely be in the low $\times 10^{-6}$ region for the first test alone which indicate that the strata would not be suitable for soakaway drainage. Logs are included in Appendix D.

10.0 QUANTITATIVE RISK ASSESSMENT

Sample results (**Appendix F**) have been compared directly against a generic screening criterion (GAC) for residential gardens with home grown produce. A Soil Organic Matter (SOM) of 6% has been used in the below assessment as the range was 8.3% to 11%.

Comparison of environmental testing values with GAC for Residential Gardens with Home Grown Produce end use. 6% organic matter content values used.			
Determinant	Screening Value (S4UL) (mg/kg)	Highest Value (mg/kg)	Location of Exceedances
Metals, semi-metals			
Arsenic	37	37	-
Cadmium	11	3.2	-
Chromium (III)	910	3.2	-
Chromium (VI)	6	< 1.0	-
Copper	2400	120	-
Lead	200	640	TP01 0.20 – 0.40 TP02 0.30 – 0.50 TP03 0.10 – 0.30 TP05 0.10 – 0.30
Mercury (elemental)	1.2	2.5 (total)	TP04 0.20 – 0.40*
Mercury (inorganic)	40		-
Mercury (methyl)	11		-
Nickel	180	26	-
Selenium	250	< 8.0	-
Zinc	3700	460	-
Organic Compounds			
Acenaphthene	1100	2.6	-
Acenaphthylene	920	0.85	-
Anthracene	11000	9.1	-
Benzo(a)anthracene	13	16	TP01 0.20 – 0.40
Benzo(a)pyrene	3.0	11	TP01 0.20 – 0.40
Benzo(b)fluoranthene	3.7	10	TP01 0.20 – 0.40
Benzo(g,h,i)perylene	350	4.7	-
Benzo(k)fluoranthene	100	5.3	-
Chrysene	27	12	-
Dibenzo(a,h)anthracene	0.3	1.5	TP01 0.20 – 0.40
Fluoranthene	890	42	-
Fluorene	860	4.1	-
Indeno(1,2,3-c,d)Pyrene	41	6.1	-
Naphthalene	13	0.8	-
Phenanthrene	440	40	-
Pyrene	2000	30	-
Phenol	1100	< 1.0	-
Total PAH		200	-
SOM (Organic Matter) range		7.9 – 11.0 %	-
Other			
pH range		6.2 – 7.5	-
Asbestos Detected		None Detected	-
Screening values are LQM S4UL 2015 apart from where otherwise annotated < denotes Limit Of Detection (LOD) value returned			

10.1 ANALYSIS OF RESULTS

Concentrations of metals and PAH were slightly elevated in all samples. Organic matter was also relatively high. PAH compounds benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and dibenzo(a,h)anthracene were all in exceedance of the screening value in TP01 only.

Chemical analysis and comparison with screening values identified that concentrations of lead in all topsoil and surface clay samples on the site (TP01, TP02, TP03 and TP05) exceeded the GAC for residential gardens with home grown produce.

Concentrations of total mercury were slightly higher than the screening value for elemental mercury, but below the value for mercury in other states. Due to the historical site use, it is considered unlikely that any mercury present is in an elemental state, and this screening value is not appropriate.

10.2 ORIGIN OF CONTAMINATION

The made ground topsoil and clay had marginally elevated concentrations of metals and PAH compounds, and contained anthropogenic inclusions. It was also thicker than 0.30m which would be usual for a site such as this. It is probable that this topsoil has been mixed with soil from another source, possibly including ash which has decomposed leaving behind metal and organic compounds.

11.0 CONCEPTUAL SITE MODEL

Based on the preliminary CSM for the site, an environmental risk assessment has been undertaken. A simple matrix can provide a consistent basis for decision making. It should be used with caution, recognising the over-simplification that it will normally represent. The probability and consequences are defined according to parameters relevant to the situation; the boundaries of risk acceptability (and tolerability, where relevant) indicated on the matrix provided in **Error! Reference source not found.**, can be tailored to the factors influencing the significance of the risk. Individual situations are mapped onto the matrix to provide a ready and consistent indication of their acceptability or tolerability.

TABLE 1 RISK CLASSIFICATION MATRIX

		Consequence			
		Severe (Sv)	Medium (Md)	Mild (Mi)	Minor (Mr)
Probability	High (Hi)	Very high risk	High risk	Moderate Risk	Moderate/ Low Risk
	Likely (Li)	High risk	Moderate Risk	Moderate/ Low Risk	Low Risk
	Low Likelihood (Lw)	Moderate Risk	Moderate/ Low Risk	Low Risk	Very Low Risk
	Unlikely (UI)	Moderate/ Low Risk	Low Risk	Very Low Risk	Very Low Risk

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

These attributes are evaluated qualitatively against individual hazard assessments to determine the likelihood of a given hazard occurring. The risk evaluations for each plausible pollutant linkage are given in the last three columns of Table 1.

TABLE 2 CLASSIFICATION OF RISK

Very high risk (Vh)	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk (Hi)	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer term.
Moderate risk (Md)	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either 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. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk (Lw)	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk (VI)	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.

Source: CIRIA Report C552, Contaminated Land Risk Assessment. A Guide to Good Practice, 2001

TABLE 3 SUMMARY OF SIGNIFICANT POLLUTION LINKAGES

Source	Receptor	Pathway	Probability of Linkage	Conseq. of Linkage	Risk	Justification
Soil contaminants: - Shallow made ground with anthropogenic inclusions and lead in all tested areas of site. - Marginally elevated PAH compounds in all tested soils. - Made ground topsoil at TP01 with sharps, PAH compounds.	Site workers (<i>during site works, excavations, eating and drinking</i>)	Ingestion, direct contact, inhalation of dust and dry arisings	Low Likelihood	Mild	Low	Contamination identified but in low concentrations. Standard PPE sufficient.
	End users (<i>residents / tenants, children, visitors, service personnel</i>)	Crop uptake, ingestion, direct contact, inhalation of dust and dry arisings	Likely	Medium	Moderate	Impacted soils identified over whole of the site including proposed soft landscape areas.
	Flora and fauna (<i>on and offsite</i>)	Migration, crop uptake	Low Likelihood	Mild	Low	Runoff of contamination from the site to adjacent fields or gardens not considered likely. No sensitive ecology identified in desk study.
	Controlled waters (<i>Secondary A aquifer, watercourse 148m to the east of site</i>)	Vertical and lateral migration (<i>no superficial, bedrock highly permeable</i>)	Unlikely	Mild	Very Low	Soakaway tests on the site failed, no sensitive abstractions identified, migration of contaminants from the site to watercourse of aquifer not feasible.
	Services (<i>new potable supply piping</i>)	Direct contact (<i>pipe degradation and leaching</i>)	Likely	Mild	Moderate / Low	PAH concentrations were mildly elevated in made ground topsoils. Highest concentrations were to the rear of the site away from any new potable water pipes. Made ground was relatively shallow elsewhere on the site.
Ground gas: -No sources identified in the desk study.	Site workers & excavations, end users & building envelope (<i>ingress and build-up</i>)	Vertical and lateral migration (<i>no superficial, bedrock highly permeable</i>)	Unlikely	Minor	Very Low	No potential sources of hazardous ground gas or vapour identified in the desk study.
Vapours: -No sources identified in the desk study.	Site workers & excavations, end users & building envelope (<i>ingress and build-up</i>)	Vertical and lateral migration (<i>no superficial, bedrock highly permeable</i>)	Unlikely	Minor	Very Low	
Radon:	End users & building envelope	Vertical and lateral migration	Low	Minor	Low	Site not located in a Radon Affected Area (<1%). No Radon Protective Measures considered necessary.

12.0 REVISED ENVIRONMENTAL RISK ASSESSMENT

Based on the information contained in this report, it is the opinion of Castledine Environmental that the site represents a **MODERATE** level of risk with respect to the proposed development.

12.1 RESIDENTS / END USERS

Elevated concentrations of lead and PAH in excess of the screening values, and man-made sharp fragments were identified in the made ground topsoil. This topsoil is present in the current proposed garden areas.

Impact to end users is therefore estimated to be **MODERATE**.

12.2 SITE WORKERS

Contaminants were not found to be in sufficiently high concentrations to be likely to impact site workers taking standard precautions; PPE and site hygiene practices.

Impact to site workers is therefore estimated to be **LOW**.

12.3 CONTROLLED WATERS

Significantly contaminated soils were not encountered which appeared capable of migrating from the site as runoff to the local watercourse, and more likely would be washed into municipal drainage with significant dilution where mobilised at all.

No groundwater was encountered and soakaway tests in the mudstone and sandstone were failures, indicating a very low level of permeability of the site soils. Migration of contaminants on the site to underlying aquifers is therefore considered unlikely to occur.

Impact to controlled waters is therefore estimated to be **VERY LOW**.

12.4 FLORA AND FAUNA

There are no sensitive receptors identified on or near to the site, and runoff from the site is not considered a viable pathway currently.

Therefore, the level of risk is estimated to be **LOW**.

12.5 GROUND GAS & VAPOUR

No sources of ground gas or vapour were identified in the desk study report. Made ground on the site was not found to be thicker than the likely base of the foundation. Therefore, the level of risk is estimated to be **VERY LOW**.

12.6 POTABLE WATER SUPPLY PIPING

Concentrations of PAH compounds were generally elevated above the LOD in all of the samples of made ground.

The estimated level of risk to potable water supply pipes is therefore **MODERATE TO LOW** but will depend on the design and invert depth of water supplies.

13.0 WASTE CLASSIFICATION

Where samples are required to be removed from the site for disposal WAC (Waste Assessment Criteria) may be required by the carrier or the receiving body. Alternatively the laboratory certificates attached may be sufficient.

14.0 RECOMMENDATIONS

This report should be submitted to your Local Planning Authority for approval before continuation of the works. Allowance is recommended to be made for the following:

- A Phase 3 Remediation Strategy to advise on remediation options for the identified risks to end users, potable water pipes, structures and controlled waters.
 - This will likely include excavation of the soils in all soft landscape areas to prevent further risk to end users.

- Site workers to maintain good hygiene standards during site works. Site specific risk assessments should be made for ground workers on the site.
- Consultation with the local statutory water authority regarding their requirements for any new potable water pipes.
- Shuttering or sumps to prevent runoff from any stockpiled soils during the works from leaving the site.
- A watching brief should be carried out by the site supervisor during the course of demolition, site clearance and construction works (Outlined in Appendix G)
- Soakaway drainage on the site is not likely to be feasible and alternative methods should be pursued after agreement with planning and the local water authority.

15.0 FURTHER ENVIRONMENTAL INVESTIGATION

It is not envisaged that further site investigation will be required.

16.0 REFERENCES**16.1 LEGISLATION AND REGULATIONS****16.1.1 ACTS**

- [1]. Environmental Protection Act 1990, Part IIA: inserted by Environment Act 1995, Section 57. See Environment Act 1995 for text of Part IIA.

16.1.2 PLANNING REGULATIONS

- [2]. The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 SI1999/No.293
- [3]. The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2000 SI2000/No.2867
- [4]. The Town and Country Planning (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2017 SI2017/No.571

16.1.3 CONTAMINATED LAND REGULATIONS

- [5]. The Contaminated Land (England) Regulations 2000. SI2000/No.227
- [6]. The Contaminated Land (England) (Amendment) Regulations 2001 SI2001/No.663
- [7]. The Contaminated Land (England) Regulations 2006 SI2006/No.1380

16.2 STATUTORY GUIDANCE

- [8]. Department of Environment, Food and Rural Affairs. 2012. *Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance*. Department of Environment, Food and Rural Affairs
- [9]. Communities and local Government, 2023: National Planning Policy Framework.

16.3 BRITISH STANDARDS

- [10]. BS 5930:2015+A1:2020 Code of practice for site investigations
- [11]. BS 10175:2011+A2:2017 Investigation of potentially contaminated sites - Code of practice
- [12]. BS 8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings
- [13]. BS 8576:2013 Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs)
- [14]. BS 10176 Taking Soil Samples for Determination of Volatile Organic Compounds (VOCs)

16.4 NON-STATUTORY TECHNICAL GUIDANCE

16.4.1 ENVIRONMENT AGENCY

- [15]. Land Contamination Risk Management (LCRM) 2020, updated 2023

16.4.2 CIRIA PUBLICATIONS

- [16]. Wilson, S., Oliver, S., Mallett, H., Hutchings, H., and Card, G.. 2007, *C 665 Assessing risks posed by hazardous ground gases to buildings* London: Construction Industry Research and Information Association
- [17]. Mallett, H., Cox, L., Wilson, S. and Corban, M... 2014, *C 735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases* London: Construction Industry Research and Information Association

16.4.3 CL:AIRE

- [18]. Card G, Wilson S, Mortimer S. 2012. *A Pragmatic Approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17.* CL:AIRE, London, UK. ISSN 2047- 6450 (Online)

APPENDICES

APPENDIX A

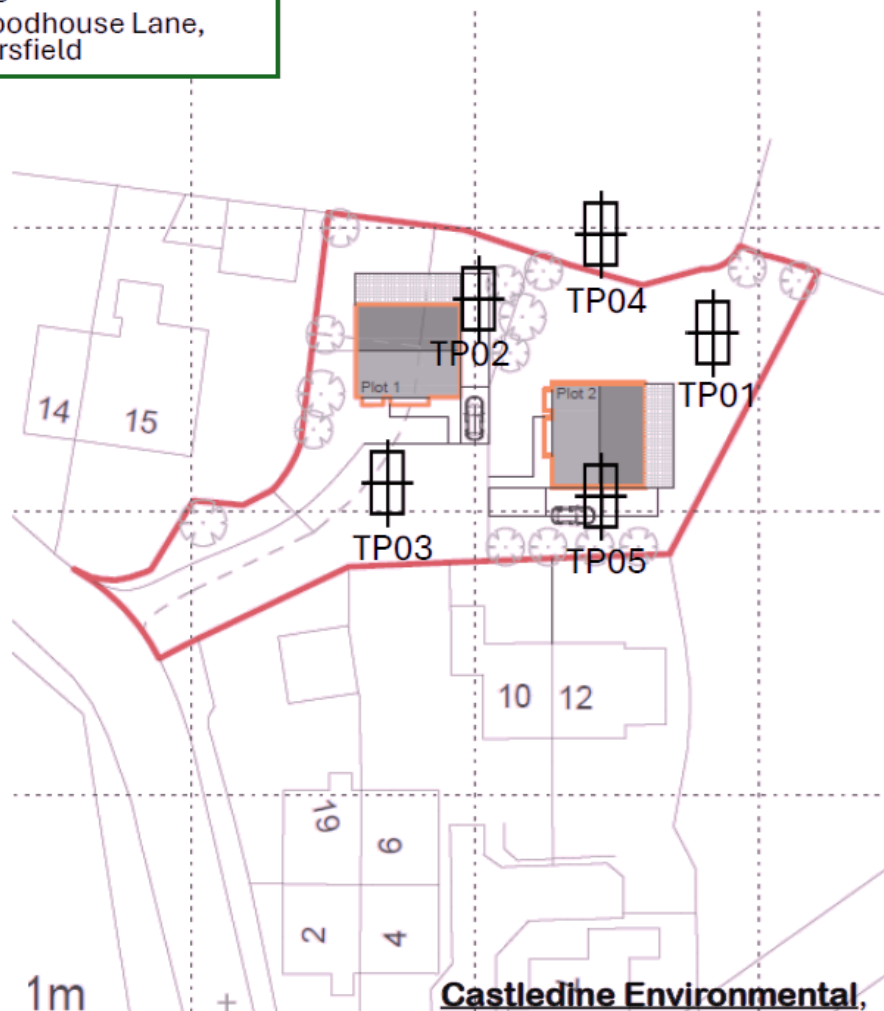
PHASE 1 REPORT

- Found as separate PDF(s)

APPENDIX B

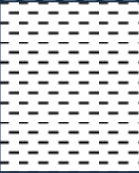
SITE INVESTIGATION PLAN

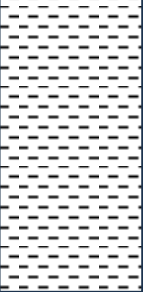
Site Investigation Plan
4276 Shelley Woodhouse Lane,
Huddersfield



APPENDIX C

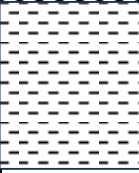
EXCAVATION LOGS

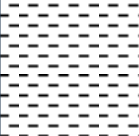
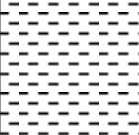
Project.	Shelly Woodhouse Lane, Huddersfield			Project Number:		
				4276		
Client.	Britology Ltd.			Date		
				30/04/2026		
Method.				Location		
	JCB 3CX Excavator			TP02		
GW	Depth (m)	Description of Strata	Legend	Type	Samples	
					Depth (m)	
	From	To				
	0.00	MADE GROUND: Dark grey slightly sandy clayey angular GRAVEL and COBBLES of sandstone, concrete and plastic.		ES01	0.10	0.30
	0.60	Stiff orange brown mottled grey slightly gravelly CLAY. Fine to coarse angular gravel of mudstone [weathered mudstone].				
	2.00	Trial pit complete.				
Remarks		Key			 Castledine Environmental LAND CONTAMINATION SURVEYS	
Pit sides stable during excavation. No groundwater entries.		Logged By	Scale	Sheet		
		TR	Not to Scale	1 of 1		

Project.	Shelly Woodhouse Lane, Huddersfield			Project Number:		
				4276		
Client.	Britology Ltd.			Date		
				30/04/2026		
Method.				Location		
	JCB 3CX Excavator			TP01		
GW	Depth (m)	Description of Strata	Legend	Type	Samples	
					From	To
	0.00	MADE GROUND: Dark grey slightly gravelly clayey silty TOPSOIL. Gravel sized fragments of mudstone, sandstone, ceramic, brick, wood and glass.		ES01	0.20	0.40
	0.60	Stiff mottled grey brown slightly gravelly CLAY. Fine to coarse angular gravel of mudstone.				
	1.70	Stiff light grey gravelly CLAY. Fine to coarse angular gravel sized fragments of mudstone [weathered mudstone].				
	2.70	Stiff light grey clayey angular fine to coarse GRAVEL of mudstone [weathered mudstone].				
	3.25	Trial pit complete.				
Remarks		Key				
Pit sides stable during excavation. No groundwater entries.		Logged By	Scale	Sheet		
		TR	Not to Scale	1 of 1		



Castledine Environmental
LAND CONTAMINATION SURVEYS

Project.	Shelly Woodhouse Lane, Huddersfield			Project Number:		
				4276		
Client.	Britology Ltd.			Date		
				30/04/2026		
Method.				Location		
	JCB 3CX Excavator			TP03		
GW	Depth (m)	Description of Strata	Legend	Type	Samples	
					Depth (m)	
	From	To				
	0.00	MADE GROUND: Dark grey slightly gravelly sandy clay TOPSOIL. Gravel sized fragments of mudstone, sandstone, ceramic and brick.		ES01	0.30	0.50
	0.50	Stiff orange brown mottled grey slightly gravelly CLAY. Gravel is angular, fine to coarse of mudstone [weathered mudstone].				
	2.00	Trial pit complete.				
Remarks		Key				
Pit sides stable during excavation. No groundwater entries.		Logged By	Scale	Sheet		
		TR	Not to Scale	1 of 1		
 Castledine Environmental LAND CONTAMINATION SURVEYS						

Project.	Shelly Woodhouse Lane, Huddersfield			Project Number:		
				4276		
Client.	Britology Ltd.			Date		
				30/04/2026		
Method.				Location		
	JCB 3CX Excavator			TP04		
GW	Depth (m)	Description of Strata	Legend	Samples		
				Type	Depth (m)	
					From	To
	0.00	MADE GROUND: Dark grey slightly gravelly clayey silty TOPSOIL. Gravel sized fragments of brick.		ES01	0.20	0.40
	0.70	Stiff orange brown gravelly CLAY. Gravel is angular, fine to coarse of sandstone.				
	1.50	Stiff orange brown clayey angular fine to coarse GRAVEL of sandstone [weathered sandstone]				
	2.30	Trial pit complete.				
Remarks		Key			 Castledine Environmental LAND CONTAMINATION SURVEYS	
Pit sides stable during excavation. No groundwater entries.		Logged By	Scale	Sheet		
		TR	Not to Scale	1 of 1		

Project.	Shelly Woodhouse Lane, Huddersfield			Project Number:		
				4276		
Client.	Britology Ltd.			Date		
				30/04/2026		
Method.				Location		
	Hand pit			TP05		
GW	Depth (m)	Description of Strata	Legend	Type	Samples	
					Depth (m)	
					From	To
	0.00	MADE GROUND: Dark grey slightly gravelly sandy clay TOPSOIL. Gravel sized fragments of mudstone, sandstone, ceramic and brick.		ES01	0.10	0.30
	0.50	Trial pit complete.				
Remarks		Key			 Castledine Environmental LAND CONTAMINATION SURVEYS	
Pit sides stable during excavation. No groundwater entries.		Logged By	Scale	Sheet		
		TR	Not to Scale	1 of 1		

APPENDIX D

SOAKAWAY REPORTS

APPENDIX E

SITE WORK PHOTOGRAPHS



Trial Pit Photographs

Photo No.1: TP01



Address: Shelley Woodhouse Lane, Huddersfield
Client: Britology Ltd

Photo No.2: TP01 soakaway



Castledine Environmental, 4 Wymeswold Road, Hoton, Loughborough, Leicestershire. LE12 5SN
Telephone: 01509 880399 info@castledineenvironmental.co.uk



Trial Pit Photographs

Photo No.3: TP03



Address: Shelley Woodhouse Lane, Huddersfield
Client: Britology Ltd

Photo No.4: TP04



Castledine Environmental, 4 Wymeswold Road, Hoton, Loughborough, Leicestershire. LE12 5SN
Telephone: 01509 880399 info@castledineenvironmental.co.uk



Trial Pit Photographs

Address: Shelley Woodhouse Lane, Huddersfield

Client: Britology Ltd

Photo No.5: TP05



Castledine Environmental, 4 Wymeswold Road, Hoton, Loughborough, Leicestershire. LE12 5SN
Telephone: 01509 880399 info@castledineenvironmental.co.uk

APPENDIX F

TEST RESULTS

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APPENDIX G**WATCHING BRIEF**

It remains possible that previously unexpected soil conditions may be encountered during the construction process. Examples may include oily pockets within the soil, potential for asbestos containing materials, black ashy materials, soils exhibiting strong odours, brightly coloured materials, and former demolition materials.

Should previously undiscovered contamination be encountered during the demolition/construction of the new buildings the following course of action should be adhered to:

1. The ground workers should report any suspected contamination immediately to the Client's site supervisor. The supervisor should contact the Client or their appointed agent who will in turn contact Castledine Environmental to request an engineer to visit the site to assess the extent of the 'contamination'.
2. Castledine Environmental shall make records of their inspection, and pass details of these to the Local Authority.
3. Where the conditions revealed differ from those previously anticipated, the Castledine Environmental shall take samples as deemed appropriate to be dispatched for appropriate chemical testing.
4. Depending on the results of the testing either:
 - a. no further work will be required;
 - b. a further detailed risk assessment will be required; and/or
 - c. Localised specific remedial measures will be necessary.
Appraisal criteria will vary depending on the nature of the assessment.
5. The results of any such testing will be sent to the Local Authority Pollution Control Section, Local Authority development control section, and the appointed building inspector. If remediation is required, the LA/Building inspector will be informed of the date and time of the proposed works.

6. Remediation will be undertaken in accordance with a method statement submitted for approval. The works shall be supervised where necessary by Castledine Environmental who shall provide a Verification Report for the Local Authorities.
7. A copy of the discovery strategy should be lodged on site and provisions made to ensure that all workers are made aware of their responsibility to observe, report and act on any potentially suspicious or contaminated materials they may encounter.

APPENDIX H

DISCOVERY STRATEGY

