



Controlled

**POLLARDS FARM, DITCHLING ROAD,
BURGESS HILL, RH15 0SE
PHASE II GEO-ENVIRONMENTAL
ASSESSMENT
PWX CONSTRUCTION LTD
30TH MAY 2025
LS8465**

Site:	POLLARDS FARM, DITCHLING ROAD, BURGESS HILL, RH15 0SE	
Title:	PHASE II GEO-ENVIRONMENTAL ASSESSMENT	
Project:	CONVERSION OF AGRICULTURAL BARN INTO A DETACHED HOUSE	
Client:	PWX CONSTRUCTION LTD	
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1.0 EXECUTIVE SUMMARY

This summary is a brief precis of the main findings and conclusions of the investigation. For detailed information, the reader is referred to the main report.

The proposed development was understood to comprise the conversion of the redundant former agricultural building to a 1.5 storey, four bedroom, residential dwelling. The intrusive investigation included five hand pits to 1.0mbgl.

Strata	Base Depth range	Summary
Made Ground	0.05-0.40m	Brownish grey sandy (locally very sandy) Gravel. Gravels are fine to medium subangular to subrounded flint, concrete and brick. HP01: brown slightly clayey slightly gravelly Sand. Sand is fine to medium. Gravels are fine angular to rounded flint, plastic and metal fragments.
Backfill	0.50m	Blueish grey mottled red and orange slightly gravelly Clay. Gravels are fine to coarse angular to rounded flint.
Weald Clay	1.00m+	Mottled light brown/blue-grey/red-orange Clay (locally slightly silty), becoming mottled blue-grey and red-orange with depth. HP05: very gravelly with fine mudstone fragments 0.70-0.90mbgl.

No groundwater was encountered within 1.0m depth.

Buried structural concrete may be designed to DS-1 and AC-1s in accordance with BS8500. Water supply pipe work will require protection from aggressive soil contaminants.

No issues with respect to ground gases have been identified. No Radon Protection Measures (RPM) are required for new dwellings and extensions at this location.

Soil testing has identified slightly elevated levels of contamination. Requirements for remediation have been identified in Section 10.

Chemical results on Made Ground corresponded to Inert waste classification. Natural soils are anticipated to generally be Inert Waste.

No immediate requirements for further ground investigation have been identified. A Remediation Method Statement should be prepared. This report should be submitted to relevant authorities etc. in good time for consideration and approval.

2.0 INTRODUCTION

2.1 General

Land Science was instructed to undertake a Phase II Geo-Environmental Assessment in relation to the change of use with a proposed single dwelling residential development at Pollards Farm, Ditchling Road, Burgess Hill, RH15 0SE. The location is shown on Figure 1, which is centred at grid reference TQ 33220 18288.

2.2 Client

The Client for this appointment was PWX Construction Ltd. This report may only be used by this named client and their project team for the purposes set out and subject to the report conditions. It was understood that the Client already owned the property, and that this investigation was not a pre-purchase appraisal.

2.3 Area Under Investigation

The area under investigation comprised an active construction site and the start of the new development. The foundation base had been laid, and construction of ground floor surface and walls had begun as detailed in the site investigation walkover survey in Appendix A. Areas of the site had been reduced in level by 400-600mm. The layout is indicated on Figure 2. The area was approximately 0.03 hectares.

2.4 Proposed Development

The proposed development was understood to comprise the conversion of the redundant former agricultural building to a 1.5 storey, four-bedroom, residential dwelling. The proposed development was covered under planning application number DM/22/0797. Figure 3 illustrates the layout of the proposed redevelopment. The findings of this report may not be valid if the proposed development is altered.

2.5 Previous Investigations

The following previous investigations relevant to the site were made available:

- Phase I Geo-Environmental Assessment ("Desk Study"), Land Science, ref. LS8322, dated 27th February 2025

The phase II ground investigation has been carried out in accordance with the recommendations of the previous report and all reports must be read in conjunction with each other.

2.6 Scope of Work

The work carried out is described in detail in the following sections but in summary included:

- An intrusive investigation comprising five hand excavated trial pits.
- Preliminary chemical testing of selected soil samples in the field and laboratory.

The fieldwork was conducted on 8th May 2025, under the supervision of Land Science.

2.7 Geo-Environmental Objectives

A phase II intrusive investigation was required, to provide a generic quantitative risk assessment (GQRA). The reports were required to assess risks associated with end users, the proposed redevelopment, adjacent land uses, and the wider environment, in the context of the planning regime.

2.8 Standards

Where practicable, the investigation was undertaken in accordance with the following primary standards and guidance:

- Land Contamination Risk Management (LCRM) Environment Agency 2023.
- BS10175:2011+A2:2017, Investigation of Potentially Contaminated Sites.
- National Planning Policy Framework, December 2024.
- Building Regulations Approved Document C: Site preparation and resistance to contaminants and moisture, HM Government, September 2013.
- NHBC Standards Chapter 4.1 Land Quality - Managing Ground Conditions, 2024.

Other technical sources have been cited in respect of specific aspects of the investigation, as referenced throughout the text.

3.0 SUMMARY PHASE I ASSESSMENT

3.1 Qualitative Ratings

Overall, the level of risk ranged between unlikely and high. Consequently, a **High** level of risk has been assigned to the site in respect of the proposed development. This is primarily due to the Made Ground below the barn and the proposed residential end use.

3.2 Recommendations

It would be necessary to undertake basic ground investigation works, which may include;

- Shallow boreholes, or trial pits, to assess the composition and depth of any Made Ground and any field evidence of contamination into the underlying soils.
- Selected samples (including materials bearing field evidence of contamination) should be sent for laboratory analysis. The main analytical suite is identified below.
- Soil samples should be screened for vapours using a Photoionisation Detector (PID).
- Positions should be located in areas of concern; i.e. targeted to specific points of potential contamination such as the Made Ground underlying the hardcover concrete of the barn, and in receptor sensitive locations such as proposed garden area, below the footprint of the dwelling, in the location of buried services, etc.
- Positions should be located adjacent to the site boundaries, to evaluate the potential for contamination to have migrated laterally offsite and impact on adjacent land users.
- Samples of any perched water should be collected for laboratory testing.

The analytical suite, based on the known site history and walkover survey, should include:

- General parameters: acidity (pH), fraction of organic carbon.
- Metals; arsenic, cadmium, chromium (total), lead, mercury, selenium, boron, copper, nickel and zinc.
- Non-metals: water soluble sulphate, sulphide, total cyanide.
- Targeted organic parameters; TPH (speciated), BTEX, speciated PAHs, VOCs and SVOCs, scheduled based on PID screening and field evidence etc.
- Visual asbestos screening of all Made Ground samples. Where possible asbestos fibres or ACMs are identified, these should be examined under a microscope to determine type and quantification tests should be carried out.

Further positions may be required, additional samples analysed or additional determinands added to the analysis, as appropriate, based on any field evidence of possible contamination encountered.

In addition, the requirement for Waste Acceptance Criteria (WAC) testing should be considered to categorise soils in terms of disposal.

4.0 INTRUSIVE INVESTIGATION

4.1 Investigation Rationale

Based on the findings of the conceptual site model, the intrusive investigation was based on the following strategy:

- Five hand pits were carried out to assess the position and depth of any Made Ground and any field evidence of contamination into the underlying soils.
- The positions were located to give broad coverage across the site, where accessible.
- Additionally, HP01 and HP03 were located next to the site boundaries specifically to investigate the potential for lateral migration of contaminants. HP02 was located to target the Made Ground under the driveway, and HP04 and HP05 were located to target the proposed garden area.

Position	Provisional Depth / Strata	Existing Location	Proposed Location	Testing	
HP01	1.00m or refusal	Adjacent to the north wall of old barn (north boundary)	Adjacent to the north wall of new dwelling (north boundary)	PID	
HP02		Front of old barn adjacent to access track	Adjacent to east wall of new dwelling		
HP03		Adjacent to the south wall of old barn (south boundary)	Adjacent to the south wall of new dwelling (south boundary)		
HP04		Behind rear of old barn by west boundary	Proposed garden (west of new dwelling)		
HP05					

It should be noted that on arrival to site, construction of the new build had already started as shown in the photographs in Appendix B. Therefore, the positions of the hand pits were relocated outside the building footprint, to the positions stated in the table above.

4.2 Contamination Strategy

Geo-environmental aspects were investigated based on the following strategy:

Area of Concern	Investigation	Position(s)
Made Ground, Agricultural barn/fields	Representative samples of soil were to be screened for a broad industry standard screening contaminants.	HP01, HP03, HP04, HP05
Waste classification	For preliminary waste classification, representative samples were to be screened for contaminants and full hazardous waste leachate testing performed.	HP02

4.3 Enabling Works

Positions HP01 and HP03 were relocated outside of the building due to concrete (foundations) being constructed for the new dwelling.

4.4 Hand Pits (HP)

Hand excavated trial pits provide a low cost and low impact method of sampling shallow soils.

4.5 Soil Sampling

Soil samples were recovered from the exploratory holes during the ground investigation and stored/transported in containers appropriate for the laboratory testing undertaken. Sample types and depths are recorded on the relevant exploratory hole records.

4.6 PID Screening (PID)

Soil samples were screened for VOC's in headspace from each hand pit using a Photo Ionisation Detector (PID) broadly in accordance with the methodology set-out in CIRIA C682. Due to interference from humidity and other factors, Land Science adopts a method detection limit of 1.0ppm to avoid reporting false positive readings.

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5.0 GROUND CONDITIONS

5.1 General

The expected ground conditions were anticipated to comprise Weald Clay Formation to depth. The investigation confirmed the anticipated ground conditions. A thin capping of Made Ground was encountered at surface.

A summary of the encountered conditions is presented below.

Strata	Base Depth (mbgl)				
	HP01	HP02	HP03	HP04	HP05
Made Ground	0.40	0.15	0.05	0.05	0.05
Backfill	-	0.50	-	-	-
Weald Clay	1.00+	1.00+	1.00+	1.00+	1.00+

The naming of geological strata is tentative and should be used as a guide. Interpolation between or below investigation points should be treated with caution. The description of soils and rocks was in accordance with BS5936.

Topsoil can be distinguished from Made Ground, even though these may have been disturbed through human activity and may contain materials such as brick, pottery, or charcoal etc.

5.2 Made Ground

Made Ground was encountered in all locations, and the full thickness was proved in all. The base ranged between 0.05 and 0.50mbgl.

In summary, with the exception of HP01 the Made Ground comprised brownish grey sandy (locally very sandy) Gravel. Gravels are fine to medium subangular to subrounded flint, concrete and brick.

HP01 comprised grass over brown slightly clayey slightly gravelly Sand. Sand is fine to medium. Gravels are fine angular to rounded flint, plastic and metal fragments.

5.3 Backfill

Backfill was encountered at HP02 and was proved to a depth of 0.50mbgl. It comprised blueish grey mottled red and orange slightly gravelly Clay. Gravels are fine to coarse angular to rounded flint.

5.4 Weald Clay

The Weald Clay was encountered at all locations and all positions terminated in this stratum at 1.00mbgl.

In summary, the Weald Clay comprised light brown/blue-grey/red-orange mottled blue-grey and orange-brown Clay (locally slightly silty), becoming mottled blue-grey and red-orange with depth. HP05 was noted as very gravelly with fine mudstone fragments 0.70-0.90mbgl.

5.5 Roots and Rootlets

Occurrences of roots and rootlets were noted as follows:

Position	Roots	Rootlets
HP01	-	0.0-0.40mbgl; abundant rootlets

5.6 Field Evidence of Contamination

Made Ground was identified in all locations, including backfill in HP02, and such materials may be imported from an unknown source or mixed with hazardous materials, and as such may contain a wide range of potential contaminants. Any such materials should be treated as suspect unless proven otherwise. Preliminary testing has been carried out, as described in section 7.1.

5.7 PID Screening (PID)

None of the samples exhibited VOC's above the detection limit.

The purpose of the screening was to identify samples which may be impacted by organic contaminants (such as VOC's, SVOC's, petroleum hydrocarbons, diesel, etc.) and to assist in prioritising samples for laboratory analysis.

5.8 Groundwater

Groundwater was not encountered during excavation of any of the investigative positions.

5.9 Stability

No instability was encountered within the hand pits.

6.0 CONTAMINATION LABORATORY TESTING

6.1 Scheduled Testing

Samples were selected for geochemical (contamination) analysis, based on the following rationale:

- Made Ground was encountered, which may contain a wide range of contaminants. Selected samples from all positions between depths of 0.1m and 0.3m were tested for a routine screening suite (S2) and were screened for asbestos. Where the Made Ground was found to be very thin (<0.05m thick) then samples of the underlying natural soils were taken and tested.
- Waste classification testing on one sample was included in the scope of works, to provide a preliminary assessment for waste handling. The historic access area was targeted, a representative sample of Made Ground from HP02 0.1m was selected for testing.

The scope and extent of testing was considered appropriate and in accordance with the Conceptual Site Model and preliminary risk assessment.

Sample	Stratum	S2	Asbestos	TPH7	S3
HP01 0.30m	Made Ground	X	X	X	
HP02 0.10m	Made Ground	X	X	X	X
HP03 0.20m	Waste Clay	X	X	X	
HP04 0.30m		X	X	X	
HP05 0.10m		X	X		

The relevant screening suites are defined below. Where duplicate analysis exists between suites, each test is performed only once:

Suite	Definition
S2 (soil)	Screening suite: pH, fraction of organic carbon, metals and non-metals, water soluble sulphate, sulphide, total cyanide, total phenols, speciated PAH's.
Asbestos	Asbestos screen: Laboratory screening for fibres and Asbestos Containing Materials (ACM); identification where identified. Using polarising light and dispersion staining as described in HSG 248, HSE Contract Research Report No 83/1996 and in Davies et al, 1996.
TPH7	Speciated TPH: Total petroleum hydrocarbons CWG banding incl. aliphatic and aromatic split plus BTEX and MTBE.
S3	Waste Acceptance Criteria (WAC): Total Organic Carbon (TOC), Loss on Ignition (LoI), BTEX, speciated PCB's, mineral oil (EC10 – EC40), pH, acid neutralisation capacity, speciated PAH's, 10:1 leachable metals and non-metals.

The results are discussed in the relevant sections.

7.0 HUMAN HEALTH SCREENING

7.1 Screening Values

As the basis of a generic tier 1 screening assessment, the results have been compared directly against published standards for human health.

Several different partly overlapping schemes are currently in use in the UK, based on the Environment Agency's CLEA Model but with differing toxicological parameters. For this report, these schemes have been applied in the following hierarchy:

- Suitable For Use levels (S4UL) recently published by LQM in association with the CIEH.
- Category 4 Screening Levels (C4SL) recently published by the DEFRA and CL:AIRE.

Whilst other standards exist, such as the LQM Generic Assessment Criterion and the Environment Agency's Soil Guideline Values, these are deemed superseded by the above documents.

The soil chemical analysis results have been compared against respective screening values for residential land uses with plant uptake (i.e. residential properties with private gardens, where homegrown produce could form a proportion of dietary intake).

For contaminants where the respective screening value is dependent on Soil Organic Matter (SOM), the corresponding value for 1.00% was used (the arithmetic mean SOM value for the soil was 2.31%).

Where no standard exists, the contaminant is either not considered a priority in terms of human health (at least in the scenario being considered), or no screening value has been published.

7.2 Screening Results

None of the results exceeded the screening criteria, with the exception of the following:

Determinand	Screening value	Results Exceeding the Screening Value
Di-benzo(a,h)anthracene	0.24mg/kg	HP02 0.10m (0.24mg/kg) – on threshold
Arsenic	37mg/kg	HP05 0.10m (37.3mg/kg)
Beryllium	1.7mg/kg	HP05 0.10m (1.8mg/kg)
Lead	200mg/kg	HP01 0.30m (207mg/kg) & HP02 0.10m (224mg/kg)

7.3 Benzo(a)Pyrene

With respect to Polycyclic Aromatic Hydrocarbons (PAH's) Land Science adopt the surrogate marker approach described in Appendix E of the C4SL suite of documents i.e. using benzo(a)pyrene as a representative compound for all genotoxic PAH's. This approach was used as benzo(a)pyrene was detected in the samples, and the other PAH's identified above the individual screening values were all classed as genotoxic. The table below summarises the revised screening assessment:

Determinand	GAC	Concentration	Results Above GAC Value
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		Mean	Max	
Benzo(a)pyrene (as surrogate marker)	5.0	0.22	0.42	None

7.4 Bioaccessible Metals

The screening value for metals arsenic, beryllium and lead assumes all ingested contaminant will be fully soluble in stomach acid and therefore available to enter the body. However, this seldom the case in practice, and can be measured through Physiological Based Extraction Testing (PBET). The method in current use is known as the Unified BARGE method (UBM) as devised by Bio-Accessibility Research Group Europe (BARGE) which was led by the UK. This data can then be applied as part of a detailed quantitative risk assessment. Whilst there are costs associated with this testing, the results may prove favourable.

7.5 Speciated TPH

The risks from TPH's are assessed differently from other contaminants. The ratio of an individual group of carbon bands to the respective GAC is calculated (a hazard quotient) and these are totalled to derive a sample specific hazard index. A hazard index exceeding 1.0 suggests a potential significant risk to human health in the exposure scenario considered. The calculated hazard indexes are summarised below.

Sample	Total TPH	Hazard Index	Notes
HP01 0.30m	<10	0.09	No potential significant human health risk
HP02 0.10m	94.7	0.11	
HP03 0.20m	<10	0.09	
HP04 0.30m	<10	0.09	

7.6 Asbestos

There are no published screening values for asbestos in soil. From the five soil samples screened, none detected asbestos.

8.0 ENVIRONMENTAL SCREENING

8.1 Soft Landscaping

A number of documents include guidance on screening levels of phytotoxic contaminants within soils, including:

- BS3882:2015 "Specification for topsoil and requirements for use" (although stipulated as not to be used in contaminated land risk assessment).
- ICRL in publication 70/90 1990 'Notes on the Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing' (although indirectly withdrawn) (where marked *).
- Code of Practice for Agricultural Use of Sewage Sludge (England and Wales 1996) for arable use (as opposed to grazing) and relating to priority phytotoxic elements only.

The results of the chemical analysis for determinands known to pose a potential phytotoxic risk to plant growth are summarised on the following table, together with the respective adopted screening values for plant growth. The results of the chemical analysis were evaluated singularly without the use of statistical tools.

Element	Phytotoxicity Value (mg/kg)			Arable (grassland) pH >5.2	Results Exceeding Screening Value
	pH <6.0	pH 6.0-7.0	pH >7.0		
Zinc	200	200	300	300 (300)	None
Copper	100	135	200	200 (330)	
Nickel	60	75	110	110 (180)	HP04 0.30m (119mg/kg)
Cadmium	50*			3.0 (3.0)	None
Arsenic	1,000*			50 (50)	

8.2 Structural Concrete

All sub surface concrete should be designed and specified in accordance with BS8500-1:2015+A1:2016. The results of the Sulphate and pH analyses fell into Class DS-1 and an ACEC class AC-1s is appropriate.

8.3 Potable Water Supplies

The risk of chemical attack on water supply pipework has been assessed following the general principles set out in the joint Water UK/HBF (Home Builders Federation) *Contaminated Land Assessment Guidance* dated January 2014. A summary of the main chemical criteria is reproduced below.

Test Group (in mg/kg)	Poly-ethylene (PE)	Polyvinyl Chloride (PVC)	Metal or Barrier pipe	Results Exceeding
Mineral oil EC11-20	10	No limit	No limit	None
Mineral oil EC21-40	500	No limit	No limit	None

Redox potential and conductivity should be checked where metal pipework is to be installed. aluminium barrier pipework is acceptable under all conditions. No pipework should be laid where there is evidence of petrol, diesel etc.

9.0 CONTROLLED WATERS SCREENING

The relevant analytical results have been compared directly against the standard set out in the water framework directive for surface waters, and the current UK potable water supply regulations.

9.1 Soil Leachate Screening

In comparison to the adopted surface water standards, the following determinands exceeded the respective thresholds:

Determinand	EQS	Units	HP02 0.10m
Chromium	0.0047	mg/l	0.006
Lead	0.0012	mg/l	0.002

In comparison to the adopted drinking water standards, none were found to exceed the respective standards.

10.0 TIER 1 CONTAMINATION ASSESSMENT

10.1 End Users

The preliminary conceptual site model identified end users to comprise a residential dwelling with private garden / soft landscaping.

The chemical results identified PAH (Di-benzo(a,h)anthracene) on the screening criteria threshold of 0.24mg/kg at HP02 0.10m in the Made Ground, and slightly elevated heavy metals including arsenic, beryllium and lead at HP01, HP02 and HP05 at depths between 0.10-0.30m, associated with the Made Ground and natural Weald Clay.

The soil samples tested were all from the proposed soft standing area. Samples from HP03 and HP04 were taken from a reduced dig area of approx. 400mm, whilst the sample from HP05 was from a reduced dig area of approx. 600mm.

It should be noted that access within the area of the historic slab/ proposed building footprint was not feasible at the time of the site works as construction had started (see photographs in Appendix B). Therefore, some of the recommended sampling/testing has not been carried out. However, the risk of contamination was classed as very low in the Conceptual Site Model within the desk study (LS8322).

10.2 Adjacent Land Users

The site has not been identified as a risk of ongoing pollution to neighbouring land. However, measures should always be taken to prevent and control any dust, run-off and mud etc. generated during groundworks, as part of good site management.

10.3 Soft Landscaping

Nickel exceeded the phytotoxicity screening value in the sample from HP04 0.30m with a value of 119mg/kg.

No evidence of potentially phytotoxic effects was noted during the site walkover survey inspection.

The physical composition of the Made Ground (with plastic, metal, brick and concrete and little soil) was such that it was unlikely to be a suitable medium for landscaping and planting. Clean imported topsoil and subsoil will be required in accordance with appropriate British Standards.

10.4 Concrete Specification

All sub surface concrete should be designed and specified in accordance with BS8500-1:2015+A1:2016. The results of the sulphate and pH analyses fell into Class DS-1 and an ACEC class AC-1s is appropriate.

10.5 Potable Water Supplies

No organic contaminants exceeding the screening values were identified. Subject to confirmation from the water utility, it appears there is no restriction on pipework material selection.

10.6 Ground Water Protection

The site overlies unproductive strata (the mudstone/clay) and is outside of any source protection zone (SPZ).

However, whilst the site may lie in a low groundwater sensitivity setting, the risk driver for controlled waters was identified as surface water quality, given the proximity and sensitivity of surface water features and for the reasons set out (in the following section).

10.7 Surface Water Protection

The preliminary conceptual site model identified possible source-pathway-receptor linkages with respect to surface water. Contamination may migrate through the action of water laterally towards the culverted drain channel (dependent on hydraulic continuity) located 7m east and ponds from 25m southwest of the site, where the water quality may become degraded in terms of recreational amenity, potable abstraction, environmental status, etc.

Comparing the soil-leachate data directly to surface water standards, chromium and lead exceeded the respective standards (chromium 0.006mg/l over 0.0047mg/l and lead 0.002mg/l over 0.0012mg/l). However, as no groundwater was recorded and the soils are Weald Clay this would restrict the movement of any leachable metals and therefore it is considered there is no risk to surface waters.

10.8 Conclusions

The updated conceptual site model has identified the following potential risks:

- End users; ingestion, dermal contact with soils, soil borne dusts, consumption of homegrown produce.
- Soft landscaping; risk of phytotoxicity and poor soil conditions for landscaping and planting.
- Surface water; risk of contamination in groundwater migrating laterally and impacting on the drainage channel and ponds receptor.

It seems unlikely that further investigation would be fruitful at this stage as the slightly elevated contamination levels are also within poor quality soils for landscaping/ planting. However, BARGE testing for metals is an option as discussed in section 7.4.

Based on a preliminary remediation options appraisal, it was considered that the risks would be most cost effectively mitigated by:

- Removal of all Made Ground in the proposed garden areas,
- Levels to be raised with clean imported topsoil/subsoil as required by the landscape designer (minimum 150mm thickness of topsoil),
- Excavating and disposing of unsuitable or contaminated soils appropriately,

By removing the Made Ground the risk to surface water will be significantly reduced.

A copy of this report should be submitted to the relevant authorities for approval in sufficient time prior to commencement on site.

A suitably qualified Environmental Consultant should prepare a full *Remediation Method Statement*. An appropriate level of supervision and testing will be required, to form part of a formal *Verification Report*.

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11.0 PRELIMINARY WASTE ASSESSMENT

11.1 General

Waste may be defined as any substance or object in Annex 1 of the Waste Framework Directive which the holder discards, intends to discard, or is required to discard. Subject to compliance with waste regulations, soils may either be handled as either:

- Non-Waste, and re-used (either on-site or on another site), or
- Waste, and disposed of (to a waste management facility).

Given the confines of the site, it was anticipated that all materials would be disposed of from site as waste.

The waste producer has a legal duty on care to ensure that waste materials are handled properly and sent to the appropriate licenced facility. Substantial tax penalties and fines are being levied by the regulators. Inspection, testing, segregation etc. will be required on site, and the support of a suitably qualified consultant should be sought; therefore, the advice in this section is preliminary only.

11.2 Waste Disposal

Where materials are not re-used they must be handled as waste, and must be sent to a licenced waste management facility. Waste soil is classified for disposal purposes as follows:

Step 1: Does the material contain dangerous substances in various proportions that exceed the thresholds for hazardous waste under the Waste Framework Directive?

- If yes, the material is hazardous
- If not, the material is non-hazardous

Step 2: Does the waste acceptance testing allow the materials to be sub classified as follows:

- If hazardous, does the soil meet the requirements for Stable Non-Reactive Hazardous Waste (SNRHW)?
- If non-hazardous, does the soil meet the requirements for inert waste?

A material is therefore either hazardous or non-hazardous waste; hazardous may only be sub-classified as SNRHW and non-hazardous waste may only be sub-classified as inert.

The results of the soils analysis have been interpreted as follows:

Soil	Step 1: Hazardous Waste	Step 2: Waste Acceptance	Asbestos etc.	Waste Designation
Made Ground – HP01 0.30m	Non-hazardous	Non-hazardous	None	Non-hazardous*
Made Ground - HP02 0.10m	Non-hazardous	Inert	None	Inert
Weald Clay – HP03 0.20m, HP04 0.30m, HP05 0.10m	Non-hazardous	Non-hazardous	None	Non hazardous*

Whilst the samples marked * were classified as non-hazardous, WAC testing was not carried out and therefore the materials could not be sub-classified as Inert. However, based on the WAC testing on other samples, it is likely these would in fact also qualify as Inert.

Further WAC testing may be considered for soils identified as non-hazardous, as the tests may enable those materials to be re-classified as inert and therefore represent a potential saving on disposal costs.

With reference to the current List of Wastes (formerly European Waste Catalogue), waste soils and stone derived from construction and demolition sites may be disposed of under either of the following codes as appropriate:

Waste	Code	Description
Hazardous	17 05 03*	soil and stones containing dangerous substances
Non-Hazardous	17 05 04	soil and stones other than those mentioned in 17 05 03

(Note, the asterix is a Mirror Entry, as defined in the List of Wastes, conferring the relationship with the non-hazardous code 17-05-04).

REFERENCES

A number of technical references have been referred to in the preparation of this document, including:

- Smith, I. (2014) Smith's Elements of Soil Mechanics. Chichester. Wiley Blackwell. 9th edition.
- Highways England 2009. Interim Advice Note 12/06 revision 1: Design Guidance for Road Pavement Foundations (draft HD25).
- BRE Design Guide 365. Soakaway design ("DG365").
- Radon: Guidance on protective measures for new buildings, BRE Report BR 211, 2023 6th edition.
- Groundwater protection: Principles and practice (GP3) August 2013 Version 1.1.
- Revised EU Waste Framework Directive 2008 2008/98/EC [transposed into English law under The Waste (England and Wales) Regulations 2011].
- European Community (EC) Directive 1999/31/EC [transposed into English law under the Landfill (England and Wales) Regulations 2002].
- Defining Waste Recovery - Permanent Deposit of Waste on Land, EPA13 v1.0, EA 2010.
- The definition of waste: Development Industry Code of Practice, v2, CL:AIRE 2011.
- Guidance on the classification and assessment of waste Technical Guidance WM3 ("WM3") EA publication (1st edition 2015).

REPORT CONDITIONS

The Client

This report may only be used by the client named in section 1 and their appointed project team for the purpose of design, obtaining planning, building regulations approval, and in connection with finance. This report must not be used by any other persons or for other purposes without express written agreement of Land Science.

General

Land Science takes all reasonable professional care in the preparation of this report, using current standards and industry practice. However, the evaluation of ground conditions depends on an interpretation and extrapolation of the conditions revealed by a limited data set. The level of risk is related to the extent of investigation and no site is ever free of risk. The client should understand their risks and liabilities. We accept no liability whatsoever in respect of:

- The scope, extent or design of an investigation.
- Any conditions not directly revealed by the investigation.
- Published standards or methodologies used or adopted in this report.
- The opinion of any other party including any regulator, authority or stakeholder.
- Any dispute, claim or consequential loss arising from any findings of this report.
- Third party information and data.

This report relates solely to ground-related matters as set out in the objectives and makes no representation on other matters such as ecology, arboriculture, invasive plant species, the condition of buildings and structures, hazardous building materials such as insulation or asbestos, the locations of boundaries, unexploded ordnance, and or planning constraints etc. Further reports should be commissioned in this respect as appropriate.

Regulators and Approvals

This (and any other) report should be submitted to relevant authorities for their own assessments and to provide their approval or comments accordingly. This should be in good time before commencing on site in case additional work is to be carried out.

Standards, technical guidance and regulatory positions change over time and may therefore affect the findings and recommendations made in this report; this should be verified by the client prior to any critical project milestones. Where this information is used in design, the designer should verify that the information is appropriate and has been used correctly.

Variations with Time

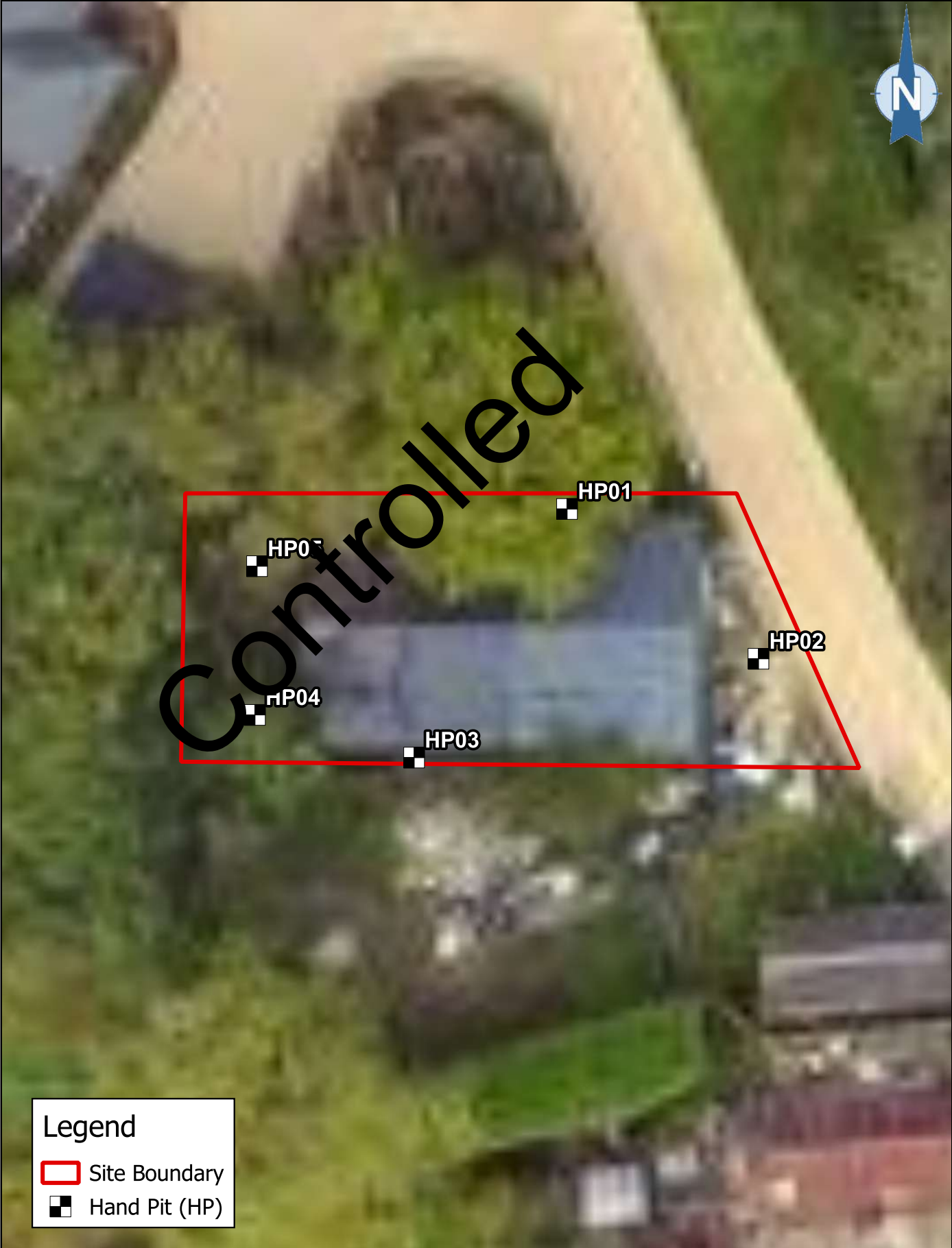
The report relates to conditions revealed at the time of the investigation and any monitoring visits. Some parameters may vary over time or seasonally; groundwater levels, ground gas compositions, or concentrations of contaminants are particularly variable in this respect. Further monitoring or verification should be considered as appropriate.

GLOSSARY OF TERMS

ACM	Asbestos Containing Material
BGS	British Geological Survey
BRE	Building Research Establishment
BS	British Standard
C4SL	Category 4 Screening Level
CBR	California Bearing Ratio
CDM	Construction Design and Management regulations
CIRIA	Construction Industry Research and Information Association
CL:AIRE	Contaminated Land: Applications in Real Environments
CLEA	Contaminated Land Exposure Assessment model
CSM	Conceptual Site Model
EA	Environment Agency
EQS	Environmental Quality Standards
FOC	Fraction of Organic Carbon
GAC	Generic Assessment Criterion
GQRA	Generic Quantitative Risk Assessment
mbgl	Meters Below Ground Level
NHBC	National House Building Council
mOD	Metres above Ordnance Datum
PAH's	Polycyclic Aromatic Hydrocarbons
PHE	Public Health England
PID	Photo-Ionisation Detector
PQRA	Preliminary Quantitative Risk Assessment
PSD	Particle Size Distribution Test
RMS	Remediation Method Statement
S4UL	Suitable for Use Level
SOM	Soil Organic Matter
SPZ	Source Protection Zone
SPT	Standard Penetration Test
SSSI	Sites of Special Scientific Interest
ST-WEL	Short Term Workplace Exposure Limit
SVOC's	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
TRRL / TRL	Transport Road Research Laboratory
TWA-WEL	Time Weighted Average Workplace Exposure Limit
UK HBF	United Kingdom House Building Federation
VOC's	Volatile Organic Compounds
WAC	Waste Acceptance Criteria



	Title: Site Location			Reference: LS8465
	Project: Pollards Farm, Ditchling Road, RH15 0SE			Figure: 1
	Client: PWX Construction Ltd			Date: 14/05/2025
	Prepared by: WP	Checked by: SW	Version: 01	Sheet: 1 of 1

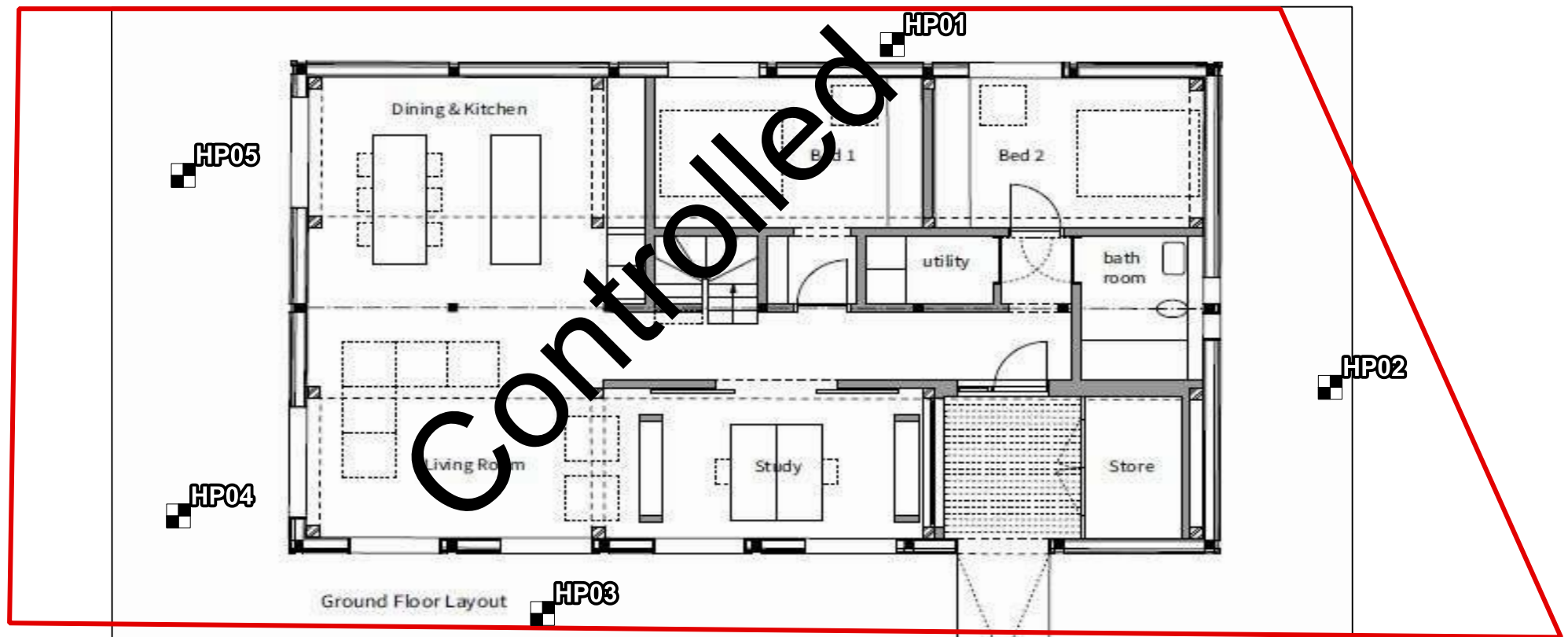


Legend

Site Boundary

Hand Pit (HP)

Land Science	Title: Exploratory Hole Location Plan			Reference: LS8465
	Project: Pollards Farm, Ditchling Road, RH15 0SE			Figure: 2
	Client: PWX Construction Ltd			Date: 15/05/2025
	Prepared by: WP	Checked by: JM	Version: 01	Sheet: 1 of 1



Legend

-  Site Boundary
-  Hand Pit (HP)



Title: Proposed Development Layout	Reference: LS8465	Prepared by: WP
Project: Pollards Farm, Ditchling Road, RH15 0SE	Figure: 3	Checked by: JM
Client: PWX Construction Ltd	Date: 15/05/2025	Version: 01

Controlled

APPENDIX A

SITE WALKOVER RECORD



The walkover is restricted only to aspects related to the Land Science report and the stated objectives therein. The walkover does not replace other surveys such as asbestos, arboriculture, ecology, utilities etc which the client should consider. The client should review the walkover and provide any further relevant information where available.

SITE DETAILS			
Project	Pollards Farm, Pitching Lane, RH15 0SE		
Reference	LS8465	Date of walkover	19/05/2025
Engineer	Will Pitman		
CURRENT USE			
Existing land uses	Residential – 1.5 storey, four bedroom dwelling under construction		
Status	Active construction site		
Suspected asbestos	No immediate evidence.		
Below ground structures	No immediate evidence.		
Hardstandings	Footprint of new dwelling and old concrete slab in front of the dwelling by the northeast corner of the site.		
Soft landscaping	Bare ground overlayed by gravel covering majority of the site outside of the dwelling's footprint. Grass strips along the northern and western boundaries.		
General condition	Under construction – building materials, rubble piles etc surrounding the dwelling.		
Boundaries	North, east and west boundaries formed by temporary Heras fencing. South formed by gravel access track.		
Adjacent land uses	Main residential dwelling 'Pollards Farm' to the north and a neighbouring dwelling 'Pollards Farm Cottage' to the south. Large residential development (housing estate) further west.		
TOPOGRAPHY			
General lie of the land	Located on a relative flat low lying plane.		
General lie of the site	The ground level had been reduced by approx. 1m where the foundations of the dwelling have been put in place, rest of the site surrounding was flat and level.		
Abrupt changes in slope	Surrounding the edges of the development (~0.50m, 60 degree angle)		
Excavations and Depressions	Recent excavation where the development lies.		
Raised ground	None recorded		
GROUND STABILITY			

Signs of landslip	<i>None recorded</i>
Cracking in buildings and walls etc	<i>None recorded</i>
Subsidence on ground surface	<i>None recorded</i>
GROUND CONDITIONS	
Possible filled-in ground	<i>None recorded</i>
Possible built-up ground	<i>Any raised ground</i>
Exposed soils	<i>Surrounding the new development which is overlayed by a thin layer of gravel.</i>
Desiccation	<i>None recorded</i>
Disturbance	<i>*Again, relating to the development.</i>
WATER CONDITIONS	
Wet boggy ground	<i>None recorded</i>
Wells and ditches	<i>None recorded</i>
Ponds or ponding	<i>None recorded</i>
Streams / Rivers	<i>None recorded</i>
ECOLOGY	
Burrows	<i>None recorded</i>
VEGETATION	
Reeds or water loving plants	<i>None recorded</i>
Sparse growth or die back	<i>None recorded</i>
Invasive species	<i>None recorded</i>
TREES	
Relevant trees height/species	<i>Tall mature oak tree >10m in height off site to north however, the canopy hung over the boundary and barn footprint.</i>
Off-site	<i>Trees ~3-5m in height along the western boundary. A tall tree ~10m in height beyond the southern site border.</i>
Hedgerow	<i>Beyond the southern site border.</i>
Recent felling and older stumps	<i>None recorded</i>
CONTAMINATION	
Tipped materials	<i>Construction debris etc by front of development</i>
Areas of possible fill	<i>None recorded</i>
Discolouration/sheens of waterbodies	<i>None recorded</i>
Surface staining	<i>None recorded</i>
Chemicals storage	<i>None recorded</i>
Drums and tanks	<i>None recorded</i>
Petrol interceptor	<i>None recorded</i>

Soakaways	<i>None recorded</i>
LOCAL INFORMATION	
Place/road names	<i>N/A</i>
3 rd party information	<i>N/A</i>
OTHER INFORMATION	
-	<i>N/A</i>

Controlled

Controlled

APPENDIX B



Controlled



TITLE:	Site Photos - Setting	REF:	LS8465	PREPARED:	WP
PROJECT:	Pollards Farm, Ditchling Road, RH15 0SE	SHEET:	1 OF 3	CHECKED:	JM
CLIENT:	PWX Construction Ltd	DATE:	15/05/2025	VERSION	V1



HP01



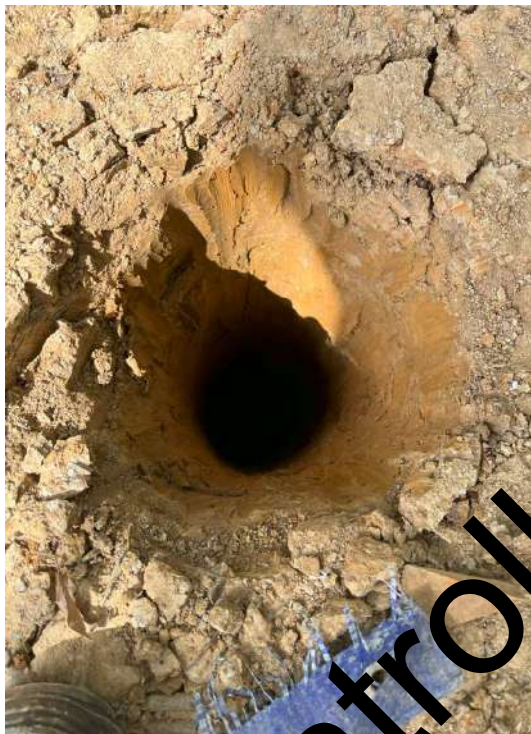
HP02



HP03



TITLE:	Site Photos - Hand Pits 1	REF:	LS8465	PREPARED:	WP
PROJECT:	Pollards Farm, Ditchling Road, RH15 0SE	SHEET:	2 OF 3	CHECKED:	JM
CLIENT:	PWX Construction Ltd	DATE:	15/05/2025	VERSION	V1



HP04



HP05

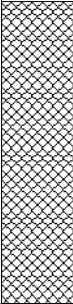


TITLE: Site Photos - Hand Pits 2			REF: LS8465
PROJECT: Pollards Farm, Ditchling Road, RH15 0SE			FIGURE: N/A
CLIENT: PWX Construction Ltd			DATE: 15/05/2025
PREP: WP	CHECK: JM	VERSION V1	SHEET: 3 OF 3

Controlled

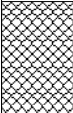
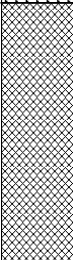
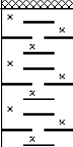
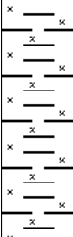
APPENDIX C

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client PWX Construction Ltd		Job Number LS8465	
		Location		Dates 08/05/2025		Project Contractor Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30 0.30	D E		PID<1.0		0.40	Grass over brown, slightly clayey, slightly gravelly SAND with abundant rootlets. Sand is fine to medium. Gravels are fine, angular to rounded flint, plastic and metal. (MADE GROUND)		
0.70	D		PID<1.0		(0.60)	Light brown, mottled grey and orangey brown CLAY. (WEALD CLAY)		
					1.00	Complete at 1.00m		

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: No instability encountered. BACKFILL: Backfilled with compacted arisings. NOTES: Hand excavated inspection pit to 1.00mbgl. Hand pit complete at target depth.			
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					Scale (approx) 1:10		Logged By WP	Figure No. LS8465.HP01

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client PWX Construction Ltd		Job Number LS8465	
		Location		Dates 08/05/2025		Project Contractor Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	E				(0.15)	Brownish grey, very sandy GRAVEL. Sand is fine. Gravels are fine to coarse, angular to rounded flint, brick and concrete. (MADE GROUND)		
0.30	D		PID<1.0		(0.15)	Blueish grey, mottled red and orange slightly gravelly CLAY. Gravels are fine to coarse, angular to rounded flint (BACKFILL)		
0.40	E				0.50	Red, mottled blueish grey and orange, slightly silty CLAY. (WEALD CLAY)		
0.70	D		PID<1.0		(0.50)	...Mottled grey and reddish orange from 0.70m.		
					1.00	Complete at 1.00m		

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: No instability encountered. BACKFILL: Backfilled with compacted arisings. NOTES: Hand excavated inspection pit to 1.00mbgl. Hand pit complete at target depth.			
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					Scale (approx) 1:10		Logged By WP	Figure No. LS8465.HP02

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client PWX Construction Ltd		Job Number LS8465	
		Location		Dates 08/05/2025		Project Contractor Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	E				(0.05) 0.05	Brownish grey, sandy GRAVEL. Gravels fine to medium, subangular to subrounded flint, concrete and brick. (MADE GROUND)		
0.30	D		PID<1.0			Reddish orange, mottled blue-grey and orange CLAY. (WEALD CLAY)		
0.70	D		PID<1.0		(0.95) 1.00	...Blueish grey, mottled red from 0.60m. Complete at 1.00m	                        	

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: No instability encountered. BACKFILL: Backfilled with compacted arisings. NOTES: Hand excavated inspection pit to 1.00mbgl. Hand pit complete at target depth. Top of the pit was 0.40m below the original ground level.			
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					Scale (approx) 1:10		Logged By WP	Figure No. LS8465.HP03

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client PWX Construction Ltd		Job Number LS8465	
		Location		Dates 08/05/2025		Project Contractor Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D		PID<1.0		(0.05) 0.05	Brownish grey sandy GRAVEL. Gravels are fine to medium, subangular to subrounded flint, concrete and brick. (MADE GROUND)		
0.30	E					Brown, mottled reddish orange and blueish grey, slightly silty CLAY. (WEALD CLAY)		
0.60	D		PID<1.0		(0.95) 1.00	...Mottled blueish grey and orangey brown from 0.60m.		
						Complete at 1.00m		

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: No instability encountered. BACKFILL: Backfilled with compacted arisings. NOTES: Hand excavated inspection pit to 1.00mbgl. Hand pit complete at target depth. Top of the pit was 0.40m below the original ground level.			
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					Scale (approx)	Logged By	Figure No.	
					1:10	WP	LS8465.HP04	

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client PWX Construction Ltd		Job Number LS8465	
		Location		Dates 08/05/2025		Project Contractor Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	E				(0.05) 0.05	Brownish grey sandy GRAVEL. Gravels are fine to medium, subangular to subrounded flint, concrete and brick. (MADE GROUND)		
0.30	D		PID<1.0			Brown, mottled orangey brown and blueish grey, CLAY. (WEALD CLAY)		
0.80	D				(0.95)	...very gravelly 0.70-0.90m; gravels are fine, purple mudstone fragments.		
					1.00	Complete at 1.00m		

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: No instability encountered. BACKFILL: Backfilled with compacted arisings. NOTES: Hand excavated inspection pit to 1.00mbgl. Hand pit complete at target depth. Top of the pit was 0.60m below the original ground level.			
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					Scale (approx)		Logged By	Figure No.
					1:10		WP	LS8465.HP05

Controlled

APPENDIX D

Analytical Report: 25-000035

Issue Number: 2
(Full report)

FAO: Jocelyn Middleton

Land Science
Unit 10
19 Albert Drive
Burgess Hill
West Sussex
RH15 9TN

Site: Pollards Farm, Ditchling Road, Burgess Hill

Customer Job reference: LS8465

Quote Reference: -

Samples Received: 19/05/25

Sampling Date: 08/05/25

Instruction Received: 19/05/25

Report issued: 27/05/25

Report Approved by



Graham Knight – Laboratory Operations Manager

Sample Summary

Report No: 25-000035 Issue 2

SML No.	Client's Ref	Date Sampled	Date Scheduled	Description	Deviations
1153	HP01	08/05/25	19/05/25	Silt Loam	-
1154	HP02	08/05/25	19/05/25	Loamy Clay	-
1155	HP03	08/05/25	19/05/25	Clay	-
1156	HP04	08/05/25	19/05/25	Clay	-
1157	HP05	08/05/25	19/05/25	Clay	-

Controlled

Sample Summary

Report No: 25-000035, Issue 2

SML Ref	1153	1154	1155	1156	1157
Customer Ref	-	-	-		
Sample ID	-	-	-		
Sample Type	Soil	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04	HP05
Sample Depth (m)	0.30	0.10	0.20	0.30	0.10
Sampling Date	08/05/25	08/05/25	08/05/25	08/05/25	08/05/25

Determinant	Codes	Units	LOD
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Soil preparation parameters

Moisture Content	N	%	0.1	18.7	9.40	17.02	16.7	18.4
Material removed	N	%	0.1	3.91	55.2	N/A	N/A	N/A
Description of inert material removed	N	N/A	N/A	Stones	Stones, Brick	N/A	N/A	N/A

Metals

Beryllium	N	mg/kg	1	1.01	<1.0	<1.0	<1.0	1.80
Vanadium	N	mg/kg	1	36.1	41.9	51.7	42.5	46.4
Chromium	N	mg/kg	1	22.6	34.6	46.6	199	100
Nickel	N	mg/kg	1	17.4	22.2	24.8	119	59.3
Copper	N	mg/kg	3	29.6	28.7	24.8	25.7	27.8
Zinc	N	mg/kg	3	142	188	41.1	54.8	80.9
Arsenic	N	mg/kg	1	13.3	14.8	19.8	15.6	37.3
Selenium	N	mg/kg	1	2.93	2.92	2.31	3.18	6.27
Cadmium	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	N	mg/kg	3	128	301	38.2	53.9	178
Mercury	N	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	N	mg/kg	1	207	224	21.8	18.3	66.4

Inorganics

Total Cyanide	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
Hexavalent Chromium	N	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0
Fraction Organic Carbon	N	%	0.005	0.04	0.012	<0.005	<0.005	<0.005
Sulphide	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0	<2.0
Water Soluble Boron	N	mg/kg	0.02	2.14	1.15	1.46	0.75	2.74

Miscellaneous

pH	N	pH Units	0.01	6.90	8.19	8.23	6.85	5.09
Water Soluble Sulphate (2:1)	N	mg/kg	40	80.6	410	126	192	634
Water Soluble Sulphate (2:1)	N	g/l	0.02	0.04	0.21	0.06	0.10	0.32
Water Soluble Sulphate (2:1)	N	mg/l	20	40.3	205	63	96	317

Sample Summary

Report No: 25-000035, Issue 2

SML Ref	1153	1154	1155	1156	1157
Customer Ref	-	-	-		
Sample ID	-		-		
Sample Type	Soil	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04	HP05
Sample Depth (m)	0.30	0.10	0.20	0.30	0.10
Sampling Date	08/05/25	08/05/25	08/05/25	08/05/25	08/05/25

Determinant	Codes	Units	LOD
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Phenols

Phenol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
M,P-Cresol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
O-Cresol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
3,4-Dimethylphenol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
2,3-Dimethylphenol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
2,3,5-Trimethylphenol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0
Total Monohydric Phenols	N	mg/kg	1	<6.0	<6.0	<6.0	<6.0	<6.0

Polyaromatic Hydrocarbons

Naphthalene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	N	mg/kg	0.02	<0.02	0.78	<0.02	<0.02	<0.02
Acenaphthene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	N	mg/kg	0.02	<0.02	0.12	<0.02	<0.02	<0.02
Anthracene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	N	mg/kg	0.02	0.11	0.52	<0.02	<0.02	<0.02
Pyrene	N	mg/kg	0.02	0.09	0.50	<0.02	<0.02	<0.02
Benzo(a)anthracene	N	mg/kg	0.02	0.23	<0.02	<0.02	<0.02	<0.02
Chrysene	N	mg/kg	0.02	0.02	0.49	<0.02	<0.02	<0.02
Benzo(b)fluoranthene	N	mg/kg	0.02	0.03	0.5	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	N	mg/kg	0.02	<0.02	0.45	<0.02	<0.02	<0.02
Benzo(a)pyrene	N	mg/kg	0.02	0.02	0.42	<0.02	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.02	<0.02	0.35	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	N	mg/kg	0.02	<0.02	0.24	<0.02	<0.02	<0.02
Benzo[g,h,i]perylene	N	mg/kg	0.02	<0.02	0.50	<0.02	<0.02	<0.02
Coronene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total PAH(16)	N	mg/kg	0.32	0.50	4.87	<0.32	<0.32	<0.32
Total PAH (17)	N	mg/kg	0.34	0.50	4.87	<0.34	<0.34	<0.34

TPH

Total TPH (EPH) C10-C40	N	mg/kg	1.0	<1.0	158	<1.0	<1.0	<1.0
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Sample Summary

Report No: 25-000035, Issue 2

SML Ref	1153	1154	1155	1156
Customer Ref	-	-	-	-
Sample ID	-	-	-	-
Sample Type	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04
Sample Depth (m)	0.30	0.10	0.20	0.30
Sampling Date	08/05/25	08/05/25	08/05/25	08/05/25

Determinant	Codes	Units	LOD
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TPH CWG

TPH CWG - Aromatic (>C8 - C10)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aromatic (C10 - C12)	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0
TPH CWG - Aromatic (C12 - C16)	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0
TPH CWG - Aromatic (C16 - C21)	N	mg/kg	10	<10	<10.0	<10	<10
TPH CWG - Aromatic (C21 - C35)	N	mg/kg	10	<10	30.4	<10	<10
TPH CWG - Aromatic (C35 - <C40)	N	mg/kg	10	<10	<10	<10	<10
TPH CWG - Aliphatic (>C8 - C10)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aliphatic (C10 - C12)	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0
TPH CWG - Aliphatic (C12 - C16)	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0
TPH CWG - Aliphatic (C16 - C21)	N	mg/kg	10	<10	<10	<10	<10
TPH CWG - Aliphatic (C21 - C35)	N	mg/kg	10	<10	84.9	<10	<10
TPH CWG - Aliphatic (C35 - <C40)	N	mg/kg	10	<10	20.6	<10	<10
TPH CWG Total - Aromatic (>C8-C40)	N	mg/kg	10	<10	30.4	<10	<10
TPH CWG Total - Aliphatic (>C8-C40)	N	mg/kg	10	<10	64.3	<10	<10

VOC

Benzene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01
Toluene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01
m&p Xylene	N	ug/kg	0.02	<0.02	<0.02	<0.02	<0.02
o-Xylene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01
MTBE	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01
Total BTEX	N	ug/kg	0.07	<0.07	<0.07	<0.07	<0.07

WAC Analysis							
SML Ref:	1154				Landfill WAC Limits*		
Sample Date:	08/05/25						
Sample ID:	HP02						
Depth (m):	0.10						
Site:	Pollards farm, Ditchling Road, Burgess Hill						
Determinand	Code	Units			Inert Waste Landfill	Stable non-Reactive Hazardous Waste in non-Hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon	N	%		1.2			
Loss on Ignition	N			5.21			
Total BTEX	N	mg/kg		<0.07			
Total PCB (7 congeners)	N	mg/kg		<0.028			
TPH Total Mineral Oil WAC	N	mg/kg		94.7	500	-	-
pH	N	Units		8.19	-	>6	-
Acid Neutralisation Capacity	N	mol/kg		0.05	-	-	-
Eluate Analysis		10:1		10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
		mg/l		Mg/kg			
Arsenic	N	0.006		0.06	0.5	2	25
Barium	N	0.02		0.2	20	100	300
Cadmium	N	0.000007		0.00007	0.04	1	5
Chromium	N	0.006		0.06	0.5	10	70
Copper	N	<0.2		<2.0	2	50	100
Mercury	N	0.00002		0.0002	0.01	0.2	2
Molybdenum	N	0.002		0.02	0.5	10	30
Nickel	N	0.001		0.01	0.4	10	40
Lead	N	0.002		0.02	0.5	10	50
Antimony	N	0.004		0.04	0.06	0.7	5
Selenium	N	0.0006		0.006	0.1	0.5	7
Zinc	N	<0.4		<4.0	4	50	200
Chloride	N	5.12		51.2	800	15000	25000
Fluoride	N	0.68		6.8	10	150	500
Sulphate	N	20.4		204	1000	20000	50000
Total Dissolved Solids	N	90.5		905	4000	60000	100000
Phenol Index	N	<0.1		<1.0	1	-	25
Dissolved Organic Carbon	N	5.9		59	500	800	300

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*Stated limits are for guidance only, and not for conformity assessment.



Sample Summary

Report No: 25-000035, Issue 2

Asbestos Results

Analytical results only apply to the samples submitted by the client. In accordance with procedures, a 1kg soil sample should be submitted for analysis. Sample sizes less than 1kg may not be representative of the materials present on site.

Descriptions of sample matrix are outside the laboratories scope of UKAS accreditation.

SML Number	Client Reference	Sample Matrix Description	Asbestos Identification	Gravimetric Analysis Total %	Gravimetric Analysis by ACM Type %	Free fibre Analysis %	Total Asbestos %	F/mm2 (l)
1153	HP01	Soil	NAD	N/A	N/A	N/A	N/A	N/A
1154	HP02	Soil	NAD	N/A	N/A	N/A	N/A	N/A
1155	HP03	Soil	NAD	N/A	N/A	N/A	N/A	N/A
1156	HP04	Soil	NAD	N/A	N/A	N/A	N/A	N/A
1157	HP05	Soil	NAD	N/A	N/A	N/A	N/A	N/A

Report Information

Method Summary

Soil					
Parameter	Codes	Undertaken On	Date Tested	Method Number	Technique
pH value	N	Air dried sample	20/05/25	105	Electrometric
Water Soluble Sulphate	N	Air dried sample	20/05/25	130	Ion Chromatography
Total Cyanide	N	As submitted sample	20/05/25	137	Colorimetric
Phenols	N	Air dried sample	20/05/25	111	HPLC
Asbestos ID	SU	Oven dried @ 100°C	20/05/25	147	Microscopy
Loss On Ignition	N	Air dried sample	20/05/25	115	Gravimetric
Acid Neutralisation Capacity	N	Air dried sample	20/05/25	150	Electrometric
Hexavalent Chromium	N	As submitted sample	20/05/25	103	Colorimetric
Total (of 17) PAH	N	As submitted sample	21/05/25	116	GC-MS
TPH CWG	N	As submitted sample	21/05/25	140	GC-FID
Total BTEX	N	As submitted sample	28/05/25	134	GC-MS
Sulphide	N	As submitted sample	20/05/25	117	Discrete Analyser
TOC	N	Air dried sample	20/05/25	139	Titration
Total PCBs (7 congeners)	N	As submitted sample	21/05/25	110	GC-MS
Mineral Oil	N	As submitted sample	21/05/25	128	GC-FID

Leachate				
Parameter	Codes	Date Tested	Method Number	Technique
Anions	N	23/05/25	152	Ion Chromatography
Dissolved Metals	N	28/05/25	149	ICP-MS
Phenols	N	23/05/25	111	HPLC
DOC	N	23/05/25	101	Colorimetric
TDS	N	22/05/25	In-House	Calculation

Key

U	Hold UKAS accreditation
M	Hold MCERTS accreditation
N	Not accredited
NS	Sample matrix not UKAS accredited
NM	Sample matrix not MCERTS accredited
SU	Subcontracted to a UKAS accredited laboratory
SM	Subcontracted to an MCERTS accredited laboratory
IS	Insufficient sample
US	Unsuitable sample
NT	Not tested
<	Less than
>	Greater than

Soil samples are expressed on a dry basis and are **not** corrected for inert material removed.

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