



Land Science



**MONKS FARM, OAK WOOD HILL,
DORKING, RH5 5QA
PHASE II CONTAMINATION
ASSESSMENT
MR STEPHEN FLAVIN
19TH DECEMBER 2025
LS8996.1**

Site:	MONKS FARM, OAK WOOD FARM, DORKING, RH5 5QA	
Title:	PHASE II CONTAMINATINO ASSESSMENT	
Project:	BARN CONVERSION TO DWELLING WITH GARDEN	
Client:	MR STEPHEN FLAVIN	
Contact:	STICKLAND WRIGHT (ARCHITECT)	
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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 area under investigation comprised a steel-framed barn with a strip of land to the east. The proposed development was understood to comprise the barn conversion with rear extension to provide two dwellings with gardens. The intrusive investigation included hand excavated pits.

Strata	Base Depth range (m)	Summary
Topsoil	0.20	Brown locally orange-brown and grey gravelly sandy Silt with fine brick and chalk fragments. (only HP05 & HP06)
Made Ground	0.30-0.50	Off-white and light brown to grey-brown sandy silty Gravel / gravelly sandy Silt / gravelly sandy Clay, with chalk, flint, rare plastic, charcoal, hardcore and brick fragments. HP02 also included black rubber fragments. The stockpile sample comprised brown gravelly sandy Silt/Clay, with chalk, flint, brick and hardcore fragments. (not HP05 or HP06)
Weald Clay Formation	1.20+	Orange-brown mottled red-brown Clay becoming grey/dark grey with depth. (not SP01, stockpile)

Groundwater was not encountered during excavation of any of the investigative positions within 1.20m depth.

The excavations were noted to be stable throughout except for some slight spalling of the pit sides. Excavations below the water table may become highly unstable.

Buried structural concrete may be designed to DS-1 and AC-1 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 not identified elevated levels of contamination. However, the stockpile should be removed appropriately due to the material being physically unsuitable to be used for the proposed garden area.

Chemical results on Topsoil and Made Ground corresponded to both non-hazardous and inert waste classifications. Natural soils are anticipated to generally be inert waste.

No immediate requirements for further ground investigation have been identified. 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 Contamination Assessment in relation to the proposed redevelopment at Monks Farm, Oak Wood Hill, Dorking RH5 5QA. The location is shown on Figure 1, which is centred at grid reference TQ 13106 36138.

2.2 Client

The Client for this appointment was Mr Stephen Flavin, supported by Stickland Wright architects. 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 a steel-framed barn with a strip of land to the east. 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 barn conversion with rear extension to provide two dwellings with gardens. The proposed development was covered under planning application number DC/25/0636. 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”), by Land Science, ref. LS8796, dated 27th October 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 hand pits.
- Preliminary chemical testing of selected soil samples in the field and laboratory.

The fieldwork was conducted on 24th November 2025, under the supervision of Land Science. It was noted that the site had not changed since the previous walkover carried out 27th October 2025.

2.7 Geo-Environmental Objectives

A phase II intrusive investigation was required, to provide a generic quantitative risk assessment (GQRA).

The report was 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 June 2025.
- 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 OF PREVIOUS REPORT (LS8796.1 DESK STUDY)

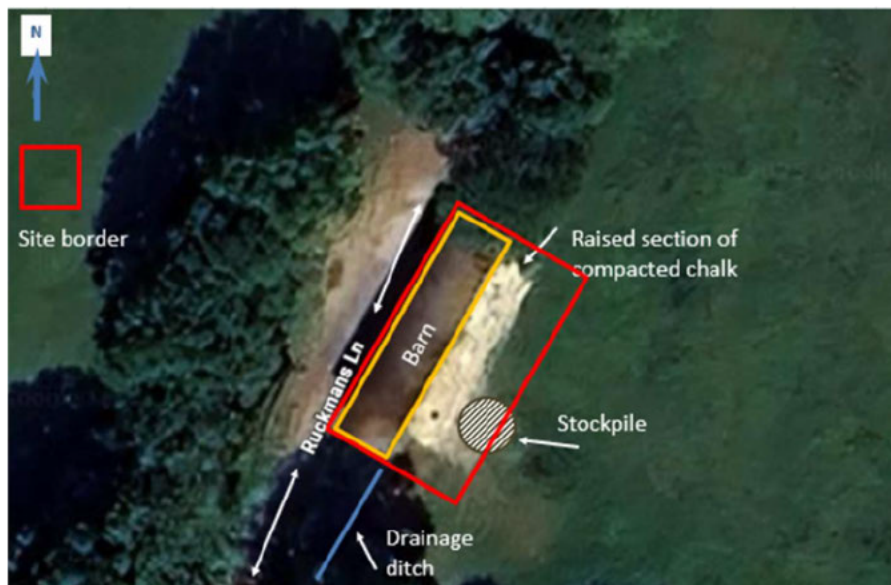
3.1 Walkover

In summary, the area under investigation comprised a vacant and derelict barn comprising a steel framework on concrete pads, corrugated metal and cement board panels/roof, with localised wooden boarding. The cement boarding, gutters and downpipe were all noted to be potentially Asbestos Containing Materials (ACM). The barn was noted to be old and partly dilapidated with broken panels and sections of gutter missing.

The footprint of the barn was hardcore and chalk. The external eastern section the length of barn and ~5m width was compacted chalk gravel, noted as ~300mm thick.

The site and surrounding area were generally flat with a few drainage channels (dry) and slightly undulated from field rutting. A small stockpile (2m x 1m x 1m height) was located along the eastern boundary with brick and concrete noted at the surface.

Stored materials inside the barn included several pieces of old farming plant/equipment with rusty metal frames, tyres, an engine and small hand/electric tools, three Heras feet and construction fencing. Also, inside the barn were paper/plastic bags and containers: two motor oil, paint, concrete powder and road salt. Fly tipping noted included three vehicle batteries, several paint aerosols and a gas cylinder. Surface litter included rare plastic, metal, ceramic tile, textile and glass fragments.



There were open boundaries with the surroundings with Ruckmans Lane west, a field east, trees north, and a drainage channel south.

A small burrow (5cm dia) was noted in the edge of the grass field, and a larger burrow (8cm dia) in the hardstanding of northern section of barn footprint.

Adjacent land uses included Ruckmans Lane west with horse field beyond, trees north, a field of long grass east, and a drainage channel and trees south before residential dwellings from approx. 95m and a caravan noted ~40m southeast.

Key environmental and geotechnical features:

- Existing/historic land uses – storage of farming equipment and possible hay bales
- Suspected asbestos – within corrugated cement board panelling, gutters and downpipes
- General condition of the site – poorly kept with old equipment, storage and litter
- Built up ground – hardcore and chalk within the barn footprint and adjacent to the east
- Signs of animals via burrows
- Tipped materials - small stockpile along eastern boundary; stored rusty equipment; containers (oil/paint/concrete/salt); fly tipping including vehicle batteries and surface general litter
- Large mature oak trees (>15m in height) adjacent north of the barn and to the west

3.2 Environmental Setting

The site lies in the following groundwater setting:

- Superficial aquifer: None identified.
- Bedrock aquifer: The Weald Clay Formation strata was classified as Unproductive Strata - Low permeability strata that have negligible significance for water supply or river base flow.
- Source protection zone: None - no groundwater Source Protection Zones were identified on site or in the vicinity.
- Flooding from Rivers and Sea: Zone 1 Low Probability - Land having a less than 1 in 1,000 annual probability of river or sea flooding.
- Surface water flooding on site: Very low risk - each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.
- Groundwater flooding on site: Not shown as a risk on site.
- Nearest Surface Water Feature: drainage ditches 10m west, and 53m south, both part of the Rother and Arun catchment area
- Nitrate Vulnerable Zone: River Arun Nvz – surface water.
- Ancient Woodland: from 160m northeast and 231m southeast.

3.3 Conceptual Site Model

Potential sources of contamination were identified and rated as follows:

Primary sources	Soils	Ground Water	Vapours	Ground Gases
Made Ground <1m - widespread (onsite)	Low	Unlikely	Unlikely	Unlikely
Agricultural premises - farm barn (onsite)	High	Unlikely	Very Low	Unlikely
Agricultural - field (onsite)	Very Low	Unlikely	Unlikely	Unlikely
Agricultural land - field (offsite)	Unlikely	Unlikely	Unlikely	Unlikely
OVERALL RATING	High	Unlikely	Very low	Unlikely

Potential receptors associated with the site and the proposed development as follows:

Receptor	Rating	Justification
End Users	High	Occupants of the proposed redevelopment. The proposed development comprised a residential dwelling with private garden.
Adjacent Land	Low	Sensitive land uses identified locally. The site was surrounded by fields with a residential dwelling from approx. 120m southwest.
Soft Landscaping	High	Areas of planting including lawns, shrubs, trees, etc. A small section of the existing open field and part of the existing hardstanding were to be converted into a new private garden. No evidence of existing plant phytotoxicity was observed, and was unlikely to be a significant issue.
Structural Concrete	Moderate	New foundations etc. cast in contact with the ground. The development was anticipated to include shallow foundations.
Water Supply Pipework	High	Water supplies may be damaged or tainted when mains are laid in contaminated ground. New potable water mains are to be laid.
Groundwater	Very Low	Water below ground in permeable strata. The site overlies strata classified as unproductive strata and is negligibly permeable therefore unlikely to be used for potable or commercial abstractions.
Surface Water	Low	Surface water in lakes and rivers etc. A drainage ditch was located 10m west of the site.

Source-pathway-receptor linkages identified as follows:

Soils	Pathways	Rating	Receptor	Rating	Overall Rating
High	Dermal contact with soil and soil-borne dust	Very high	End Users	High	High
High	Ingestion of soil and soil-borne dust	Very high	End Users	High	High
High	Inhalation of soil-borne dust	Very high	End Users	High	High
High	Consumption of homegrown produce	Moderate	End Users	High	High
High	Inhalation of soil-borne dust	Moderate	Adjacent Land	Low	Moderate
High	Plant uptake, phytotoxic effects	Moderate	Planting	High	High
High	Chemical attack	High	Concrete	Moderate	High
High	Chemical attack	High	Pipework	High	High
High	Leaching-out, migration to water table	Unlikely	Groundwater	Very Low	Unlikely
High	Leaching-out, migration to water bodies	Low	Surface Water	Low	Low

Ground water	Pathways	Rating	Receptor	Rating	Overall Rating
Unlikely	Direct contact	Unlikely	End Users	High	Unlikely
Unlikely	Direct contact	Unlikely	Adjacent Land	Low	Unlikely
Unlikely	Plant uptake, phytotoxic effects	Very Low	Planting	High	Unlikely
Unlikely	Chemical attack	Very high	Concrete	Moderate	Unlikely
Unlikely	Chemical attack	Moderate	Pipework	High	Unlikely
Unlikely	Migration to Controlled Water receptor	Low	Groundwater	Very Low	Unlikely
Unlikely	Lateral migration to water bodies	Moderate	Surface Water	Low	Unlikely

Vapours	Pathways	Rating	Receptor	Rating	Overall Rating
Very low	Inhalation, ignition	High	End Users	High	Low
Very low	Inhalation, ignition	High	Adjacent Land	Low	Low
Very low	Root asphyxiation, phytotoxic effects	High	Planting	High	Low
Very low	Not a significant hazard	-	Concrete	Moderate	Unlikely
Very low	Chemical attack	High	Pipework	High	Low
Very low	Not a significant hazard	-	Groundwater	Very Low	Unlikely
Very low	Not a significant hazard	-	Surface Water	Low	Unlikely

Ground Gases	Pathways	Rating	Receptor	Rating	Overall Rating
Unlikely	Inhalation, ignition	High	End Users	High	Unlikely
Unlikely	Inhalation, ignition	Unlikely	Adjacent Land	Low	Unlikely
Unlikely	Root asphyxiation, phytotoxic effects	Moderate	Planting	High	Unlikely
Unlikely	Not a significant hazard	-	Concrete	Moderate	Unlikely
Unlikely	Not a significant hazard	-	Pipework	High	Unlikely
Unlikely	Not a significant hazard	-	Groundwater	Very Low	Unlikely
Unlikely	Not a significant hazard	-	Surface Water	Low	Unlikely

Other areas of concern outside the geo-environmental risk assessment:

- Site managers' responsibility for workers
- Dumped waste
- Asbestos in the building
- Weil's disease
- Disturbance of protected species

3.4 Summary of Desk Study and Recommendations

Overall level of risk: Unlikely to High, consequently, a High level of risk has been assigned to the site in respect of the proposed development, primarily due to the potential Asbestos Containing Materials (pACM) within the barn's structure, the previous agricultural land use and the proposed residential end use.

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 parking area of vehicles, and in receptor sensitive locations such as in proposed garden areas, below the footprint dwellings, in the location of buried services, etc.

- Positions should be located adjacent to the site boundaries in the eastern area, to evaluate the potential for contamination to have migrated laterally on site from the adjacent field.
- Positions should be targeted to potential source areas e.g. raised ground within barn, east of barn and small stockpile along eastern boundary.
- 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.
- A selection of shallow samples should be screened for pesticides and herbicides.
- 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.

Geotechnical sampling/testing could be combined with the site works to assist with the proposed barn conversion and rear extension.

It would be prudent to confirm the scope of ground investigation works with the Local Authority and other stakeholders before carrying out these works.

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:

- Hand pits were used to minimise disruption to the site.
- The positions were located to give broad coverage across the site; covering the proposed footprint of the dwelling and garden area.
- Additionally, SP01 was located within the stockpile at the rear of the site.

Position	Provisional Depth / Strata	Existing Location	Proposed Location	Testing, etc.
HP01	1.20m (or refusal)	Barn - north	Building footprint	PID
HP02		Barn - south		
HP03		Rear of barn - north		
HP04		Rear of barn - south		
HP05		Field - north	Garden, adjacent to building footprint	
HP06		Field - south		
SP01	Within stockpile	Stockpile - rear of barn	Within garden	

4.2 Contamination Strategy

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

Area of Concern	Investigation	Position(s)
Made Ground	Representative samples of soil were to be screened for a broad industry standard screening contaminants.	All except HP06
Waste classification	For preliminary waste classification, representative samples were to be screened for contaminants and full hazardous waste leachate testing performed.	HP01 and HP04

4.3 Hand Pits (HP)

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

4.4 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.

4.5 PID Screening (PID)

Soil samples were screened for VOCs in headspace 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.

5.0 GROUND CONDITIONS

5.1 General

The expected ground conditions were anticipated to comprise Made Ground over Weald Clay Formation to depth. The investigation confirmed the anticipated ground conditions, as presented below.

Strata	Base Depth m						
	HP01	HP02	HP03	HP04	HP05	HP06	SP01
Topsoil	-	-	-	-	0.20	0.20	N/A
Made Ground	0.40	0.50	0.30	0.40	-	-	Yes
Weald Clay Formation	1.20+	1.20+	1.20+	1.20+	1.20+	1.20+	N/A

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 BS5930.

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 Topsoil

Topsoil was encountered in positions HP05 and HP06 only with the full thickness proved to 0.20mbgl. In summary, the Topsoil comprised turf over brown locally orange-brown and grey slightly gravelly slightly sandy Silt with fine brick and chalk fragments.

5.3 Made Ground

Made Ground was encountered in all positions except HP05 and HP06, with the full thickness proved in all to depths of between 0.30 and 0.50mbgl. In summary, the Made Ground comprised off-white and light brown to grey-brown slightly sandy silty Gravel / slightly gravelly sandy Silt / gravelly slightly sandy Clay, with chalk, flint, rare plastic, charcoal, hardcore and brick fragments. HP02 also included occasional black rubber fragments between 0.00 and 0.50mbgl. The stockpile sample was noted as comprising brown gravelly sandy Silt/Clay, with chalk, flint, brick and hardcore fragments.

5.4 Weald Clay Formation

The Weald Clay Formation was encountered in all positions (excluding the stockpile), and the hand pits were terminated in this stratum at a depth of 1.20mbgl. In summary, the Weald Clay Formation comprised orange-brown mottled red-brown Clay becoming grey/dark grey with depth.

5.5 Roots and Rootlets

Occurrences of roots and rootlets were noted as follows:

Position	Roots	Rootlets
HP01	0.50m: with rare partially decomposed root	-
HP03	0.50m: with rare root (2mm dia)	0.50m: with occasional rootlets
HP05	-	0.0-0.20m: with abundant rootlets 1.00-1.20m: with rare hair rootlets
HP06	-	0.0-0.20m: with abundant rootlets

5.6 Field Evidence of Contamination

No evidence of possible soil contamination (such as staining, malodours, or brightly coloured soils) was identified in the field.

Made Ground was identified to depths of between 0.30-0.50mbgl, 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. All such materials should be treated as suspect unless proven otherwise. Preliminary testing has been carried out, as described in Section 6.

5.7 Groundwater

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

The level of water in a hand pit can be affected by the excavation process and speed of infiltration; short-term rest levels should be used with caution.

5.8 Stability

The excavations were noted to be stable throughout except for some slight spalling of the pit sides.

5.9 PID Screening (PID)

None of the samples exhibited VOCs above the detection limit.

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

6.0 CONTAMINATION LABORATORY TESTING

6.1 Scheduled Testing

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

- Made Ground and Topsoil were encountered, which may contain a wide range of contaminants. Selected samples from all hand pits (except HP06) and the stockpile (SP01) were tested for a routine screening suite (S1) and were screened for asbestos, as well as speciated Total Petroleum Hydrocarbons (TPH7). The latter was due to historical land use, however VOCs were not scheduled as PID readings were below detection.
- In addition, a shallow sample from HP05 was also tested for pesticides and herbicides due to being located adjacent to an agricultural field.
- Waste classification testing on two samples was included in the scope of works, to provide a preliminary assessment for waste handling. Representative samples of Made Ground were selected for testing from opposite corners of the site.

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

Sample	Strata	S1	Asbestos	TPH7	Pesticides & Herbicides	S3
HP01 0.30m	Made Ground	X	X	X		X
HP02 0.50m		X	X	X		
HP03 0.30m		X	X	X		
HP04 0.10m		X	X	X		X
HP05 0.10m	Topsoil	X	X	X	X	
SP01 (stockpile)	Made Ground	X	X	X		

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

Suite	Definition
S1 (soil)	Screening suite: pH, fraction of organic carbon, metals and non-metals, water soluble sulphate, sulphide, total cyanide, total phenols, speciated PAHs.
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.
Herb./Pest.	Herbicide/pesticide analysis of unknown pesticides and herbicides by GC-MS.
S3	Waste Acceptance Criteria (WAC): Total Organic Carbon (TOC), Loss on Ignition (LoI), BTEX, speciated PCBs, 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) published by LQM in association with the CIEH.
- Category 4 Screening Levels (C4SL) 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 2.33%).

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
Benzo(b)fluoranthene	2.6mg/kg	SP01, stockpile (5.65mg/kg)
Benzo(a)pyrene	2.2mg/kg	SP01, stockpile (4.14mg/kg)

7.3 Benzo(a)Pyrene

With respect to Polycyclic Aromatic Hydrocarbons (PAHs) 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 PAHs. This approach was used as benzo(a)pyrene was detected in the samples, and the other PAHs 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
		Mean	Max	
Benzo(a)pyrene (as surrogate marker)	5.0	4.14	4.14	None

7.4 Speciated TPH

The risks from TPHs 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	29.3mg/kg	0.10mg/kg	No potential significant risk to human health
HP02 0.50m	711mg/kg	0.26mg/kg	
HP03 0.30m	159.3mg/kg	0.14mg/kg	
HP04 0.10m	18.1mg/kg	0.10mg/kg	
HP05 0.10m	<10mg/kg	0.10mg/kg	
SP01, stockpile	643mg/kg	0.23mg/kg	

7.5 Asbestos

There are no published screening values for asbestos in soil. From the six samples tested no asbestos was detected.

7.6 Herbicides & Pesticides

There are no published screening values for herbicides and pesticides. However, from the one sample tested none of the herbicides and pesticides were above detection level.

7.7 Polychlorinated Biphenyls (PCBs)

Two soil samples were tested within the waste criteria test which included PCB testing.

There are no published screening values for PCBs in soil, however, from the two samples screened for PCBs, neither of the results exceeded their respective detection limits.

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)	Results Exceeding Screening Value
	pH <6.0	pH 6.0-7.0	pH >7.0	pH >5.2	
Zinc	200	200	300	300 (300)	None
Copper	100	135	200	200 (330)	
Nickel	60	75	110	110 (180)	
Cadmium	50*			3.0 (3.0)	
Arsenic	1,000*			50 (50)	

8.2 pH and Sulphate

The results of the pH and water-soluble sulphate tests are summarised on the following table.

Strata	No. of Tests	Water Soluble Sulphate (SO ₄ mg/l)	pH (value)
Topsoil	1	<20.0	7.08
Made Ground	5	19.1-134	7.66-8.85

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
VOCs + BTEX & MTBE	0.1	0.03	No limit	None

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	HP02 0.50m (21.0mg/kg)
Mineral oil EC21-40	500	No limit	No limit	HP02 0.50m (689.80mg/kg) SP01, stockpile (643mg/kg)

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	HP01 0.30m	HP04 0.10m
Copper	0.001	mg/l	0.0036	0.0014

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 two dwellings with private gardens.

None of the chemical results exceeded human health screening values. In the absence of a source, no source-pathway-receptor linkage can exist.

On this basis, no requirements for remediation or further testing have been identified.

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

None of the potentially phytotoxic metals tested exceeded the respective screening values. No evidence of potentially phytotoxic effects was noted during the site walkover survey inspection.

The physical composition of the Made Ground (cohesive and granular with chalk, flint, rare plastic, charcoal, hardcore, brick and local rubber fragments) was such that it was unlikely to be a suitable medium for landscaping and planting. It should be noted that HP05 and HP06 located in the proposed garden area did not contain Made Ground, however SP01, the stockpile did and this should be removed and disposed of off-site appropriately.

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-1 is appropriate.

10.5 Potable Water Supplies

The recorded concentrations of mineral oil (both EC11-20 and EC21-40) exceeded the respective standard for polyethylene pipe in the samples from HP02 and SP01, albeit the stockpile will be removed from the proposed garden surface. Suitable types of pipework materials may include PVC, metal or aluminium barrier pipe.

10.6 Ground Water Protection

The site overlies unproductive strata outside of any source protection zone (SPZ).

Overall, the screening does not suggest a significant risk of impact on groundwater quality.

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 drainage ditches from 10m west and 53m south, 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, copper exceeded the respective standards (HP01 0.30m 0.0036mg/l and HP04 0.10m 0.0014mg/l). However, when the proposed building footprint is excavated and/or covered with hardstanding this will block the pathway linkages and the risk will be reduced. Therefore, overall, the screening does not suggest a significant risk of impact on surface water quality.

10.8 Conclusions

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

- Water supply pipes; risk of chemical attack, decay and tainting of water supplies.
- Soft landscaping; poor soil conditions for landscaping and planting.

It seems unlikely that further investigation would be fruitful at this stage as laboratory testing has only flagged up water supply pipe and stockpile issues for the site.

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

- Provision of upgraded or protected water supply pipework to a specification agreed with the local utility.
- Complete removal of the stockpile (Made Ground) from the proposed garden area and disposing of materials off-site to an appropriate waste facility.

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

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 of 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
Topsoil – HP05 0.10m	Non-hazardous	WAC testing not carried out.	None	Non-hazardous*
Made Ground – HP02 0.50m				Non-hazardous*
HP03 0.30m				

Soil	Step 1: Hazardous Waste	Step 2: Waste Acceptance	Asbestos etc.	Waste Designation
Made Ground – SP01, stockpile				Non- hazardous*
Made Ground – HP01 0.30m HP04 0.10m		WAC testing carried out confirming soils to be accepted as inert waste.		Inert

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 also 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.
- BRE Design Guide 365. Soakaway design ("DG365").
- Radon: Guidance on protective measures for new buildings, BRE Report BR 211, 2023 6th edition.
- The Environment Agency's approach to groundwater protection. February 2018 Version 1.2.
- Water UK and the Home Builders Federation; Contaminated Land Assessment Guidance, dated January 2014.
- Concrete – Complementary British Standard to BS EN 206 - Method of specifying and guidance for the specifier BS 8500-1:2023 - TC, dated November 2023.
- 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, EPR13 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 v1.2GB) dated 2021.

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.

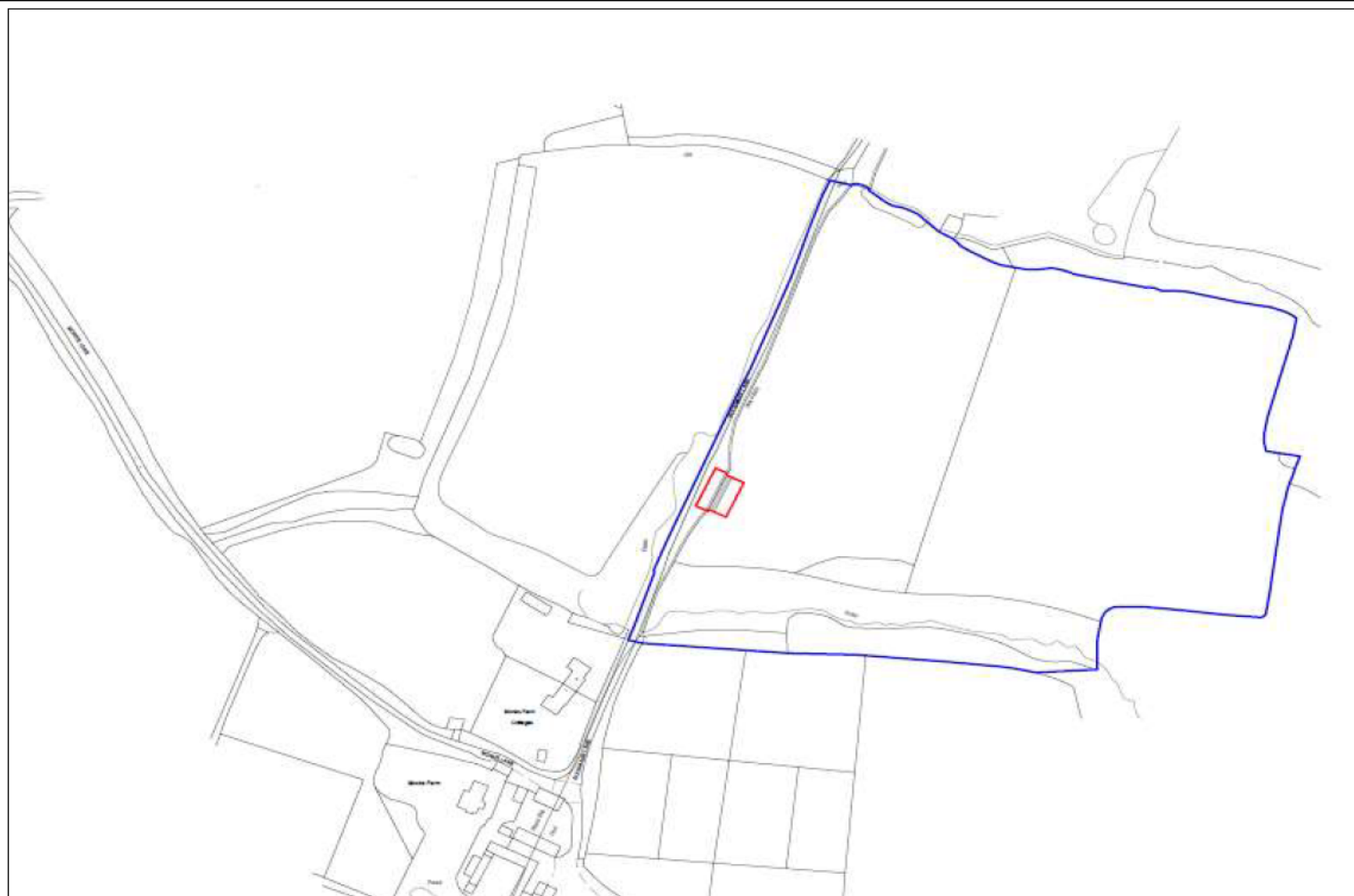
Standards, technical guidance and regulatory positions change over time and may therefore affect the findings and recommendations made in this report; this should be verified by the client prior to any critical project milestones. Where this information is used in design, the designer should verify that 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
PAHs	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
SVOCs	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
VOCs	Volatile Organic Compounds
WAC	Waste Acceptance Criteria



Site border



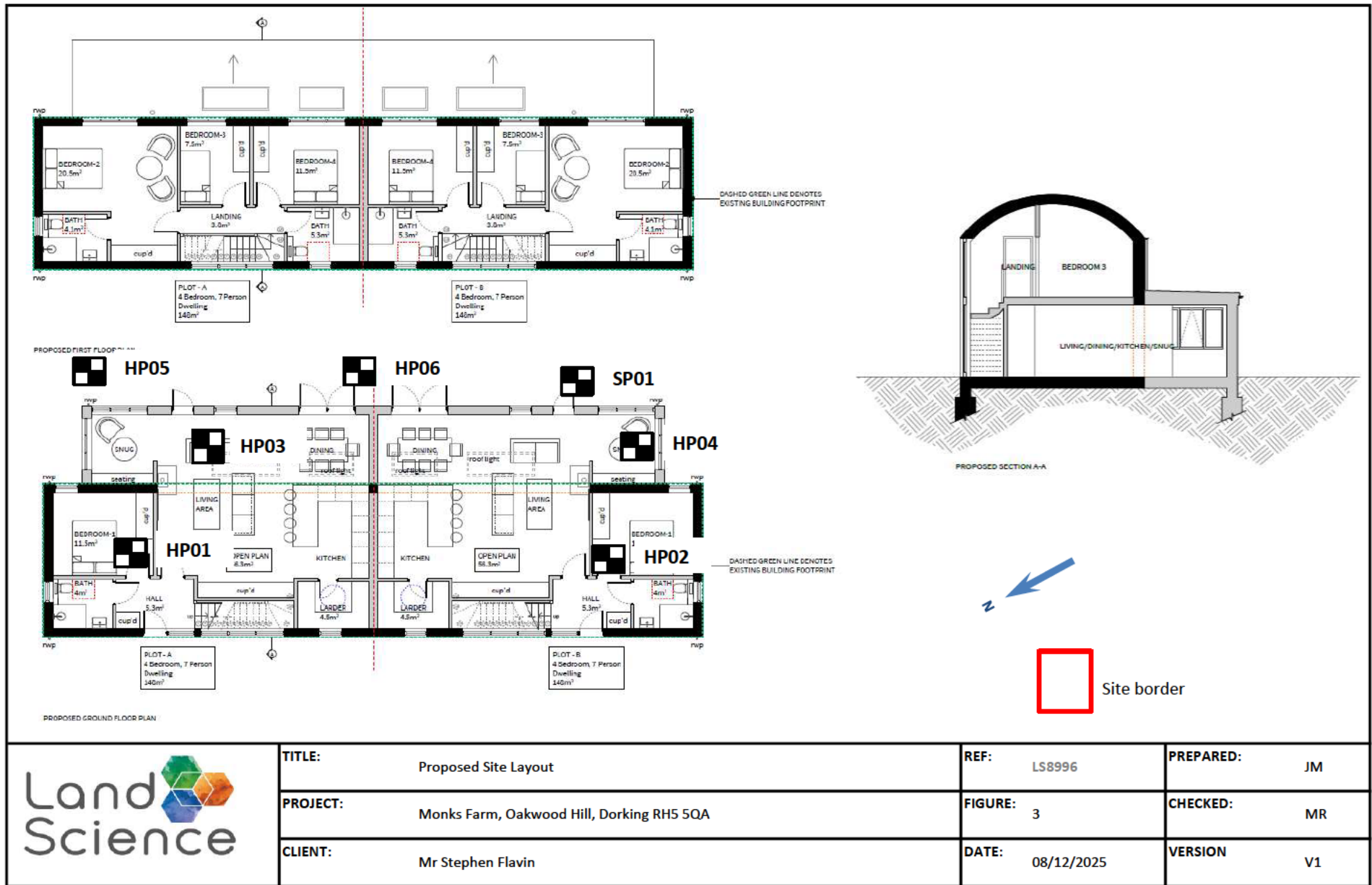
TITLE:	Site Location Plan	REF:	LS8996	PREPARED:	JM
PROJECT:	Monks Farm, Oakwood Hill, Dorking RH5 5QA	FIGURE:	1	CHECKED:	MR
CLIENT:	Mr Stephen Flavin	DATE:	08/12/2025	VERSION	V1



Site border



TITLE:	Existing Site Layout	REF:	LS8996	PREPARED:	JM
PROJECT:	Monks Farm, Oakwood Hill, Dorking RH5 5QA	FIGURE:	2	CHECKED:	MR
CLIENT:	Mr Stephen Flavin	DATE:	08/12/2025	VERSION	V1



APPENDIX A



TITLE:	Site Photographs	REF:	LS8996	PREPARED:	JM
PROJECT:	Monks Farm, Oakwood Hill, Dorking RH5 5QA	SHEET:	1	CHECKED:	MR
CLIENT:	Mr Stephen Flavin	DATE:	08/12/2025	VERSION	V1

APPENDIX B

Excavation Method Trial Pit	Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin	Job Number LS8996
	Location		Dates 24/11/2025		Engineer Land Science	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.3ppm		(0.20)	Off-white and light brown slightly sandy silty GRAVEL. Sand is fine to coarse. Gravel is subangular to subrounded fine and medium chalk, flint, hardcore, 1no. plastic, 1no. charcoal and 1no. brick fragment. (MADE GROUND)		
0.30	D		PID = 0.1ppm		(0.20)	Brown and grey-brown slightly gravelly sandy SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse hardcore, chalk, charcoal and brick fragments. (MADE GROUND)		
0.50	D		PID = 0.3ppm		0.40	Soft to firm orange-brown mottled red-brown CLAY. (WEALD CLAY FORMATION)		
0.70	D		PID = 0.3ppm		(0.70)	0.50m: with rare partially decomposed root.		
1.00	D		PID = 0.4ppm			1.00m: orange-red and slightly sandy.		
1.20	D		PID = 0.5ppm		1.10 (0.10)	Firm grey becoming dark grey locally with orange-brown pockets slightly sandy CLAY. (WEALD CLAY FORMATION)		
					1.20	Complete at 1.20m		

Plan					Remarks			
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: Slight spalling. BACKFILL: Backfilled with arisings. NOTES: Positions completed at target depth.			
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					Scale (approx)	Logged By	Figure No.	
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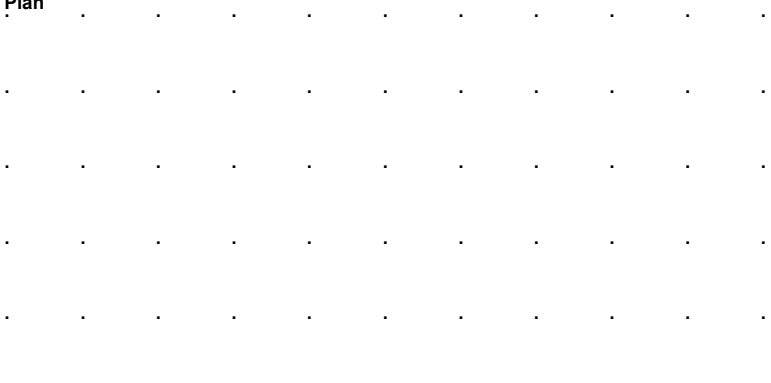
Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin		Job Number LS8996	
		Location		Dates 24/11/2025		Engineer Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.4ppm		(0.30)	Off-white becoming light grey gravelly SILT. Gravel is subangular to rounded fine to coarse chalk with occasional fine to medium black rubber fragments. (MADE GROUND)		
0.30	D		PID = 0.4ppm		0.30 (0.20)	Grey-brown and orange-brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse chalk with occasional fine to medium black rubber fragments. (MADE GROUND)		
0.50	D		PID = 0.2ppm		0.50	Soft to firm orange-brown mottled red-brown CLAY. (WEALD CLAY FORMATION)		
0.70	D		PID = 0.4ppm		(0.70)			
1.00	D		PID = 0.4ppm			1.00-1.20m: becoming orange-brown slightly sandy.		
1.20	D		PID = 0.3ppm		1.20	Complete at 1.20m		

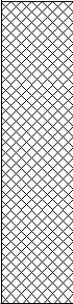
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	Scale (approx) 1:10	Logged By JM	Figure No. LS8996.HP02

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin		Job Number LS8996	
		Location		Dates 24/11/2025		Engineer Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.4ppm		(0.10)	Off-white locally light yellow silty GRAVEL. Gravel is subangular to subrounded fine to coarse chalk. (MADE GROUND)		
					0.10	Yellow-grey to light brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded chalk, with very rare fine brick, 1no. charcoal and rare pockets of black organic matter. (MADE GROUND)		
0.30	D		PID = 0.3ppm		(0.20)			
					0.30	Soft to firm orange-brown mottled red-brown CLAY. (WEALD CLAY FORMATION)		
0.50	D		PID = 0.2ppm					
						0.50m: with rare root (2mm dia) and occasional rootlets, with rare fine to medium weathered sandstone fragments.		
0.70	D		PID = 0.2ppm		(0.70)			
						0.70m: yellow-grey and orange-brown, with rare fine and medium weathered sandstone fragments and lithorelicts.		
1.00	D		PID = 0.2ppm		1.00			
					(0.20)	Firm grey becoming dark grey CLAY with occasional pockets of organic matter. (WEALD CLAY FORMATION) 1.00m: locally grey with fine and medium phosphatic nodules and organic matter.		
1.20	D		PID = 0.1ppm		1.20			
						Complete at 1.20m		

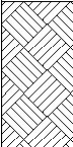
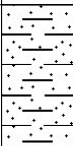
Plan 					Remarks GROUNDWATER: None encountered. STABILITY: Slight spalling. BACKFILL: Backfilled with arisings. NOTES: Positions completed at target depth.			
					Scale (approx) 1:10			
					Logged By JM		Figure No. LS8996.HP03	

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin		Job Number LS8996	
		Location		Dates 24/11/2025		Engineer Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.4ppm		(0.40)	Off-white locally light yellow silty GRAVEL. Gravel is subangular to subrounded fine to coarse chalk, with rare flint and pockets of brown organic matter. (MADE GROUND)		
0.30	D		PID = 0.3ppm		0.40	Soft to firm orange-brown mottled red-brown CLAY. (WEALD CLAY FORMATION)		
0.50	D		PID = 0.2ppm					
0.70	D		PID = 0.2ppm		(0.60)			
1.00	D		PID = 0.2ppm		1.00	Firm grey becoming dark grey CLAY. (WEALD CLAY FORMATION)		
1.20	D		PID = 0.1ppm		1.20	1.20m: slightly sandy. Complete at 1.20m		

Plan					Remarks GROUNDWATER: None encountered. STABILITY: Slight spalling. BACKFILL: Backfilled with arisings. NOTES: Positions completed at target depth.			
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					Scale (approx) 1:10		Logged By JM	Figure No. LS8996.HP04

Excavation Method Trial Pit	Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin	Job Number LS8996
	Location		Dates 24/11/2025		Engineer Land Science	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.0ppm		(0.20)	Turf over brown locally orange-brown slightly gravelly slightly sandy SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine brick, chalk, with abundant rootlets. (TOPSOIL)		
0.30	D		PID = 0.0ppm		0.20	Soft to firm orange-brown mottled red-brown CLAY, becoming yellow-grey locally mottled orange with depth. (WEALD CLAY FORMATION)		
0.50	D		PID = 0.0ppm		(0.80)			
0.70	D		PID = 0.0ppm			0.70m: slightly sandy.		
1.00	D		PID = 0.2ppm		1.00	Firm dark grey locally orange-brown slightly sandy CLAY. Sand is fine to coarse, with rare hair rootlets.(WEALD CLAY FORMATION)		
1.20	D		PID = 0.1ppm		1.20	1.20m: with rare cream fine crushed fossils and lithorelicts and fine pockets of organic matter.		
						Complete at 1.20m		

Plan					Remarks		
.	.	.	.	.	GROUNDWATER: None encountered. STABILITY: Slight spalling. BACKFILL: Backfilled with arisings. NOTES: Positions completed at target depth.		
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					Scale (approx)	Logged By	Figure No.
					1:10	JM	LS8996.HP05

Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Mr Stephen Flavin		Job Number LS8996	
		Location		Dates 24/11/2025		Engineer Land Science		Sheet 1/1	

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D		PID = 0.0ppm		(0.20)	Turf over brown locally orange-brown and grey slightly gravelly slightly sandy SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine brick, chalk, with abundant rootlets and organic matter. (TOPSOIL)		
0.30	D		PID = 0.0ppm		0.20	Soft to firm orange-brown mottled reed-brown CLAY. (WEALD CLAY FORMATION)		
0.50	D		PID = 0.0ppm			0.30m: with occasional rootlets.		
0.70	D		PID = 0.0ppm			0.50m: with rare fine to medium phosphatic nodules and pockets of organic matter.		
1.00	D		PID = 0.0ppm		1.00	Stiff yellow-grey becoming dark grey slightly sandy CLAY, with local pockets of black organic matter. (WEALD CLAY FORMATION)		
1.20	D		PID = 0.0ppm		(0.20)	1.00m: rare hair rootlets and rare fine to medium phosphatic nodules.		
					1.20	Complete at 1.20m		

Plan					Remarks GROUNDWATER: None encountered. STABILITY: Slight spalling. BACKFILL: Backfilled with arisings. NOTES: Positions completed at target depth.			
					Scale (approx) 1:10		Logged By JM	Figure No. LS8996.HP06

APPENDIX C



SML Laboratories Ltd
Unit E1, Rosebury Business Park
Brampton Road
Eastbourne BN22 9BN
Tel: 01323 302280
Email: cs@sml-laboratories.co.uk

Analytical Report: 25-000295

Customer: Land Science
Address: Unit 10, Albert Drive, Burgess Hill, RH15 9TN
Name: Jocelyn Middleton
Project: Monks Farm, Oakwood Hill, Dorking
Customer ref: LS8996
Quote ref: -
Sampling date: 24/11/2025
Samples received: 26/11/2025
Instructions received: 26/11/2025
Report issued: 10/12/2025
Report issue number: 2

Issue 2 - Amendment Note

Pesticide and Herbicide results added.
This report supercedes Issue 1

Report Approved By

A handwritten signature in black ink, appearing to read 'G. Knight', is written over a horizontal line.

Graham Knight – Laboratory Operations Manger

Sample Summary

Analytical Report: 25-000295 issue 2

SML No.	Client's Ref	Depth (m)	Date Sampled	Date Scheduled	Description	Deviations
2368	HP01	0.30	24/11/2025	26/11/25	Clay Loam	-
2369	HP02	0.50	24/11/2025	26/11/25	Clay Loam	-
2370	HP03	0.30	24/11/2025	26/11/25	Silty Clay Loam	-
2371	HP04	0.10	24/11/2025	26/11/25	Chalk	-
2372	HP05	0.10	24/11/2025	26/11/25	Clay Loam	-
2373	SP01	Stockpile	24/11/2025	26/11/25	Sandy Loam	-

Analytical Report: 25-000295 issue 2

SML Ref	2368	2369	2370	2371	2372	2373
Customer Ref	-	-	-	-	-	-
Sample ID	-	-	-	-	-	-
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04	HP05	SP01
Sample Depth (m)	0.30	0.50	0.30	0.10	0.10	Stockpile
Sampling Date	24/11/2025	24/11/2025	24/11/2025	24/11/2025	24/11/2025	24/11/2025

Determinant	Codes	Units	LOD
-------------	-------	-------	-----

Soil preparation parameters

Moisture Content	N	%	0.1	13.4	15.0	22.4	16.2	25.1	14.4
Material removed	N	%	0.1	18.6	23.9	0.30	27.7	<0.10	45.9
Description of inert material removed	N	N/A	N/A	Stones	Stones, Rubber	Stones	Stones	N/A	Stones

Metals

Beryllium	N	mg/kg	0.5	0.61	<0.5	0.60	<0.5	0.66	0.68
Vanadium	N	mg/kg	1	25.4	23.3	28.9	6.25	43.8	30.6
Chromium	N	mg/kg	1	14.9	13.6	18.5	5.77	22.9	21.6
Nickel	N	mg/kg	1	14.9	13.1	18.6	6.38	14.1	18.9
Copper	N	mg/kg	1	15.3	19.1	15.9	5.88	14.8	28.7
Zinc	N	mg/kg	1	57.6	71.8	52.5	19.5	53.4	116
Arsenic	N	mg/kg	1	13.5	11.3	9.42	<1.0	9.04	9.51
Selenium	N	mg/kg	1	3.75	3.14	4.10	2.23	3.32	4.33
Cadmium	N	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56
Barium	N	mg/kg	1	64.6	56.7	75.8	14.7	58.2	123
Mercury	N	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lead	N	mg/kg	1	19.9	25.0	25.3	4.18	25.8	36.1

Inorganics

Total Cyanide	N	mg/kg	1	<1.0	<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	<5.0
Fraction Organic Carbon	N	%	0.005	0.008	0.011	0.012	<0.005	0.020	0.022
Sulphide	N	mg/kg	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Water Soluble Boron	N	mg/kg	0.02	0.34	0.54	0.48	0.20	0.41	0.70

Miscellaneous

pH	N	pH Units	0.01	7.93	7.66	7.95	8.85	7.08	8.52
Water Soluble Sulphate (2:1)	N	mg/kg	40	267	217	38.1	<40.0	<40.0	149
Water Soluble Sulphate (2:1)	N	g/l	0.02	0.13	0.11	0.02	<0.02	<0.02	0.07
Water Soluble Sulphate (2:1)	N	mg/l	20	134	109	19.1	<20.0	<20.0	74.5

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SML Ref	2368	2369	2370	2371	2372	2373
Customer Ref	-	-	-	-	-	-
Sample ID	-	-	-	-	-	-
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04	HP05	SP01
Sample Depth (m)	0.30	0.50	0.30	0.10	0.10	Stockpile
Sampling Date	24/11/25	24/11/25	24/11/25	24/11/25	24/11/25	24/11/25

Determinant	Codes	Units	LOD
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Phenols

Phenol	N	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
M,P-Cresol	N	mg/kg	1	<1.0	<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	<1.0
3,4-Dimethylphenol	N	mg/kg	1	<1.0	<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	<1.0
Naphthol	N	mg/kg	1	<1.0	<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	<1.0
Total Monohydric Phenols	N	mg/kg	7	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0

Polyaromatic Hydrocarbons

Napthalene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.17
Acenaphthene	N	mg/kg	0.02	<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	0.26
Phenanthrene	N	mg/kg	0.02	0.22	0.14	<0.02	<0.02	<0.02	3.71
Anthracene	N	mg/kg	0.02	<0.02	0.20	<0.02	<0.02	<0.02	<0.02
Fluoranthene	N	mg/kg	0.02	0.42	0.34	0.34	0.34	0.35	5.66
Pyrene	N	mg/kg	0.02	0.11	0.05	0.03	0.04	0.03	4.14
Benzo(a)anthracene	N	mg/kg	0.02	0.63	0.59	0.64	0.59	<0.02	3.90
Chrysene	N	mg/kg	0.02	0.55	0.55	0.56	0.53	0.58	3.94
Benzo(b)fluoranthene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5.65
Benzo(k)fluoranthene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	2.13
Benzo(a)pyrene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	4.14
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	3.88
Dibenzo(a,h)anthracene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[g,h,i]perylene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	3.97
Coronene	N	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.05
Total PAH(17)	N	mg/kg	0.34	1.94	1.86	1.57	1.50	0.96	42.6

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SML Ref	2368	2369	2370	2371	2372	2373
Customer Ref	-	-	-	-	-	-
Sample ID	-	-	-	-	-	-
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil
Sample Location	HP01	HP02	HP03	HP04	HP05	SP01
Sample Depth (m)	0.30	0.50	0.30	0.10	0.10	Stockpile
Sampling Date	24/11/25	24/11/25	24/11/25	24/11/25	24/11/25	24/11/25

Determinant	Codes	Units	LOD
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TPH CWG

TPH CWG - Aliphatic (>C5 - C7)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aliphatic (C7 - C8)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aliphatic (C8 - C10)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05
TPH CWG - Aliphatic (C10 - C12)	N	mg/kg	2	<2.0	<2.0	<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	<2.0	<2.0
TPH CWG - Aliphatic (C16 - C21)	N	mg/kg	10	<10.0	21.0	<10.0	<10.0	<10.0	<10.0
TPH CWG - Aliphatic (C21 - C35)	N	mg/kg	10	15.0	329	25.5	<10.0	<10.0	208
TPH CWG - Aliphatic (C35 - C40)	N	mg/kg	10	<10.0	125	47.7	18.1	<10.0	172
TPH CWG - Aromatic (>C5 - C7)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aromatic (C7 - C8)	N	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TPH CWG - Aromatic (C8 - C10)	N	mg/kg	0.05	<0.05	<0.05	<0.05	0.30	0.10	0.16
TPH CWG - Aromatic (C10 - C12)	N	mg/kg	2	<2.0	<2.0	<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	<2.0	<2.0
TPH CWG - Aromatic (C16 - C21)	N	mg/kg	10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
TPH CWG - Aromatic (C21 - C35)	N	mg/kg	10	14.3	178	62.0	<10.0	<10.0	146
TPH CWG - Aromatic (C35 - C40)	N	mg/kg	10	<10	57.8	24.1	<10.0	<10.0	117
TPH CWG Total - Aliphatic (>C5-C40)	N	mg/kg	10	15.0	475	73.2	18.1	<10.0	380
TPH CWG Total - Aromatic (>C5-C40)	N	mg/kg	10	14.3	236	86.1	<10.0	<10.0	263

VOC

Benzene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toluene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	N	ug/kg	0.01	<0.01	<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	<0.02	<0.02
o-Xylene	N	ug/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MTBE	N	ug/kg	0.01	<0.01	<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	<0.07	<0.07

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SML Ref	2372
Customer Ref	-
Sample ID	-
Sample Type	Soil
Sample Location	HP05
Sample Depth (m)	0.10
Sampling Date	24/11/25

Determinant	Codes	Units
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OCP & OPP

4,4'-DDD (p,p'-DDD)	N	mg/kg	< 0.1
4,4'-DDE (p,p'-DDE)	N	mg/kg	< 0.1
4,4'-DDT (p,p'-DDT)	N	mg/kg	< 0.2
Aldrin	N	mg/kg	< 0.2
alpha-BHC	N	mg/kg	< 0.1
beta-BHC	N	mg/kg	< 0.1
cis-Chlordane	N	mg/kg	< 0.1
delta-BHC	N	mg/kg	< 0.1
Dieldrin	N	mg/kg	< 0.2
Endosulfan I	N	mg/kg	< 0.2
Endosulfan II	N	mg/kg	< 0.2
Endosulfan Sulfate	N	mg/kg	< 0.2
Endrin	N	mg/kg	< 0.2
gamma-BHC (Lindane)	N	mg/kg	< 0.1
Heptachlor	N	mg/kg	< 0.1
Heptachlor Epoxide	N	mg/kg	< 0.2
Methoxychlor	N	mg/kg	< 0.2
trans-Chlordane	N	mg/kg	< 0.1
Azinphos Methyl (Guthion)	N	mg/kg	< 0.2
Chlorpyrifos (Dursban)	N	mg/kg	< 0.1
Coumaphos	N	mg/kg	< 0.15
Demeton O & S	N	mg/kg	< 0.2
Diazinon	N	mg/kg	< 0.1
Dichlorvos (DDVP) (Dichlorophos)	N	mg/kg	< 0.1
Dimethoate	N	mg/kg	< 0.2
Disulfoton	N	mg/kg	< 0.2
Endrin Aldehyde	N	mg/kg	< 0.2
Endrin Ketone	N	mg/kg	< 0.15
EPN	N	mg/kg	< 0.1
Ethoprophos	N	mg/kg	< 0.1
Fenchlorphos (Ronnel)	N	mg/kg	< 0.1
Fensulfothion	N	mg/kg	< 0.2
Fenthion	N	mg/kg	< 0.1
Malathion (Carbophos)	N	mg/kg	< 0.2
Methyl parathion	N	mg/kg	< 0.2
Mevinphos	N	mg/kg	< 0.1
Monocrotophos	N	mg/kg	< 0.4
Naled	N	mg/kg	< 0.4
Parathion (Ethyl Parathion)	N	mg/kg	< 0.2
Phorate	N	mg/kg	< 0.1
Prothiofos (Tokuthion)	N	mg/kg	< 0.1
Sulfotep (Dithion)	N	mg/kg	< 0.1
Sulprofos (Bolstar)	N	mg/kg	< 0.2
TEPP (Tetraethylpyrophosphate)	N	mg/kg	< 0.8
Tetrachlorovinphos (Stirifos)	N	mg/kg	< 0.15
Trichloronate	N	mg/kg	< 0.1
Permethrin	N	mg/kg	< 0.1

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SML Ref	2372
Customer Ref	-
Sample ID	-
Sample Type	Soil
Sample Location	HP05
Sample Depth (m)	0.10
Sampling Date	24/11/25

Determinant	Codes	Units	
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Herbicides

Ametryn	N	mg/kg	< 0.001
Atrazine	N	mg/kg	< 0.001
Prometryn	N	mg/kg	< 0.001
Propazine	N	mg/kg	< 0.001
Simazine	N	mg/kg	< 0.001
Terbuthylazine	N	mg/kg	< 0.001
Terbutryn	N	mg/kg	< 0.001
Atraton	N	mg/kg	< 0.001
Simetryn	N	mg/kg	< 0.001
Prometon	N	mg/kg	< 0.001
2,4,5-T	N	mg/kg	< 0.01
2,4-D	N	mg/kg	< 0.01
Dichlorprop	N	mg/kg	< 0.01
Fenoprop	N	mg/kg	< 0.01
Mecoprop	N	mg/kg	< 0.01
2,4-DB	N	mg/kg	< 0.01
MCPA	N	mg/kg	< 0.01
MCPB	N	mg/kg	< 0.01
Carbetamide	N	mg/kg	< 0.001
Chlorbufam	N	mg/kg	< 0.001
Ethiofencarb	N	mg/kg	< 0.001
Phenmediphan	N	mg/kg	< 0.001
Pirimicarb	N	mg/kg	< 0.001
Bromacil	N	mg/kg	< 0.001
Cyanazine	N	mg/kg	< 0.001
Carbaryl	N	mg/kg	< 0.001
Methiocarb	N	mg/kg	< 0.001
Chloroxuron	N	mg/kg	< 0.001
Chlortoluron	N	mg/kg	< 0.001
Diflubenzuron	N	mg/kg	< 0.001
Dimefuron	N	mg/kg	< 0.001
Diuron	N	mg/kg	< 0.001
Isoproturon	N	mg/kg	< 0.001
Linuron	N	mg/kg	< 0.001
Methabenzthiazuron	N	mg/kg	< 0.001
Metoxuron	N	mg/kg	< 0.001
Monolinuron	N	mg/kg	< 0.001
Monuron	N	mg/kg	< 0.001
Pencycuron	N	mg/kg	< 0.001

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WAC Analysis

SML Ref:	2368				Landfill WAC Limits*		
Sample Date:	24/11/2025				Inert Waste Landfill	Stable non- Reactive Hazardous Waste in non- Hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP01						
Depth (m):	0.30						
Site:	Monks Farm, Oak Wood Hill, Dorking						
Determinand	Code	Units					
Total Organic Carbon	N	%		0.80	3	5	6
Loss on Ignition	N	%		3.58	-	-	10
Total BTEX	N	mg/kg		<0.07	6	-	-
Total PCB (7 congeners)	N	mg/kg		<0.28	1	-	-
TPH Total WAC (EH_CU_1D_Total)	N	mg/kg		<10	500	-	-
pH	N	Units		7.93	-	>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	0.0013		0.013	0.5	2	25
Barium	N	0.0106		0.106	20	100	300
Cadmium	N	<0.0005		<0.005	0.04	1	5
Chromium	N	0.0015		0.015	0.5	10	70
Copper	N	0.0036		0.036	2	50	100
Mercury	N	<0.0001		<0.001	0.01	0.2	2
Molybdenum	N	0.0022		0.022	0.5	10	30
Nickel	N	0.0009		0.009	0.4	10	40
Lead	N	0.0006		0.006	0.5	10	50
Antimony	N	0.0012		0.012	0.06	0.7	5
Selenium	N	<0.001		<0.01	0.1	0.5	7
Zinc	N	0.0058		0.058	4	50	200
Chloride	N	5.59		55.9	800	15000	25000
Fluoride	N	<0.5		<5.0	10	150	500
Sulphate	N	23.0		230	1000	20000	50000
Total Dissolved Solids	N	153		1530	4000	60000	100000
Phenol Index	N	<0.1		<1.0	1	-	25
Dissolved Organic Carbon	N	31.3		313	500	800	1000

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.

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WAC Analysis

SML Ref:	2371				Landfill WAC Limits*		
Sample Date:	24/11/2025				Inert Waste Landfill	Stable non- Reactive Hazardous Waste in non- Hazardous Landfill	Hazardous Waste Landfill
Sample ID:	HP04						
Depth (m):	0.10						
Site:	Monks Farm, Oak Wood Hill, Dorking						
Determinand	Code	Units					
Total Organic Carbon	N	%		0.30	3	5	6
Loss on Ignition	N	%		0.70	-	-	10
Total BTEX	N	mg/kg		<0.07	6	-	-
Total PCB (7 congeners)	N	mg/kg		<0.28	1	-	-
TPH Total WAC (EH_CU_1D_Total)	N	mg/kg		<10	500	-	-
pH	N	Units		8.85	-	>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	0.0039		0.039	0.5	2	25
Barium	N	0.0072		0.072	20	100	300
Cadmium	N	<0.0005		<0.005	0.04	1	5
Chromium	N	<0.0005		<0.005	0.5	10	70
Copper	N	0.0014		0.014	2	50	100
Mercury	N	<0.0001		<0.001	0.01	0.2	2
Molybdenum	N	0.0012		0.012	0.5	10	30
Nickel	N	0.001		0.01	0.4	10	40
Lead	N	<0.0005		<0.005	0.5	10	50
Antimony	N	<0.001		<0.01	0.06	0.7	5
Selenium	N	<0.001		<0.01	0.1	0.5	7
Zinc	N	<0.0005		<0.005	4	50	200
Chloride	N	2.74		27.4	800	15000	25000
Fluoride	N	<0.5		<5.0	10	150	500
Sulphate	N	3.15		31.5	1000	20000	50000
Total Dissolved Solids	N	80.0		800	4000	60000	100000
Phenol Index	N	<0.1		<1.0	1	-	25
Dissolved Organic Carbon	N	11.0		110	500	800	1000

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.

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Asbestos Screening

SML Sample Reference	Client Reference	Depth (m)	Sample Matrix Description	Asbestos Identification	Gravimetric Analysis Total %	Gravimetric Analysis by ACM Type %	Free fibre Analysis %	Total Asbestos %
2368	HP01	0.30	Soil	NAD	N/T	N/T	N/T	N/T
2369	HP02	0.50	Soil	NAD	N/T	N/T	N/T	N/T
2370	HP03	0.3	Soil	NAD	N/T	N/T	N/T	N/T
2371	HP04	0.10	Soil	NAD	N/T	N/T	N/T	N/T
2372	HP05	0.10	Soil	NAD	N/T	N/T	N/T	N/T
2373	SP01	Stockpile	Soil	NAD	N/T	N/T	N/T	N/T

NAD - No Asbestos Detected

N/T - Not tested

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Method Summary

Soil					
Parameter	Codes	Undertaken On	Date Tested	Method Number	Technique
pH value	N	Air dried sample	01/12/25	105	Electrometric
Water Soluble Sulphate	N	Air dried sample	02/12/25	130	Ion Chromatography
Total Cyanide	N	As submitted sample	28/11/25	137	Colorimetric
Phenols	N	As submitted sample	01/12/25	111	HPLC
Asbestos ID	SU	Subcontracted	01/12/25	Subcontracted	Microscopy
Loss On Ignition	N	Air dried sample	01/12/25	115	Gravimetric
Acid Neutralisation Capacity	N	Air dried sample	01/12/25	150	Electrometric
Hexavalent Chromium	N	As submitted sample	28/11/25	103	Colorimetric
Total (of 16) PAH	N	As submitted sample	01/12/25	116	GC-MS
Total BTEX	N	As submitted sample	01/12/25	134	GC-MS
Sulphide	N	As submitted sample	01/12/25	117	Discrete Analyser
TOC	N	Air dried sample	01/12/25	139	Titration
TPH CWG	N	As submitted sample	01/12/25	128	GC-FID
Water Soluble Boron	N	Air dried sample	02/12/25	136	Discrete Analyser
Total Metals	N	Air dried sample	01/12/25	148	GC-FID
PCB 7 Congeners	N	Air dried sample	01/12/25	110	GC-MS
Mineral Oil (EH_CU_1D-Total)	N	As submitted sample	01/12/25	128	GC-FID
GC Pesticides	N	As submitted sample	01/12/25 to 10/12/25	Subcontracted	GC-MS
LC Herbicides	N	As submitted sample	01/12/25 to 10/12/25	Subcontracted	GC-MS

Leachate					
Parameter	Codes	Undertaken On	Date Tested	Method Number	Technique
Anions	N	10:1 WAC leachate	03/12/25	152	Ion Chromatography
Dissolved Metals	N	10:1 WAC leachate	03/12/25	149	ICP-MS
Phenols	N	10:1 WAC leachate	03/12/25	111	HPLC
Electrical Conductivity	N	10:1 WAC leachate	03/12/25	118	Probe
DOC	N	10:1 WAC leachate	03/12/25	101	TOC Analyser
TDS	N	10:1 WAC leachate	03/12/25	In-House	Calculation

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Key

Symbol	Description
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
NAD	No asbestos detected
<	Less than
>	Greater than

Soil samples are expressed on an air dried <30°C 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.

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



ZF1Q8-M6J4F-009IF

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Report is invalid if pages are removed.

Job name

LS8996

Description/Comments

Project

LS8996

Site

Monks Farm Barn, Dorking RH5 5QA

Classified by

Name: **Jos Middleton**
Date: **08 Dec 2025 13:45 GMT**
Telephone: **01444 712 870**
Company: **SML Laboratories**
Unit 10, 19 Albert Drive
Burgess Hill
RH15 9TN.

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

2 - Material Characterisation

Address of the waste

Monks Farm Barn, Dorking

Post Code RH5 5QA

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Redevelopment with conversion of farm barn to residential dwelling

Description of the specific process, sub-process and/or activity that created the waste

Waste from foundation excavations

Description of the waste

Made Ground: sandy silty Gravel, gravelly sandy Silt and gravelly sandy Clay with chalk, flint, rare plastic, charcoal, hardcore, brick and rubber fragments with rare pockets of organic matter.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	HP01	0.30	Non Hazardous		3
2	HP02	0.50	Non Hazardous		5
3	HP03	0.30	Non Hazardous		7
4	HP04	0.10	Non Hazardous		9
5	HP05	0.10	Non Hazardous		11
6	SP01	Stockpile	Non Hazardous		13

Related documents

#	Name	Description
1	Land Science Template WM3 v1.2GB	waste stream template used to create this Job

Report

Created by: Jos Middleton

Created date: 08 Dec 2025 13:45 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	15
Appendix B: Rationale for selection of metal species	16
Appendix C: Version	17

Classification of sample: HP01

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
HP01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13.4%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 13.4% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	pH				7.93 pH		7.93 pH	7.93 pH		
2	phenol				<7 mg/kg		<7 mg/kg	<0.0007 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
3	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
4	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
5	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
6	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
7	phenanthrene				0.22 mg/kg		0.22 mg/kg	0.000022 %		
		201-581-5	85-01-8							
8	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
9	fluoranthene				0.42 mg/kg		0.42 mg/kg	0.000042 %		
		205-912-4	206-44-0							
10	pyrene				0.11 mg/kg		0.11 mg/kg	0.000011 %		
		204-927-3	129-00-0							
11	benzo[a]anthracene				0.63 mg/kg		0.63 mg/kg	0.000063 %		
	601-033-00-9	200-280-6	56-55-3							
12	chrysene				0.55 mg/kg		0.55 mg/kg	0.000055 %		
	601-048-00-0	205-923-4	218-01-9							
13	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
14	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
15	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
16	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5							
17	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
19	coronene	205-881-7	191-07-1		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	13.5 mg/kg	1.32	17.824 mg/kg	0.00178 %			
21	barium { barium oxide }	215-127-9	1304-28-5		64.6 mg/kg	1.117	72.126 mg/kg	0.00721 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.61 mg/kg	2.775	1.693 mg/kg	0.000169 %			
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2	0.34 mg/kg	3.22	1.095 mg/kg	0.000109 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %			<LOD
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	15.3 mg/kg	1.126	17.226 mg/kg	0.00172 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	19.9 mg/kg	1.56	31.04 mg/kg	0.00199 %			
28	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	14.9 mg/kg	2.976	44.346 mg/kg	0.00443 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			3.75 mg/kg	1.405	5.269 mg/kg	0.000527 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	25.4 mg/kg	1.785	45.344 mg/kg	0.00453 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	57.6 mg/kg	2.774	159.791 mg/kg	0.016 %			
33	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
37	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.28 mg/kg		<0.28 mg/kg	<0.000028 %			<LOD
Total:									0.0387 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HP02

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
HP02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 15% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	pH				7.66 pH		7.66 pH	7.66 pH		
2	phenol				<7 mg/kg		<7 mg/kg	<0.0007 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
3	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
4	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
5	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
6	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
7	phenanthrene				0.14 mg/kg		0.14 mg/kg	0.000014 %		
		201-581-5	85-01-8							
8	anthracene				0.2 mg/kg		0.2 mg/kg	0.00002 %		
		204-371-1	120-12-7							
9	fluoranthene				0.34 mg/kg		0.34 mg/kg	0.000034 %		
		205-912-4	206-44-0							
10	pyrene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		204-927-3	129-00-0							
11	benzo[a]anthracene				0.59 mg/kg		0.59 mg/kg	0.000059 %		
	601-033-00-9	200-280-6	56-55-3							
12	chrysene				0.55 mg/kg		0.55 mg/kg	0.000055 %		
	601-048-00-0	205-923-4	218-01-9							
13	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
14	benzo[k]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
15	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
16	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5							
17	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
19	coronene	205-881-7	191-07-1		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	11.3 mg/kg	1.32	14.92 mg/kg	0.00149 %			
21	barium { barium oxide }	215-127-9	1304-28-5		56.7 mg/kg	1.117	63.306 mg/kg	0.00633 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %			<LOD
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2	0.54 mg/kg	3.22	1.739 mg/kg	0.000174 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %			<LOD
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	19.1 mg/kg	1.126	21.504 mg/kg	0.00215 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	25 mg/kg	1.56	38.995 mg/kg	0.0025 %		
28	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	13.1 mg/kg	2.976	38.989 mg/kg	0.0039 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			3.14 mg/kg	1.405	4.412 mg/kg	0.000441 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	23.3 mg/kg	1.785	41.595 mg/kg	0.00416 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	71.8 mg/kg	2.774	199.184 mg/kg	0.0199 %			
33	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
Total:									0.0413 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HP03

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:	
HP03	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 m		
Moisture content:		
22.4%		
(no correction)		

Hazard properties

None identified

Determinands

Moisture content: 22.4% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	• pH		PH		7.95 pH		7.95 pH	7.95 pH		
2	• phenol	604-001-00-2	203-632-7	108-95-2	<7 mg/kg		<7 mg/kg	<0.0007 %		<LOD
3	• naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
4	• acenaphthylene		205-917-1	208-96-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
5	• acenaphthene		201-469-6	83-32-9	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
6	• fluorene		201-695-5	86-73-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
7	• phenanthrene		201-581-5	85-01-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
8	• anthracene		204-371-1	120-12-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
9	• fluoranthene		205-912-4	206-44-0	0.34 mg/kg		0.34 mg/kg	0.000034 %		
10	• pyrene		204-927-3	129-00-0	0.03 mg/kg		0.03 mg/kg	0.000003 %		
11	• benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.64 mg/kg		0.64 mg/kg	0.000064 %		
12	• chrysene	601-048-00-0	205-923-4	218-01-9	0.56 mg/kg		0.56 mg/kg	0.000056 %		
13	• benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
14	• benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
15	• benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
16	• indeno[123-cd]pyrene		205-893-2	193-39-5	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
17	• dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
19	coronene	205-881-7	191-07-1		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	9.42 mg/kg	1.32	12.437 mg/kg	0.00124 %			
21	barium { barium oxide }	215-127-9	1304-28-5		75.8 mg/kg	1.117	84.631 mg/kg	0.00846 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	0.6 mg/kg	2.775	1.665 mg/kg	0.000167 %			
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2	0.48 mg/kg	3.22	1.546 mg/kg	0.000155 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %			<LOD
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	15.9 mg/kg	1.126	17.902 mg/kg	0.00179 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	25.3 mg/kg	1.56	39.463 mg/kg	0.00253 %			
28	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	18.6 mg/kg	2.976	55.359 mg/kg	0.00554 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			4.1 mg/kg	1.405	5.76 mg/kg	0.000576 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	28.9 mg/kg	1.785	51.592 mg/kg	0.00516 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	52.5 mg/kg	2.774	145.643 mg/kg	0.0146 %			
33	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
Total:									0.0403 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HP04

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:	
HP04	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10 m		
Moisture content:		
16.2%		
(no correction)		

Hazard properties

None identified

Determinands

Moisture content: 16.2% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	• pH		PH		8.85 pH		8.85 pH	8.85 pH		
2	• phenol	604-001-00-2	203-632-7	108-95-2	<7 mg/kg		<7 mg/kg	<0.0007 %		<LOD
3	• naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
4	• acenaphthylene		205-917-1	208-96-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
5	• acenaphthene		201-469-6	83-32-9	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
6	• fluorene		201-695-5	86-73-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
7	• phenanthrene		201-581-5	85-01-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
8	• anthracene		204-371-1	120-12-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
9	• fluoranthene		205-912-4	206-44-0	0.34 mg/kg		0.34 mg/kg	0.000034 %		
10	• pyrene		204-927-3	129-00-0	0.04 mg/kg		0.04 mg/kg	0.000004 %		
11	• benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.59 mg/kg		0.59 mg/kg	0.000059 %		
12	• chrysene	601-048-00-0	205-923-4	218-01-9	0.53 mg/kg		0.53 mg/kg	0.000053 %		
13	• benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
14	• benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
15	• benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
16	• indeno[123-cd]pyrene		205-893-2	193-39-5	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
17	• dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
19	coronene	205-881-7	191-07-1		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3	<1 mg/kg	1.32	<1.32 mg/kg	<0.000132 %			<LOD
21	barium { barium oxide }	215-127-9	1304-28-5		14.7 mg/kg	1.117	16.413 mg/kg	0.00164 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9	<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %			<LOD
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2	0.2 mg/kg	3.22	0.644 mg/kg	0.0000644 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0	<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %			<LOD
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	5.88 mg/kg	1.126	6.62 mg/kg	0.000662 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	4.18 mg/kg	1.56	6.52 mg/kg	0.000418 %			
28	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7	<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7	6.38 mg/kg	2.976	18.989 mg/kg	0.0019 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			2.23 mg/kg	1.405	3.133 mg/kg	0.000313 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1	6.25 mg/kg	1.785	11.157 mg/kg	0.00112 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9	19.5 mg/kg	2.774	54.096 mg/kg	0.00541 %			
33	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
37	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.28 mg/kg		<0.28 mg/kg	<0.000028 %			<LOD
Total:									0.0117 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HP05

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:	
HP05	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10 m		
Moisture content:		
25.1%		
(no correction)		

Hazard properties

None identified

Determinands

Moisture content: 25.1% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	pH				7.08	pH		7.08	pH	7.08 pH		
2	phenol				<7	mg/kg		<7	mg/kg	<0.0007 %		<LOD
	604-001-00-2	203-632-7	108-95-2									
3	naphthalene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
4	acenaphthylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8									
5	acenaphthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9									
6	fluorene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7									
7	phenanthrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8									
8	anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7									
9	fluoranthene				0.35	mg/kg		0.35	mg/kg	0.000035 %		
		205-912-4	206-44-0									
10	pyrene				0.03	mg/kg		0.03	mg/kg	0.000003 %		
		204-927-3	129-00-0									
11	benzo[a]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
12	chrysene				0.58	mg/kg		0.58	mg/kg	0.000058 %		
	601-048-00-0	205-923-4	218-01-9									
13	benzo[b]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
14	benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
15	benzo[a]pyrene; benzo[def]chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
16	indeno[123-cd]pyrene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5									
17	dibenz[a,h]anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
19	coronene	205-881-7	191-07-1		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4		9.04 mg/kg	1.32	11.936 mg/kg	0.00119 %			
21	barium { barium oxide }	215-127-9	1304-28-5		58.2 mg/kg	1.117	64.981 mg/kg	0.0065 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1		0.66 mg/kg	2.775	1.832 mg/kg	0.000183 %			
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8		0.41 mg/kg	3.22	1.32 mg/kg	0.000132 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2		<0.5 mg/kg	1.142	<0.571 mg/kg	<0.0000571 %			<LOD
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7		14.8 mg/kg	1.126	16.663 mg/kg	0.00167 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	1	25.8 mg/kg	1.56	40.243 mg/kg	0.00258 %			
28	mercury { mercury dichloride }	080-010-00-X	231-299-8		<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5		14.1 mg/kg	2.976	41.965 mg/kg	0.0042 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			3.32 mg/kg	1.405	4.665 mg/kg	0.000466 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		43.8 mg/kg	1.785	78.191 mg/kg	0.00782 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9		53.4 mg/kg	2.774	148.139 mg/kg	0.0148 %			
33	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
Total:									0.0396 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: SP01

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
SP01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Stockpile m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.4%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 14.4% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	pH		PH		8.52 pH		8.52 pH	8.52 pH		
2	phenol				<7 mg/kg		<7 mg/kg	<0.0007 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
3	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
4	acenaphthylene				0.17 mg/kg		0.17 mg/kg	0.000017 %		
		205-917-1	208-96-8							
5	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
6	fluorene				0.26 mg/kg		0.26 mg/kg	0.000026 %		
		201-695-5	86-73-7							
7	phenanthrene				3.71 mg/kg		3.71 mg/kg	0.000371 %		
		201-581-5	85-01-8							
8	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
9	fluoranthene				5.66 mg/kg		5.66 mg/kg	0.000566 %		
		205-912-4	206-44-0							
10	pyrene				4.14 mg/kg		4.14 mg/kg	0.000414 %		
		204-927-3	129-00-0							
11	benzo[a]anthracene				3.9 mg/kg		3.9 mg/kg	0.00039 %		
	601-033-00-9	200-280-6	56-55-3							
12	chrysene				3.94 mg/kg		3.94 mg/kg	0.000394 %		
	601-048-00-0	205-923-4	218-01-9							
13	benzo[b]fluoranthene				5.65 mg/kg		5.65 mg/kg	0.000565 %		
	601-034-00-4	205-911-9	205-99-2							
14	benzo[k]fluoranthene				2.13 mg/kg		2.13 mg/kg	0.000213 %		
	601-036-00-5	205-916-6	207-08-9							
15	benzo[a]pyrene; benzo[def]chrysene				4.14 mg/kg		4.14 mg/kg	0.000414 %		
	601-032-00-3	200-028-5	50-32-8							
16	indeno[123-cd]pyrene				3.88 mg/kg		3.88 mg/kg	0.000388 %		
		205-893-2	193-39-5							
17	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
18	benzo[ghi]perylene	205-883-8	191-24-2		3.97 mg/kg		3.97 mg/kg	0.000397 %			
19	coronene	205-881-7	191-07-1		1.05 mg/kg		1.05 mg/kg	0.000105 %			
20	arsenic { arsenic trioxide }	033-003-00-0	215-481-4		9.51 mg/kg	1.32	12.556 mg/kg	0.00126 %			
21	barium { barium oxide }	215-127-9	1304-28-5		123 mg/kg	1.117	137.33 mg/kg	0.0137 %			
22	beryllium { beryllium oxide }	004-003-00-8	215-133-1		0.68 mg/kg	2.775	1.887 mg/kg	0.000189 %			
23	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8		0.7 mg/kg	3.22	2.254 mg/kg	0.000225 %			
24	cadmium { cadmium oxide }	048-002-00-0	215-146-2		0.56 mg/kg	1.142	0.64 mg/kg	0.000064 %			
25	chromium in Cr(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8		<5 mg/kg	1.923	<9.616 mg/kg	<0.000962 %			<LOD
26	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7		28.7 mg/kg	1.126	32.313 mg/kg	0.00323 %			
27	lead { lead chromate }	082-004-00-2	231-846-0	1	36.1 mg/kg	1.56	56.309 mg/kg	0.00361 %			
28	mercury { mercury dichloride }	080-010-00-X	231-299-8		<0.5 mg/kg	1.353	<0.677 mg/kg	<0.0000677 %			<LOD
29	nickel { nickel chromate }	028-035-00-7	238-766-5		18.9 mg/kg	2.976	56.251 mg/kg	0.00563 %			
30	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			4.33 mg/kg	1.405	6.084 mg/kg	0.000608 %			
31	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		30.6 mg/kg	1.785	54.627 mg/kg	0.00546 %			
32	zinc { zinc chromate }	024-007-00-3	236-878-9		116 mg/kg	2.774	321.801 mg/kg	0.0322 %			
33	benzene	601-020-00-8	200-753-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
34	toluene	601-021-00-3	203-625-9		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
35	ethylbenzene	601-023-00-4	202-849-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
36	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
Total:									0.0704 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
	Newer version of determinand available
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

• pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

• acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

• acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

• fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

• anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

• benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **coronene** (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.

Data source: <http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en>

Data source date: 16 Jun 2014

Hazard Statements: STOT SE 2; H371

• **barium oxide** (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825>

Data source date: 02 Apr 2020

Hazard Statements: Acute Tox. 3; H301, Skin Corr. 1B; H314, Eye Dam. 1; H318, Acute Tox. 1; H332

divanadium pentaoxide; vanadium pentoxide (EC Number: 215-239-8, CAS Number: 1314-62-1)

GB MCL index number: 023-001-00-8

Description/Comments: Hazard statements H301, H330, H350 added by HazWasteOnline due to ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.

Additional Hazard Statement(s): Carc. 1B; H350, Acute Tox. 3; H301, Acute Tox. 2; H330

Reason for additional Hazards Statement(s):

20 Sep 2022 - Carc. 1B; H350 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List].

Substance has therefore been self-classified.

28 Sep 2022 - Acute Tox. 3; H301 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 3; H301". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List].

Substance has therefore been self-classified.

28 Sep 2022 - Acute Tox. 2; H330 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 2; H330". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List].

Substance has therefore been self-classified.

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

• **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4

Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

Additional Hazard Statement(s): Carc. 1A; H350

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

barium {barium oxide}

No chromium 6

beryllium {beryllium oxide}

Reasonable case CLP species based on hazard statements/molecular weight. Industrial sources include: most common (non alloy) form, used in ceramics (edit as required)

boron {diboron trioxide; boric oxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in Cr(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil. (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2025.339.6914.12493 (07 Dec 2025)

HazWasteOnline Database: 2025.339.6914.12493 (07 Dec 2025)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

GB MCL List v7.0 - version 7.0 of 23rd September 2025