



**GEOTECHNICAL AND
GROUND CONTAMINATION
RISK ASSESSMENT REPORT**

**IMBERHORNE
LOWER SCHOOL
WINDMILL LANE
EAST GRINSTEAD
WEST SUSSEX**

PROJECT REFERENCE: P17617

REPORT REFERENCE: R17152

Report Beneficiary: Imberhorne Lower School

Document Control			
Issue No.	Status	Issue Date	Notes
1	Final	25 th March 2026	
Report Section		Prepared By	Approved By
Factual Section		Tom Hughes BA MA	Steven McSwiney BA Mod. Geol. MSc FGS
Geotechnical Assessment		Adam Cormack HNC FGS	Steven McSwiney BA Mod. Geol. MSc FGS
Quantitative Ground Contamination Risk Assessment		Stuart Card BA (Hons)	Alex Minchell-Bewick BSc MSc DIC MEnvSc CEnv

Limitations

This report was prepared specifically for the Client's project and may not be appropriate to alternative schemes. The copyright for the report and licence for its use shall remain vested in Ashdown Site Investigation Limited (the Company) who disclaim all responsibility or liability (whether at common law or under the express or implied terms of the Contract between the Company and the Client) for any loss or damage of whatever nature in the event that this report is relied on by a third party, or is issued in circumstances or for projects for which it was not originally commissioned.

This report is not intended to be either an ecological, archaeological or flood risk assessment. An appropriate specialist should be consulted about any concerns that may arise in this regard.

Head Office:

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG

Telephone:

[REDACTED]

Email:

[REDACTED]

Company Registration No.
242 6786



EXECUTIVE SUMMARY

The following presents a summary of the main findings of the report. It is emphasised that no reliance should be placed on any individual point until the whole of the report has been read as other sections of the report may put into context the information contained herein.

It is proposed to construct two modular buildings at Imberhorne Lower School, Windmill Lane, East Grinstead. One of the buildings will be located within an existing courtyard and the other on an area of playground to the north-east of the main building.

The southern location, within the courtyard, is largely occupied by an existing classroom building surrounded by grass. The northern area comprises part of an asphalt surface playground, adjacent to other modular classroom buildings.

Reference to geological datasets indicates that the site is expected to be underlain by the Upper Tunbridge Wells Sand. The ground investigation confirmed the underlying soils to comprise a shallow thickness of made ground, overlying Upper Tunbridge Wells Sand deposits.

The site does not lie within a groundwater source protection zone. Although the results of the groundwater monitoring are not available, during the intrusive works groundwater was encountered at a depth of around 1.0m in one of the boreholes and a seepage was noted at the base of a shallow trial pit.

Precautions against shrinkage and heave for any new foundation system should assume a medium volume change potential for the fine-grained Upper Tunbridge Wells Sand.

A net allowable bearing capacity of 150kN/m² may be assumed for spread (pad or strip) foundations up to 1.00m across bearing within the Upper Tunbridge Wells Sand soils of at least very stiff consistency or very dense relative density.

A DS-1 Design Sulfate Class and an AC-2z ACEC classification should be assumed as a minimum for the design of concrete in contact with the ground.

Infiltration testing within trial pit TP03 and within the Upper Tunbridge Wells Sand soils recorded an infiltration rate of 1.86×10^{-6} . Negligible infiltration was recorded during testing conducted in trial pit TP01.

The preliminary contamination risk assessment prepared for the proposed did not identify any potential pollutant linkages with regard to either proposed end users of the site or controlled waters.

The ground investigation did not record any contaminants to be present at concentrations considered to pose an unacceptable risk to either end users of the site or controlled waters beneath the site. No remedial measures or further contamination risk assessment works are considered to be necessary.

TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	SITE CONTEXT	2
2.1	Site Description	2
2.2	Geological and Hydrogeological Setting	2
3.	SITE WORKS	4
3.1	Introduction	4
3.2	Exploratory Holes	4
3.3	Sampling	4
3.4	In Situ Strength Testing	4
3.5	In Situ Infiltration Testing	5
3.6	Installations	5
3.7	Laboratory Testing	5
4.	GROUND CONDITIONS	6
4.1	Stratigraphy	6
4.2	Stability	6
4.3	Groundwater Conditions	6
5.	GEOTECHNICAL ASSESSMENT	7
5.1	Foundations	7
5.2	Groundwater	9
5.3	Stability of Excavations	10
5.4	Aggressivity to Concrete	10
5.5	Stormwater Infiltration Systems	11
6.	QUANTITATIVE CONTAMINATION ASSESSMENT	13
6.1	Introduction	13
6.2	Analysis of Contamination Test Results	13
6.3	Quantitative Contamination Risk Assessment	15
6.4	Risks to Other Potential Receptors	16
6.5	Discovery Strategy	16
7.	HANDLING AND DISPOSAL OF WASTE	18
7.1	Waste Management – Legislative Framework	18
7.2	Analysis of Laboratory Test Results	18

FIGURES AND APPENDICES

FIGURES

- Figure 1 Site Location Plan
- Figure 2 Site Plan

APPENDIX A

- Explanatory Notes
- Exploratory Hole Records
- DPSH-B Dynamic Probe Records

APPENDIX B

- Geotechnical Laboratory Test Results
- Contamination Laboratory Test Results

APPENDIX C

- Aggressivity To Concrete Assessment
- Trial Pit In Situ Infiltration Test Results

APPENDIX D

- Preliminary Conceptual Model

APPENDIX E

- Classification of Probability, Consequence and Risk

APPENDIX F

- Quantitative Conceptual Model

APPENDIX G

- HazWasteOnline Output Sheets

1. INTRODUCTION

It is proposed to construct two modular buildings at Imberhorne Lower School, Windmill Lane, East Grinstead. One of the buildings will be located within an existing courtyard and the other on an area of playground to the north-east of the main building.

Ashdown Site Investigation Ltd was requested to undertake a ground investigation to provide advice to assist with the structural design and assess the ground contamination risk for the proposed development works.

The scope of the works covered by this report, and the terms and conditions under which they were undertaken, were set out within the offer letter Q16144, dated 23rd January 2026. The instruction to proceed was received on behalf of the client.

The specific objectives of the works were to:

- a) Establish the expected geology and hydrogeology at the site;
- b) Investigate the shallow ground and groundwater conditions in the area of the proposed development;
- c) Provide advice/parameters to assist others in undertaking design of spread foundations and ground floors, and to assist with the preliminary design of the stormwater drainage system;
- d) Test for the presence of contaminants identified by the preliminary conceptual model;
- e) Develop a quantitative conceptual model of the site, refining the preliminary model to identify any pollutant linkages that may be present; and
- f) Provide an indicative assessment of the waste classification of the materials tested.

This report should be read in conjunction with the Preliminary Ground Contamination Risk Assessment Report prepared by Ashdown Site Investigation Ltd¹.

¹ Ashdown Site Investigation Ltd Project Ref: P17617, Report Ref: R17085, dated 25th March 2026.

2. SITE CONTEXT

2.1 Site Description

The site is located at within the grounds of Imberhorne Lower School, Windmill Lane, East Grinstead and is centred on the approximate Ordnance Survey national grid reference 538598, 139159. A site location plan and site plan are presented as Figure 1 and Figure 2, respectively.

The courtyard area currently contains two wooden classroom buildings with the remaining area largely surfaced with grass.

The playground to the north-east is surfaced with asphalt and has further pre-fabricated classrooms; one located immediately to the south and others further to the north and west.

2.2 Geological and Hydrogeological Setting

A summary of the pertinent geological and hydrogeological data is presented below. Further information in this regard is presented within the preliminary ground contamination risk assessment.

2.2.1 Expected Geology and Aquifer Designation

The stratigraphic unit that may be expected to underlie the site has been established by reference to British Geological Survey (BGS) mapping and the BGS Lexicon of Named Rock Units. The expected stratigraphy is presented in the following table.

Table 1. Expected Strata and Aquifer Designation

Type	Stratum	Aquifer Designation
Bedrock	Upper Tunbridge Wells Sand	Secondary A Aquifer

The Tunbridge Wells Sand Formation predominantly comprises repeating sequences of fine to medium grained sandstone, siltstone and silty sand with finely-bedded mudstones and thin limestones. In the western High Weald (between Haywards Heath and Tunbridge Wells) the formation can be divided into three, the informally named Lower and Upper Tunbridge Wells Sand and the intervening Grinstead Clay Member. The succession commences with rhythmically bedded sandstones, siltstones and mudstones of the lower part of the Lower Tunbridge Wells Sand which pass up into the massive sandstones of the Ardingly Sandstone Member. These are overlain by the finely bedded mudstones, mudstones and silty mudstones with subordinate clay ironstones and shelly limestones of the Grinstead Clay Member. This clay member is itself locally divided into upper and lower parts by the cross-bedded fine sandstone of the Cuckfield Stone Bed. Above the Grinstead Clay Member, the Upper Tunbridge Wells Sand comprises a generally more argillaceous rhythmic succession, including mudstones, siltstones and silty sandstones. Outside the western High Weald the Grinstead Clay Member is not recognisable, and the succession is mapped as undivided Tunbridge Wells Sand Formation.

2.2.2 Mining Hazards

The geological units of the Wealden Group, including the Upper Tunbridge Wells Sand, were locally mined for iron during the early Roman period, the Medieval period and significantly between the 15th and 18th centuries. The mining activities were associated with hammer and furnace ponds, and forges. The

locations of many of the workings are unknown, the works mostly having been dismantled and sites overgrown with woodland. Many of the old ponds in the Weald may be representative of old hammer or furnace ponds.

The historical extraction was mostly from open pits excavated from surface, but during the Medieval period, extraction in the eastern Weald was increasingly from mine pits. These mine pits were typically five metres in diameter and up to twelve metres deep. The pits were worked in sequence with spoil from one pit used to in-fill the one before. In the western part of the Weald, the principal method of extracting iron ore was also the mine pit but smaller in scale; the pits consisted of a vertical shaft up to 2.5 metres in diameter and the base of the shaft would have been widened out.

The British Geological Survey GeoIndex Onshore viewer records the presence of several ceased mines and quarries the closest of which are Baldwins Hill Clay Pit some 200m to the north and St Mararet's Brick Works some 400m to the south-east. A search of the Wealden Iron Research Group database (www.wirgdata.org) revealed no records of iron workings within 1km of the site. The risk posed to the development is considered to be very low.

Further assessment of the natural ground and mining hazards can be undertaken, if required, to provide more detailed comment specific to the site.

2.2.3 Radon

Table 2. Radon

Section	Groundsure Comment
Radon Affected Areas	The site is reported to be within an area where less than 1% of properties are at or above the action level requiring radon gas protection measures to be installed in new buildings.
Radon Protection Measures	No radon protection measures are reported by the British Geological Survey to be necessary in the construction of new dwellings or extensions.

2.2.4 Groundwater Source Protection Zones (SPZ)

The Environment Agency defines SPZs as those areas where groundwater supplies are at risk from potentially polluting activities and accidental releases of pollutants. SPZs are primarily a policy tool used to control activities close to water supplies intended for human consumption.

The site does not lie within a SPZ.

3. SITE WORKS

3.1 Introduction

The intrusive site works comprised the drilling of a series of dynamic sampler boreholes, the mechanical excavation of trial pits and the drilling of a single hand augered borehole, together with accompanying in-situ geotechnical testing. The intrusive work was carried out between 19th February 2026 and 20th February 2026. The exploratory hole locations are shown on Figure 2.

Descriptions of the strata encountered and comments on groundwater conditions are shown in the exploratory hole records given in Appendix A, which also includes explanatory notes to assist in their interpretation.

3.2 Exploratory Holes

The following table summarises the intrusive works undertaken at the site.

Table 3. Summary of Intrusive Works Undertaken

Designation	Depth (m bgl)	Method
WS01	2.50	Dynamic Sampler Borehole
WS02	3.00	Dynamic Sampler Borehole
TP01	0.98	Mechanically Excavated Pit
TP02	1.20	Hand Auger Borehole
TP03	1.09	Mechanically Excavated Pit

3.3 Sampling

Samples of soil were taken from the exploratory holes at the depths shown in the exploratory hole records. The types of samples taken are indicated on the exploratory hole records. Details on the sample types are provided in the explanatory notes.

Where appropriate, samples were stored in cool boxes with cooling blocks to maintain temperatures below 4°C until transferred to refrigerators upon return to the office and subsequently forwarded to the external accredited chemical testing laboratory.

3.4 In Situ Strength Testing

The types and depths of in situ testing, together with the test results, are either given on the exploratory hole records or are summarised separately in Appendix A. Further details on the in situ testing methods are provided in the explanatory notes.

3.5 In Situ Infiltration Testing

In situ infiltration testing was undertaken in the two mechanically excavated trial pits in general accordance with the test methodology given by BRE guidance², other than the pits were filled only once rather than the three times suggested by the digest due to the slow infiltration of water into the surrounding soils. The results of the testing along with the infiltration rate calculations are included in Appendix C.

3.6 Installations

Groundwater monitoring standpipes were installed to the full depths of both dynamic sampler boreholes. Descriptions of the installations are shown on the exploratory hole records.

Groundwater data loggers were installed within the standpipes on 19th February 2026. The data loggers were programmed to collect readings at hourly intervals and are scheduled to be collected on completion of a 6-week monitoring period. The results of the groundwater monitoring will be issued under separate cover.

3.7 Laboratory Testing

Laboratory testing was scheduled by Ashdown Site Investigation Ltd.

Geotechnical testing was undertaken by Ashdown Site Investigation Ltd.

Chemical testing was undertaken by a laboratory with recognised (UKAS and MCERTS) accreditation for quality control.

Results from the laboratory tests are provided in Appendix B.

² Section 3.2.3 of Building Research Establishment (BRE) Digest 365, 2016.

4. GROUND CONDITIONS

4.1 Stratigraphy

4.1.1 Surface Covering

Except for borehole WS01, which was excavated through a 150mm thick surface cover of asphalt, each of the exploratory holes was excavated through an initial surface cover of topsoil up to 500mm in thickness.

4.1.2 Made Ground

Underlying the surfacing materials at the positions of exploratory holes WS01, TP02, and TP03, made ground/reworked soils, generally comprising silty clay which was at times noted as being slightly sandy/slightly gravelly, were recorded extending to depths of between 0.40m and 0.90m below ground level. The gravel fraction comprised variable quantities of flint, brick and ironstone.

Additionally, directly underlying the asphalt surfacing within borehole WS01, a layer of asphalt, brick and flint gravel was recorded between depths of 0.15m and 0.60m depth.

No made ground/reworked soils were recorded underlying the topsoil surfacing within exploratory holes WS02 and TP01.

4.1.3 Upper Tunbridge Wells Sand

Underlying the surfacing and made ground soils, the ground investigation progressed into undisturbed very stiff silty clay deposits which were at times noted as being slightly gravelly and/or slightly sandy. The gravel fraction comprised subangular to subrounded fine to coarse sandstone and ironstone.

Additionally, beneath the clay deposits encountered within borehole WS02, slightly gravelly very clayey sand deposits were encountered below a depth of 2.20m below ground level.

These interbedded clay and sand deposits continued to the full depth of the ground investigation and are considered to represent the Upper Tunbridge Wells Sand deposits indicated to underlie the site on BGS geological maps.

4.2 Stability

Each of the exploratory holes was recorded to remain stable during the course of drilling/excavation.

4.3 Groundwater Conditions

Groundwater was recorded within borehole WS02 at a depth of around 1.01m depth, after installation of the standpipe. A groundwater seepage was also noted at the base of trial pit TP01. The other exploratory holes remained dry during the intrusive site investigation works.

5. GEOTECHNICAL ASSESSMENT

At the time of preparation of this report no specific development proposal for the site had been finalised. It is however understood that two modular buildings are to be constructed; one of the buildings will be located within an existing courtyard and the other on an area of playground to the north-east of the main building.

At the time of writing, no details were available concerning the specific loads likely to be applied to the foundations.

5.1 Foundations

5.1.1 Soil Shrinkage/Heave Potential

The fine-grained soils of the Upper Tunbridge Wells Sand have been classified as clays, and with modified plasticity indices in the range of 7% to 23%, the soils may be expected to exhibit a negligible to medium volume change potential.

It is recommended that the design of precautions against shrinkage and heave for any new foundation system (spread footings and ground beams etc.) should assume a medium volume change potential for the fine-grained Upper Tunbridge Wells Sand soils and take into account current guidance such as that given by the Building Research Establishment (BRE)³ or the National House Builders Council (NHBC)⁴.

Whilst this report has been prepared to provide advice to assist designers in undertaking detailed design, the report itself does not represent a detailed design statement. Detailed foundation design, including assessment of foundation type, minimum founding depths for spread foundations, and requirements for placement of void formers et cetera, should take into account the findings of this report and the presence of trees (previous, present and proposed). In connection with the latter, it is recommended that an arboricultural survey of the site that identifies the species and maturity of the existing or recently felled trees in the areas of the proposed new buildings should be provided to engineers responsible for the foundation design. Information on proposed planting schemes that may affect foundation design should also be provided.

5.1.2 Spread Foundations

5.1.2.1 Foundation Depths for Spread Foundations

Foundations should be constructed to bear below soils that are likely to be affected by significant soil volume changes caused by seasonal changes in moisture content to avoid damage to foundations that could otherwise arise. In addition, all made ground and any soils disturbed by the construction or removal of any previously existing foundations or services should be regarded as being variable in nature and state of compaction and, as such, unsuitable as a founding medium for shallow footings. New footings should be constructed so as to bear below made ground/disturbed natural soils and soil subject to seasonal soil volume changes, whichever is the deeper, and onto undisturbed, competent, natural deposits.

³ www.bre.co.uk : BRE Digests 240, 241 and 242, Low rise buildings on shrinkable clay soils, parts 1, 2 and 3; and BRE Digest 298 , The influence of trees on house foundations in clay soils and BRE Digest 412, Desiccation in clay soils.

⁴ <http://www.nhbc.co.uk/> : NHBC Standards, Chapter 4.2.

Summary guidance on suitable minimum foundation depths to protect against the effects of seasonal soil volume changes is presented in the table below but designers undertaking detailed design of foundations should follow the detailed guidance such as that provided within Chapter 4.2 of the NHBC Standards.

Table 4. Indicative Minimum Foundation Depths

Tree Type	Water Demand of Tree	Tree Distance to Tree Height Ratio (D/H)									
		0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.25
		Minimum Foundation Depth Required in Medium Volume Change Potential Soils (m)									
Broad Leaf	High	†			2.50	2.35	2.20	2.00	1.70	1.35	0.90*
	Moderate	2.00	1.85	1.70	1.60	1.45	1.30	1.15	0.90*	0.90*	0.90*
	Low	1.50	1.40	1.30	1.15	1.05	0.90*	0.90*	0.90*	0.90*	0.90*
Coniferous	High	†			2.30	1.95	1.60	1.25	0.90*	0.90*	0.90*
	Moderate	2.00	1.70	1.40	1.10	0.90*	0.90*	0.90*	0.90*	0.90*	0.90*

* Minimum foundation depth required to protect against soil volume changes.

† Foundations deeper than 2.50m require specialist design to protect against soil volume changes.

Where specialist foundation design is required (foundation depths exceeding the maximum permitted by the guidance) then piled foundations are likely to be needed, though commercial considerations may also dictate that piled foundations may be more economic even in comparison with conventional spread foundations constructed to depths less than the maximum permitted by guidance. Further works including deep boreholes would be required if structural engineers or quantity surveyors decide that piled foundations should be adopted.

Details on the water demand and mature height of common trees is given within Table 3 of Chapter 4.2 of the NHBC standards which should be referred to when assessing minimum foundation depths required for the proposed development. A summary is provided in the table below.

Table 5. Indicative Summary of Water Demand and Mature Height of Common Trees

Tree Type	High Water Demand		Moderate Water Demand		Low Water Demand	
	Tree	Height (m)	Tree	Height (m)	Tree	Height (m)
Broad Leaf	Elm	18 – 24*	Acacia	18	Birch	14
	Oak	16 – 24*	Alder	18	Elder	10
	Poplar	15 – 28*	Apple	10	Fig	8
	Willow	16 – 24*	Ash	11 – 23*	Hazel	8
	Eucalyptus	18	Laurel	10	Holly	12
	Hawthorn	10	Beech	20	Honey Locust	14
			Blackthorn	8	Hornbeam	17
			Cherry	8 – 17*	Laburnum	12
			Chestnut	20 – 24*	Magnolia	9
			Lime	22	Mulberry	9

Tree Type	High Water Demand		Moderate Water Demand		Low Water Demand	
			Maple	8 – 18*	Tulip Tree	20
			Pear	12		
			Plane	26		
			Plum	10		
			Sycamore	22		
			Tree of Heaven	20		
			Walnut	18		
			Whitebeam	12		
Coniferous	Cypress	18 – 20*	Cedar	20		
			Douglas Fir	20		
			Larch	20		
			Monkey Puzzle	18		
			Pine	20		
			Spruce	18		
			Wellingtonia	30		
			Yew	12		

* Dependent on particular species.

5.1.2.2 Bearing Capacity for Spread Foundations

For design purposes, a net allowable bearing capacity of 150kN/m² may be assumed for spread (pad or strip) foundations up to 1.00m across bearing within the Upper Tunbridge Wells Sand soils of at least very stiff consistency or very dense relative density. The quoted bearing capacity is expected to limit settlement to less than 25mm.

Attention is drawn to the presence of interbedded fine-grained soils and coarse-grained soils beneath the site. As there is the potential for mixed soil conditions to be present beneath footings, designers should consider the need for foundations to be reinforced due to the potential for differential cracking to develop as a result of coarse-grained and fine-grained soils settling at different rates under loading.

In view of the risk associated with the underlying geology at the site for potential mining hazards, it is recommended that as a minimum all stripped formation levels should be inspected by a suitably qualified person for evidence of historical backfilled shafts/chambers as a precaution, and the inspections should be appropriately documented.

5.2 Groundwater

Groundwater was recorded within borehole WS02 at a depth of around 1.01m below ground level, after installation of the standpipe. Groundwater seepage was also noted at the base of trial pit TP01. The other exploratory holes remained dry during the intrusive site investigation works. It should be noted that water levels within the exploratory holes may not have equilibrated with the groundwater table at the time the observations were made and that groundwater levels should be expected to fluctuate seasonally.

Groundwater monitoring is currently ongoing, and the results will be issued under separate cover.

Where excavations are proposed to extend below the groundwater table, particularly within coarse-grained soils, groundwater control will be required to maintain adequately dry working conditions and excavation stability. In such circumstances it is recommended that trial pumping from proposed formation depths should be undertaken in advance of detailed design to fully establish requirements for groundwater control at this site.

For excavation above the water table, ingress of perched groundwater or surface water run-off into excavations during heavy precipitation events would be expected to be adequately managed by either pumping from sumps or natural drainage, or a combination of the two.

5.3 Stability of Excavations

All made ground and coarse-grained soils exposed in excavations should be assumed to be unstable, even in the short term. Whilst the fine-grained natural soils may remain stable for a short period of time if not subjected to surcharge loads (such as may be imposed by existing foundations, traffic or storage of materials), the stability of these deposits if left unsupported should be assumed to have the potential to deteriorate. All excavations should be suitably supported.

All excavations requiring human entry must be shored as necessary to conform to current best practice, as accepted by the Health and Safety Executive (HSE)⁵. Current legislation requires that where personnel access is required into any excavation a competent person must inspect excavation supports or battering of slopes at the start of the working shift and at other specified times. No work should take place until the excavation is safe. Excavations should also be inspected after any event that may have affected their stability, such as a significant weather event, changes in surcharge loadings imposed by temporary storage of materials or changes in site traffic plans or alteration of support systems. Inspections should be formally recorded and any faults that are found should be corrected immediately.

Particular attention must be paid to ensuring the stability of nearby structures and services.

5.4 Aggressivity to Concrete

The aggressivity of the soils to concrete has been assessed in accordance with guidance published by the BRE⁶. The results of the chemical laboratory testing together with a summary of the characteristic values is included in Appendix C.

In consideration of the soils encountered beneath the site it is considered that 'natural ground conditions' may be assumed for the purpose of assessing the aggressivity of the chemical environment for concrete classification (ACEC class). Given the occurrence of groundwater, 'mobile groundwater' conditions should be assumed.

The following table summarises the characteristic values indicated from the chemical analysis of the soils present beneath the site.

⁵ Relevant guidance is given on the HSE website, www.hse.gov.uk

⁶ BRE Special Digest 1:2005 Concrete in Aggressive Ground.

Table 6. Assessment of the Chemical Analysis of the Soil

	Characteristic Value	Design Sulfate Class	ACEC Classification
pH	5.3	-	-
Water Soluble Sulphate (mg/l as SO ₄) *	<100	DS-1	AC-2z

Notes: * Characteristic value rounded to nearest 100.

In accordance with the guidance, a DS-1 Design Sulfate Class and an AC-2z ACEC classification should be assumed for the design of concrete in contact with the ground.

5.5 Stormwater Infiltration Systems

In-situ infiltration testing⁷ was carried out in trial pits TP01 and TP03. From the test results, calculations were made to determine the infiltration rate that could be expected for infiltration systems constructed into the underlying Upper Tunbridge Wells Sand soils.

During the testing conducted in TP03 the water level only fell 140mm in 210 minutes and as such the head of water expressed as a percentage of the initial head did not fall below 80%. Calculation of the soil infiltration rate using the calculation method set out within the BRE digest was not possible, as the calculation method requires the time taken for the water level to fall to 25% of the initial head to be known. To assist preliminary design a soil infiltration rate has therefore been calculated by dividing the volume of water lost during the test by the product of the average surface area of the trial pit in contact with water during the test period and the test duration in seconds.

During the testing conducted in trial pit TP01, no fall in water level was recorded over a period of 210 minutes, indicating a negligible infiltration rate.

The infiltration rate calculated for the test conducted in trial pit TP03, together with the fall in head of water expressed as a percentage of the initial head over which the calculation of the infiltration rate was based, and the results of the testing conducted in trial pit TP01 are summarised in the following table.

Table 7. Calculated Infiltration Rates

Exploratory Hole	Top of Response Zone (m bgl)	Bottom of Response Zone (m bgl)	Stratum	Infiltration Rate (f) (m/sec)	Calculation Based on Head of Water as % of Initial Head)
TP01	0.40	0.98	Upper Tunbridge Wells Sand	Negligible	n/a
TP03	0.40	1.09	Upper Tunbridge Wells Sand	1.86 x 10 ⁻⁶	100-80*

Notes: * Not calculated in accordance with BRE365 which requires infiltration rates to be calculated for between 75%-25% head of water of the initial head.

⁷ Conducted in general accordance with the requirements of BRE 365, Soakaway Design.

The value 'f' is equivalent to the soil infiltration coefficient 'q' quoted in the Construction Industry Research and Information Association (CIRIA) Report 156.

The results from the infiltration tests should be provided to engineers responsible for the design of the drainage system.

To comply with building regulations⁸, point discharging infiltration systems (conventional ring or trench soakaways) are required to be constructed a minimum of 5.0m away from proposed or existing buildings.

The infiltration testing conducted in the trial pits is intended to provide calculated soil infiltration rates to assist in the preliminary design of infiltration systems at the site. Preliminary infiltration testing in full accordance with the BRE365 guidance was not achievable due to the slow drainage rate of the soils encountered and the testing being restricted to a single shift. It should also be noted that the guidance states the testing should be carried out at the locations and depths of the proposed soakaways, which often will not be known until preliminary drainage design has been undertaken.

Monitoring of groundwater levels during the worst annual case (winter period) is often a requirement of Local Authorities and the BRE365 guidance suggests this should be undertaken prior to finalising design of infiltration systems. The results of the groundwater monitoring will be issued under separate cover.

⁸ The Building Regulations 2010; Part H; Drainage and Waste Disposal

6. QUANTITATIVE CONTAMINATION ASSESSMENT

6.1 Introduction

No potential sources of contamination were identified by the preliminary ground contamination risk assessment. A copy of the preliminary conceptual model, confirming the absence of any potential pollutant linkages, is presented in Appendix D.

In line with the scope of works requested by the client, samples of the shallow soils from the development areas (WS01 and TP02) were tested for a range of commonly occurring contaminants – heavy metals, polycyclic aromatic hydrocarbon (PAH) compounds, petroleum hydrocarbons and asbestos, to assist with the classification of the material for removal from site (see Section 7). The samples were also tested for their compliance with waste acceptance criteria (WAC) in this regard. A sample of topsoil from WS02 was also tested for the same range of contaminants.

The results of the testing have been compared with published human health screening values to provide an assessment of the level of risk posed.

6.2 Analysis of Contamination Test Results

6.2.1 Method of Assessment

Comparison of the results of the laboratory testing has been made against published soil screening values (SSV) comprising the 'Suitable For Use Levels' (S4UL)⁹ or, in lieu of an S4UL being developed for lead, the Category 4 Screening Level (C4SL)¹⁰.

There are no generic assessment criteria for a school land use. Therefore, to provide an initial conservative assessment, the SSV used for comparison are those calculated for the generic "Residential without homegrown produce" land use.

For the assessment of risk to controlled waters a qualitative assessment has been undertaken based upon the concentrations of contaminants recorded within the soil samples and the information obtained about the sensitivity of the underlying strata or nearby surface water receptors.

6.2.2 Heavy Metals & Polycyclic Aromatic Hydrocarbon (PAH) Compounds

The following table summarises the SSV for heavy metals and PAH compounds alongside the results of the testing.

⁹ Nathanail, C.P, et al., The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015, Land Quality Press, Nottingham. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3071.

¹⁰ SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report, published by DEFRA, 2014.

Table 8. Summary of Test Results – Heavy Metals and PAH Compounds

Contaminant	SSV (mg/kg)	Sample			No of exceedances
		WS01 0.50m	TP02 0.10m	WS02 0.05m	
Arsenic	0.2	9.5	6.5	6.2	0
Water Soluble Boron	0.2	0.5	0.5	0.5	0
Cadmium	0.1	< 0.1	0.1	0.1	0
Chromium	0.15	21	12	12	0
Hexavalent Chromium	1	< 1.0	< 1.0	< 1.0	0
Copper	0.2	23	19	12	0
Lead	0.3	56	50	33	0
Mercury	0.05	0.08	0.37	0.12	0
Nickel	1	9.7	6.7	6.0	0
Selenium	0.5	< 0.5	< 0.5	< 0.5	0
Zinc	1	42	82	37	0
Naphthalene	0.03	0.05	< 0.03	< 0.03	0
Acenaphthylene	0.03	< 0.03	< 0.03	< 0.03	0
Acenaphthene	0.03	0.09	< 0.03	< 0.03	0
Fluorene	0.03	0.12	< 0.03	< 0.03	0
Phenanthrene	0.03	0.72	0.09	0.06	0
Anthracene	0.03	0.20	< 0.03	< 0.03	0
Fluoranthene	0.03	1.0	0.20	0.24	0
Pyrene	0.03	0.85	0.17	0.23	0
Benzo(a)anthracene	0.03	0.32	0.06	0.10	0
Chrysene	0.03	0.27	0.06	0.10	0
Benzo(b)fluoranthene	0.03	0.31	0.07	0.16	0
Benzo(k)fluoranthene	0.03	0.12	< 0.03	0.06	0
Benzo(a)pyrene	0.03	0.25	0.05	0.11	0
Indeno(1,2,3-c,d)pyrene	0.03	0.08	< 0.03	0.06	0
Dibenzo(a,h)anthracene	0.03	< 0.03	< 0.03	< 0.03	0
Benzo(g,h,i)perylene	0.03	0.11	< 0.03	0.08	0

None of the samples of recorded concentrations of heavy metals or PAH compounds above their respective SSV.

6.2.3 Asbestos

No suspected asbestos materials were noted within any of the exploratory holes undertaken at the site. None of the samples recorded the presence of any asbestos materials.

6.2.4 Petroleum Hydrocarbons

No detectable concentrations of petroleum hydrocarbons were recorded in the samples tested.

6.2.5 Conclusions

Testing of the shallow soil samples did not identify any concentrations of contaminants above highly conservative screening values. No unacceptable risks to end users or controlled waters are considered to be present.

6.3 Quantitative Contamination Risk Assessment

The risk assessment for the site considers the sources of contamination identified, the receptors that may be present in view of the development proposals and the contaminant pathways by which these may be linked.

A complete pollutant linkage is only deemed to exist where all three are present and a site is considered suitable for use where no complete pollutant linkages are identified.

Where a complete pollutant linkage is considered to be present, an assessment of the level of risk associated with the pollutant linkage has been carried out in line with published guidance¹¹.

The level of risk is determined using the risk matrix presented in the following table. Classifications of probability, consequence and risk are presented in Appendix E.

Table 9. Risk Assessment Matrix

		Probability			
		Very Low	Low	Moderate	High
Consequence	Very Minor	Negligible	Very Low	Low	Low/Moderate
	Minor	Very Low	Low	Low/Moderate	Moderate
	Moderate	Low	Low/Moderate	Moderate	High
	Severe	Low/Moderate	Moderate	High	Very High

6.3.1 Contaminant Pathways Identified

The development is to comprise new modular classroom buildings. No new areas of soft landscaping are understood to be being provided.

¹¹ Contaminated Land Risk Assessment: A guide to good practice, CIRIA C552, 2001.

Pathways associated with gas and vapour intrusion into new buildings may be present. But direct contact and dust related pathways, and pathways associated with the consumption of home-grown produce are not present.

The site is underlain by the Upper Tunbridge Wells Sand which is classed as a Secondary A Aquifer. Although the site is not located within a SPZ, and is located within an urban area, pathways relating to controlled waters may be reasonably considered to be present.

Should the proposed development plans be altered, a revised risk assessment may be required.

6.3.2 Contamination Sources Identified

No sources of contamination have been identified by the quantitative contamination risk assessment:

6.3.3 Quantitative Conceptual Model

The quantitative conceptual model for the proposed development is presented in Appendix F.

In the absence of any complete pollutant linkages being identified, no remedial measures or further contamination risk assessment works are considered to be necessary.

6.4 Risks to Other Potential Receptors

All construction workers must undertake their own risk assessment, based upon the works to be carried out and the proposed method by which this will be achieved, in accordance with current health and safety legislation. Their assessment should take into account all available information about the site, including that present within this report.

Appropriate working procedures and PPE should be adopted to ensure the health and safety of the site operatives. Instruction should be given in the recognition of potentially hazardous materials. All site personnel should be appropriately briefed on the discovery strategy, presented below, and what actions they must take in the event that further evidence of contamination is identified or suspected.

6.5 Discovery Strategy

If, during the course of the site clearance and development works, any materials not previously identified by the investigation that are suspected of being 'contaminants' are encountered, then the following procedure will apply:

- All works in that area are to cease and the site manager informed.
- Advice sought from suitably qualified and experienced personnel as to whether any further site inspection, sampling, testing and/or assessment is deemed necessary.
- If required, the conclusions of any assessment and any proposed remedial works (if required) are to be agreed by the local authority.
- If necessary, full details of any remedial works are to be included in the verification report for the site.

Suspected 'contamination' may take the following form, though it is noted that this list is not exhaustive and site operatives should ask if they are at all unsure of any findings:

- Soil or water looks oily and/or has an oily odour
- Soil or water has a solvent type of odour
- Significant quantities of man-made materials within fill such as paint cans, car parts, glass fragments
- Suspected asbestos containing materials (insulating boards, cement, loose fibres etc.)
- Significant volumes of clinker like or ashy material
- Sand bags, and/or subsurface concrete structures
- Animal carcasses or evidence of animal burial pits

7. HANDLING AND DISPOSAL OF WASTE

7.1 Waste Management – Legislative Framework

"A material is waste if the holder has discarded it...Assessment of whether a material has been discarded is based on the actions of the holder. A holder may unintentionally, involuntarily or accidentally discard a material. They may also be required to discard it"¹².

Soils excavated during construction works are generally considered to be waste (examples of this have been given by previous Environment Agency guidance).

Soils may also be used as a non-waste (on the same site or another site) in accordance with the CL:AIRE code of practice¹³, but only if the soils meet the four principles for use of materials as a non-waste.

Soils and other materials taken for disposal should be handled, transferred and disposed of as controlled waste in accordance with current waste management^{14,15} and duty of care regulations¹⁶ and comply with current codes of practice¹⁷. Waste transfer notes detailing the site address, the waste type, details of the haulage contractor and full details of the disposal site must be kept by the waste producer.

The disposal of any asbestos containing materials (where encountered) should be undertaken by appropriately trained personnel. The disposal of such material and other hazardous waste should be undertaken in accordance with the Hazardous Waste Regulations 2005¹⁸.

It is a legal requirement to correctly assess and classify waste¹⁹. Classification of waste requires analysis of total contaminant concentrations within the soils, as specified in WM3²⁰: The guidance notes that "*Landfill WAC analysis (specifically leaching test results) must not be used for waste classification and hazardous waste assessment purposes.*"

7.2 Analysis of Laboratory Test Results

Characterisation of the waste in full accordance with current guidance²¹ was beyond the scope of this assessment. However, analysis of the results of the laboratory testing has been undertaken using the HazWasteOnline^{TM22} tool. 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 and/or EU technical guidance. The HazWasteOnline output sheets generated by the tool are presented in Appendix G.

The following table summarises the classification of soils tested, the appropriate code from the List of Wastes (LoW) and, where undertaken, the findings of the WAC testing.

¹² Environment Agency, Check if your material is waste, Updated 6th January 2022

¹³ CL:AIRE Definition of Waste: Development Industry Code of Practice, Version 2, March 2011

¹⁴ The Waste (England and Wales) Regulation 2011

¹⁵ Section 34, Environmental Protection Act 1990

¹⁶ The Environmental Protection (Duty of Care) Regulations 1991

¹⁷ Waste Duty of Care: Code of Practice, Updated 26th November 2018

¹⁸ Hazardous Waste (England and Wales) Regulations 2005

¹⁹ Environment Agency, Disposal of waste to landfill, Published 30th January 2020

²⁰ Technical Guidance WM3: Waste Classification – Guidance on the assessment of waste, 1st Edition v1.2.GB, Oct 2021

²¹ As discussed in BS EN 14899:2005 Characterisation of waste

²² <https://www.hazwasteonline.com/>

Table 10. Summary of Classification of Samples from HazWasteOnline Analysis

Exploratory Hole Location	Sample Depth (m bgl)	Strata	Classification	Code from LoW	WAC Test Results (where testing undertaken)
WS01	0.50	Made Ground	Non Hazardous	17 05 04	Does not meet inert WAC
TP02	0.10	Topsoil	Non Hazardous	17 05 04	Does not meet inert WAC
WS02	0.05	Topsoil	Non Hazardous	17 05 04	-

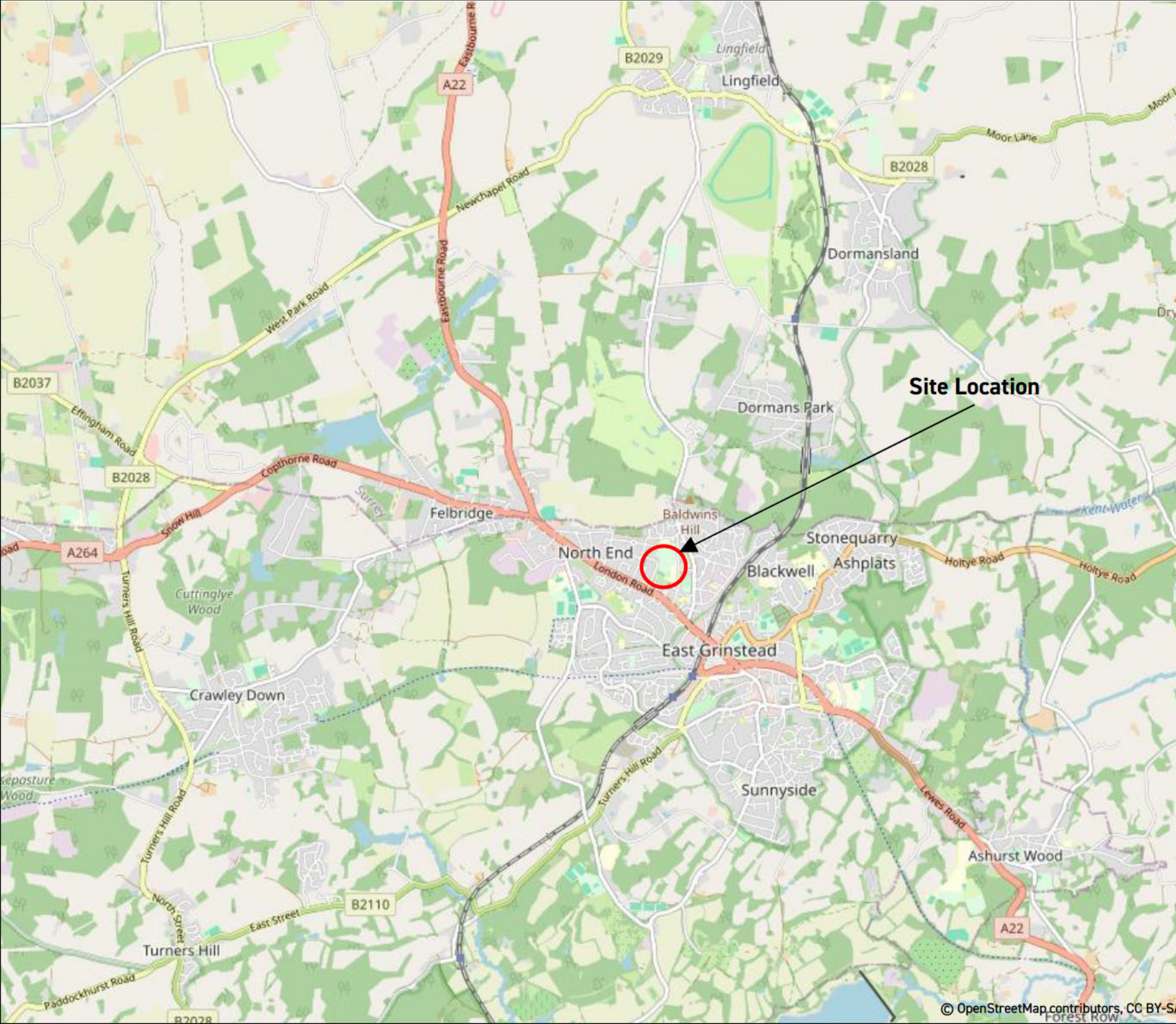
Each of the samples of tested have been classified as non-hazardous construction and demolition waste, with a code from the List of Wastes (LoW) of 17-05-04.

However, the samples do not meet the inert WAC and therefore based on their chemical properties would not be suitable for disposal at an inert landfill. If they are to be disposed of to landfill, it would need to be a non-hazardous landfill.

It is noted that the disposal site has the final decision on whether to accept any materials and we would recommend that all of the testing and classification information be provided to them at the earliest opportunity.

FIGURES

- Figure 1 Site Location Plan
- Figure 2 Site Plan



Head Office

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG

Site

Imberhorne Lower School
Windmill Lane
East Grinstead
West Sussex

Project Ref

P17617

Figure No

1

Drawing Title

Site Location Plan

Scale

Not To Scale



Head Office

Unit 3
The Old Grain Store
Ditchling Common Business Park
Ditchling
East Sussex
BN6 8SG

Site

Imberhorne Lower School
Windmill Lane
East Grinstead
West Sussex

Project Ref

P17617

Figure No

2

Drawing Title

Site Plan

Scale

Not To Scale

APPENDIX A

Explanatory Notes

Exploratory Hole Records

DPSH-B Dynamic Probe Records

EXPLANATORY NOTES

Symbols and abbreviations on Exploratory Hole Records

Samples

U	'Undisturbed' Sample: - 100mm diameter by 450mm long. The number of blows to drive in the sampling tube is shown after the test index letter in the SPT column.
L	Liner sample cut to length indicated.
D	Disturbed Sample
B	Bulk Disturbed Sample
W	Water Sample
ES	Environmental Suite (on older records may be referenced J T)

In Situ Testing

SPT	Standard penetration test (SPT): Using the split spoon sampler.
SPT(C)	Standard Penetration Test (SPT): Using a solid cone instead of the sampler – conducted usually in coarse grained soils or weak rocks.
HV	Shear Vane Test: Undrained shear strength (cohesion).
PP	Hand penetrometer Test: Undrained shear strength (cohesion).
P	Perth Penetrometer Test: Number of blows for 300mm penetration shown under remarks section.

Excavation Method

CP	Cable Percussion Borehole
RC/RO	Rotary Cored Borehole/Rotary Open Hole Borehole
WLS	Dynamic Sampler Borehole using windowless sampler tubes
WS	Dynamic Sampler Borehole using window sampler tubes
TP	Trial Pit excavated using mechanic excavator
HP	Trial Pit excavated using hand tools
HA	Hand Auger borehole

Soil Description

Description and classification of soils has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of soil, Part 1 Identification and description (BS EN ISO 14688-1) and Part 2 Principles of classification (BS EN 14688-2) as well as the BS5930 code of Practice for Ground Investigations.

Rock Description

Description and classification of rocks has been carried out using as a general basis the British Standard Geotechnical investigation and testing – Identification and classification of rock, Part 1 Identification and classification (BS EN ISO 14689-1) as well as the BS5930 code of Practice for Ground Investigations. TCR – Total Core Recovery, SCR – Solid Core Recovery, RQD – Rock Quality Designation, NI – Non Intact, If – indicative fracture spacing (min/ave/max), FI – Fracture Index.

Chalk Description

Chalk description is based on BS EN ISO 14688, BS EN ISO 14689 and BS5930. The classification of chalk generally follows the guidance offered by the Construction Industry Research and Information Association (CIRIA) C574, 'Engineering in Chalk'. This is based on assessment of chalk density, discontinuity and aperture spacing, and the proportion of intact chalk to silt of chalk.

In Situ Strength Testing (where undertaken)

Standard penetration testing (SPT) carried out in accordance with BS EN ISO 22476-3:2005.

Continuous dynamic probe testing conducted using a super heavy DPSH-B (As defined by BS EN ISO 22476-2:2005) probing geometry. The DPSH-B configuration is similar to that of the standard penetration test (SPT); the main differences being that the tip comprises a 90° cone, the driving rods are lighter than those used for SPT testing and the blow counts are recorded over 100mm increments rather than 300mm, as is the case for the SPT.

Perth penetrometer tests carried out in accordance with Australian Standard AS 1289:6.3.3-1997, Method of Testing Soils for Engineering Purposes; no equivalent European or British Standard having been published to date.

Undrained shear strength determinations made in-situ using a Geonor hand shear vane or a hand penetrometer.

Testing to determine the in-situ California Bearing Ratio (CBR) of soils conducted at shallow depths using a hand-held Transport Research Laboratory (TRL) cone penetrometer.

Dynamic (Windowless) Sampler

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:25
Project Name Imberhorne Lower School, East Grinstead	Project No. P17617	Start Date 2026-02-19	End Date 2026-02-19	

Client	Consultant	Contractor
--------	------------	------------

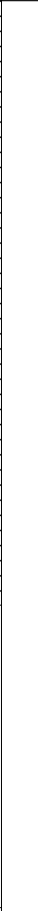
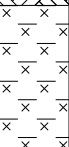
Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	ES			(0.15) 0.15		Asphalt.	
		0.50	ES			(0.45)		MADE GROUND: Dark brown sandy subangular to subrounded fine to coarse gravel of asphalt, brick and flint.	0.5
		0.90	PP	175 (kPa)		0.60 (0.10)		MADE GROUND/REWORKED: Yellow brown and orange brown clay with occasional dark brown staining.	
		0.90	D			0.70			
		1.00	HV	>130 (kPa)		0.80		Very stiff yellow brown, orange brown and grey mottled slightly sandy silty CLAY. [Upper Tunbridge Wells Sand]	1.0
		1.30	PP	>225 (kPa)				Very stiff orange brown slightly sandy silty CLAY with occasional gravel of ironstone and iron staining. [Upper Tunbridge Wells Sand]	
		1.50	D			(1.70)			1.5
		2.00	HV	>130 (kPa)					2.0
		2.10	PP	>225 (kPa)					
		2.30	D						
		2.50	HV	>130 (kPa)		2.50			2.5
								End of Borehole at 2.50m	
									3.0
									3.5
									4.0
									4.5
									5.0

Remarks No further progress below 2.50m depth - too hard/dense. Borehole dry on completion, after installation of standpipe. Standpipe installed to 2.50m depth; 2.50m to 1.50m slotted pipe with gravel surround; 1.50m to ground level plain pipe with bentonite seal; completed with end cap and security cover concreted flush with ground surface.	Method, Plant, Stability, Dimensions 0.00 - 2.50m WLS Borehole stable on completion.	Logger AW
--	--	--------------

Dynamic (Windowless) Sampler

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:25
Project Name Imberhorne Lower School, East Grinstead	Project No. P17617	Start Date 2026-02-19	End Date 2026-02-19	

Client	Consultant	Contractor
--------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.05	ES					Topsoil	
						(0.50)			
		0.60	ES			0.50		Very stiff orange brown and light grey mottled slightly sandy silty CLAY with occasional gravel of ironstone and iron staining. [Upper Tunbridge Wells Sand]	0.5
		1.00	HV	>130 (kPa)				with occasional iron staining at 0.90m depth. (0.90m)	1.0
		1.10	PP	160 (kPa)					
		1.10	D						
		1.25	PP	200 (kPa)				becoming brown and orange brown mottled below 1.20m depth. (1.20m)	
						(1.70)			
		1.50	PP	>225 (kPa)					1.5
									
		1.80	PP	>225 (kPa)					
		1.80	D						
		2.00	HV	>130 (kPa)					2.0
		2.10	PP	>225 (kPa)					
		2.20	D			2.20		Very dense light brown slightly gravelly very clayey fine to medium SAND. [Upper Tunbridge Wells Sand]	
								with occasional iron staining at 2.50m depth. (2.50m)	2.5
						(0.80)			
		2.80	D					with occasional black speckling below 2.70m depth. (2.70m)	
									
						3.00			3.0
								End of Borehole at 3.00m	
									3.5
									4.0
									4.5
									5.0

Remarks No further progress below 3.00m depth - too hard/dense. Groundwater recorded at 1.01m depth on completion, after installation of standpipe. Standpipe installed to 3.00m depth; 3.00m to 2.000m slotted pipe with gravel surround; 2.00m to ground level plain pipe with bentonite seal; completed with end cap and security cover concreted flush with ground surface.	Method, Plant, Stability, Dimensions 0.00 - 3.00m WLS Borehole stable on completion.	Logger AW
---	---	---------------------



Trial Pit

TP01
Sheet 1 of 1

Hole Type TP	Easting	Northing	Ground Level (m)	Scale 1:25
Project Name Imberhorne Lower School, East Grinstead	Project No. P17617	Start Date 2026-02-20	End Date 2026-02-20	

Client	Consultant	Contractor
--------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.20	ES			(0.30)		Topsoil.	
		0.50	D			0.30		Light brown and orange brown mottled slightly gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse ironstone. [Upper Tunbridge Wells Sand]	0.5
		0.80	D			(0.68)			
						0.98		End of Trial Pit at 0.98m	1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0

Remarks Trial pit dry on completion.	Method, Plant, Stability, Dimensions 0.00 - 0.98m TP Trial pit stable on completion. L = 1.03m W = 0.34m	Logger FL
---	---	--------------



Hand Pit

TP02
Sheet 1 of 1

Hole Type HA	Easting	Northing	Ground Level (m)	Scale 1:25
Project Name Imberhorne Lower School, East Grinstead	Project No. P17617	Start Date 2026-02-19	End Date 2026-02-19	

Client	Consultant	Contractor
--------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10 0.15-0.45	ES P	Blows: 14		(0.30)		Topsoil.	
		0.45-0.75 0.50	P D	Blows: 17		0.30 (0.60)		MADE GROUND/REWORKED: Orange brown slightly sandy silty clay.	0.5
		0.75-1.05	P	Blows: 25		0.90		Stiff light grey, orange brown and yellow brown mottled silty CLAY. [Upper Tunbridge Wells Sand]	1.0
		1.05-1.35	P	Blows: 43		(0.30)			
		1.20	D			1.20		End of Trial Pit at 1.20m	
		1.35-1.40	P*	Blows: 9					1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0

Remarks No further progress below 1.20m depth - too hard/dense for hand held tools. Exploratory hole dry on completion. P* - blow count for 50mm penetration only.	Method, Plant, Stability, Dimensions 0.00 - 1.20m HA Exploratory hole stable on completion.	Logger AW/FL
---	---	-----------------



Trial Pit

TP03
Sheet 1 of 1

Hole Type TP	Easting	Northing	Ground Level (m)	Scale 1:25
Project Name Imberhorne Lower School, East Grinstead	Project No. P17617	Start Date 2026-02-20	End Date 2026-02-20	

Client	Consultant	Contractor
--------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.30	ES			(0.40)		Topsoil over, MADE GROUND: Dark brown slightly gravelly silty clay. Gravel is subangular to subrounded fine to coarse brick and ironstone.	
		0.60	D			0.40 (0.45)		Light brown and yellow brown gravelly very clayey fine to medium SAND. Gravel is subangular to subrounded fine to coarse sandstone and rare ironstone. With occasional cobbles of sandstone. [Upper Tunbridge Wells Sand]	0.5
		0.90	D			0.85 (0.24) 1.09		Light brown, yellow brown and light grey mottled slightly gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone. [Upper Tunbridge Wells Sand]	1.0
								End of Trial Pit at 1.09m	
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0

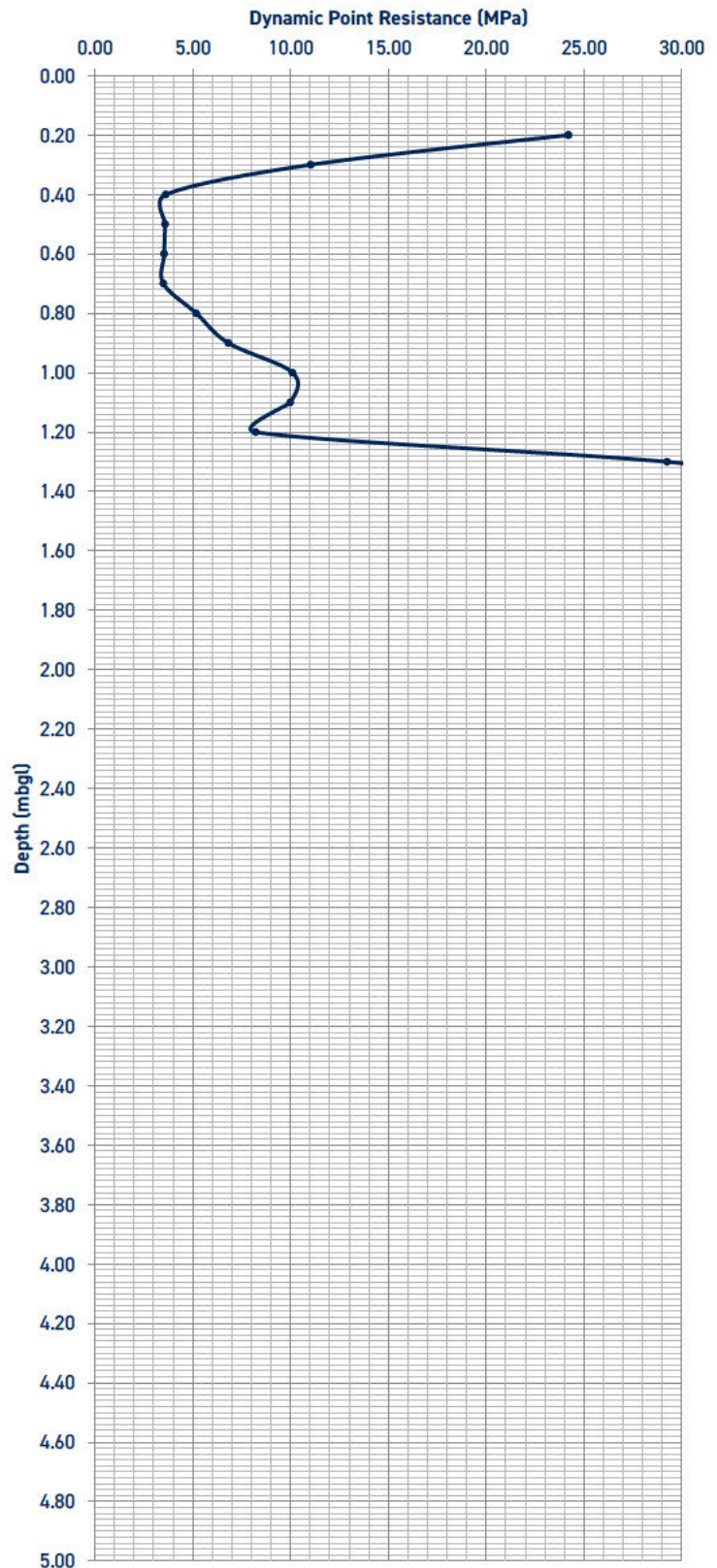
Remarks Groundwater seepage noted at base of pit.	Method, Plant, Stability, Dimensions 0.00 - 1.09m TP Trial pit stable on completion. L = 1.05m W = 0.33m	Logger FL
--	--	--------------

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Test Location Reference **WS01**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10				
0.20	13	0.01	25.27	24.21
0.30	6	0.02	11.66	11.03
0.40	2	0.05	3.89	3.63
0.50	2	0.05	3.89	3.58
0.60	2	0.05	3.89	3.54
0.70	2	0.05	3.89	3.49
0.80	3	0.03	5.83	5.18
0.90	4	0.03	7.77	6.82
1.00	6	0.02	11.66	10.10
1.10	6	0.02	11.66	9.98
1.20	5	0.02	9.72	8.22
1.30	18	0.01	34.98	29.26
1.40	26	0.00	50.53	41.78
1.50	22	0.00	42.76	34.95
1.60	23	0.00	44.70	36.13
1.70	29	0.00	56.36	45.06
1.80	29	0.00	56.36	44.56
1.90	30	0.00	58.31	45.60
2.00				
2.10				
2.20				
2.30				
2.40				
2.50				
2.60				
2.70				
2.80				
2.90				
3.00				
3.10				
3.20				
3.30				
3.40				
3.50				
3.60				
3.70				
3.80				
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:

No further progress below 1.90m depth - Hammer bouncing.

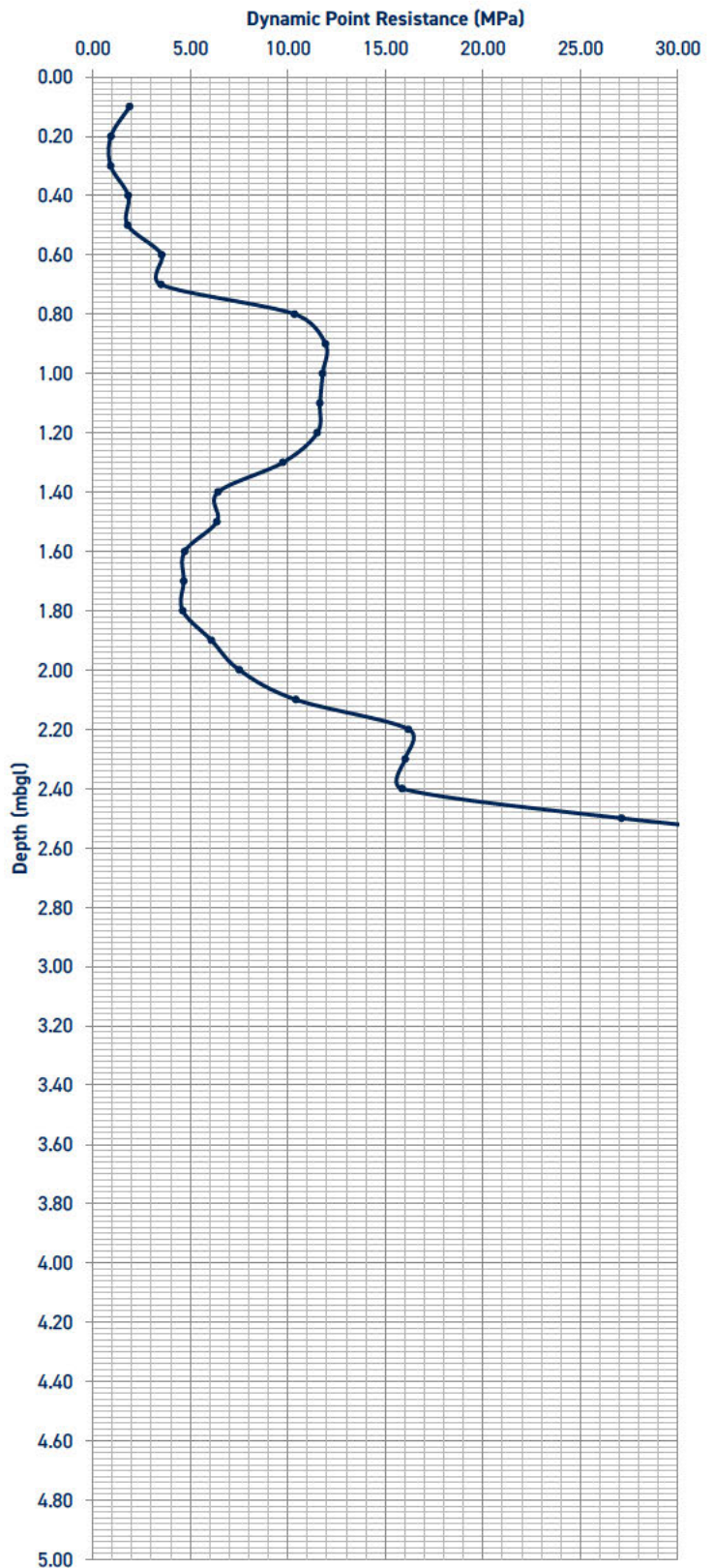
Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.78
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Test Location Reference **WS02**

Depth (mbgl)	Blows (per 100mm)	Average Penetration per Blow (m)	Unit Point Resistance (MPa)	Dynamic Point Resistance (MPa)
0.10	1	0.10	1.94	1.89
0.20	0.5	0.20	0.97	0.93
0.30	0.5	0.20	0.97	0.92
0.40	1	0.10	1.94	1.81
0.50	1	0.10	1.94	1.79
0.60	2	0.05	3.89	3.54
0.70	2	0.05	3.89	3.49
0.80	6	0.02	11.66	10.35
0.90	7	0.01	13.60	11.93
1.00	7	0.01	13.60	11.79
1.10	7	0.01	13.60	11.65
1.20	7	0.01	13.60	11.51
1.30	6	0.02	11.66	9.75
1.40	4	0.03	7.77	6.43
1.50	4	0.03	7.77	6.36
1.60	3	0.03	5.83	4.71
1.70	3	0.03	5.83	4.66
1.80	3	0.03	5.83	4.61
1.90	4	0.03	7.77	6.08
2.00	5	0.02	9.72	7.52
2.10	7	0.01	13.60	10.42
2.20	11	0.01	21.38	16.19
2.30	11	0.01	21.38	16.03
2.40	11	0.01	21.38	15.86
2.50	19	0.01	36.93	27.12
2.60	30	0.00	58.31	42.39
2.70				
2.80				
2.90				
3.00				
3.10				
3.20				
3.30				
3.40				
3.50				
3.60				
3.70				
3.80				
3.90				
4.00				
4.10				
4.20				
4.30				
4.40				
4.50				
4.60				
4.70				
4.80				
4.90				
5.00				



Notes:
No further progress below 2.60m depth - Hammer bouncing.

Hammer Mass	63.5 kg
Fall Height	0.76 m
Cone Area	0.0019 m ²
E _{theor}	473 J
Energy Ratio	0.78
Anvil Mass	1 kg
Rod Mass	8.79 kg/m

APPENDIX B

Geotechnical Laboratory Test Results
Contamination Laboratory Test Results

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

BH/TP No.	Depth (m)	Nat. Moist. Cont. (w %)	Equiv. Moist. Cont. (w _a %)	Atterberg Limits			Class'n	Cons. Index (I _c)	% passing 425 µm sieve	Visual Description of Sample
				W _L %	W _p %	I _p %				
WS01	0.90	21		48	25	23	CIM	1.17*	100	Very stiff orange brown slightly sandy silty CLAY.
WS01	2.30	21		32	23	9	CIL	1.22*	~85	Very stiff orange brown slightly gravelly slightly sandy silty CLAY.
TP02	1.20	27		43	23	20	CIM	0.80*	100	Stiff light grey, orange brown and yellow brown mottled silty CLAY.
WS02	1.10	18		29	21	8	CIL	1.38*	~85	Very stiff orange brown and light grey mottled slightly gravelly slightly sandy silty CLAY.
WS02	2.80	16					N			Light brown slightly gravelly very clayey SAND.

Test Method: Classification Tests BS1377: Part 2: 1990: Method 4.4, 5.3 and 5.4

~ % passing the 425µm estimated, likely based on proportion of gravel fraction only.

* Consistency index based on natural moisture content and not the equivalent moisture content.

Sheet No. 1

Certificate of Analysis

Certificate Number 26-04475

Issued: 09-Mar-26

Client Ashdown Site Investigations Ltd
Unit 3 The Grain Store
Ditchling Common Business Park
Ditchling Common
West Sussex
BN6 8SG

Our Reference 26-04475

Client Reference ~ P17617_3271

Order No ~ 12713

Contract Title ~ Imberhorne Lower School, Windmill Lane, East Grinstead, West S

Description 6 Soil samples, 2 Leachate prepared by DETS samples.

Date Received 25-Feb-26

Date Started 25-Feb-26

Date Completed 09-Mar-26

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Reyhan Irfan
Operations Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 26-04475

Client Ref ~ P17617_3271

Contract Title ~ Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Lab No	2646900	2646901	2646902	2646903	2646904	2646905
Sample ID ~	WS01	WS01	TP02	TP02	WS02	WS02
Depth ~	1.50	0.50	0.50	0.10	2.20	0.05
Other ID ~						
Sample Type ~	D	SOIL	D	SOIL	D	SOIL
Sampling Date ~	19/02/2026	19/02/2026	19/02/2026	19/02/2026	19/02/2026	19/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Moisture Content	DETSC 1004	0.1	%		13		26		
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg		9.5		6.5		6.2
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.5		0.5		0.5
Cadmium	DETSC 2301#	0.1	mg/kg		< 0.1		0.1		0.1
Chromium	DETSC 2301#	0.15	mg/kg		21		12		12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0		< 1.0		< 1.0
Copper	DETSC 2301#	0.2	mg/kg		23		19		12
Lead	DETSC 2301#	0.3	mg/kg		56		50		33
Mercury	DETSC 2325#	0.05	mg/kg		0.08		0.37		0.12
Nickel	DETSC 2301#	1	mg/kg		9.7		6.7		6.0
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5		< 0.5		< 0.5
Zinc	DETSC 2301#	1	mg/kg		42		82		37
Inorganics									
pH	DETSC 2008#		pH	5.6	8.2	7.3	7.0	5.3	7.3
Organic matter	DETSC 2002#	0.1	%		1.8		7.1		3.5
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	15		17		18	
Sulphate as SO4, Total	DETSC 2321#	0.01	%		0.06		0.05		0.05
Petroleum Hydrocarbons									
VPH (C8-C10): HS_1D_Total	DETSC 3321*	0.1	mg/kg		< 0.1		< 0.1		< 0.1
EPH (C10-C12): EH_1D_Total	DETSC 3311	10	mg/kg		< 10		< 10		< 10
EPH (C12-C16): EH_1D_Total	DETSC 3311	10	mg/kg		< 10		< 10		< 10
EPH (C16-C21): EH_1D_Total	DETSC 3311	10	mg/kg		< 10		< 10		< 10
EPH (C21-C40): EH_1D_Total	DETSC 3311	10	mg/kg		< 10		< 10		< 10
TPH (C8-C40): HS_1D_Total	DETSC 3311*	10	mg/kg		< 10		< 10		< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg		0.05		< 0.03		< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03		< 0.03		< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.09		< 0.03		< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		0.12		< 0.03		< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.72		0.09		0.06
Anthracene	DETSC 3303	0.03	mg/kg		0.20		< 0.03		< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		1.0		0.20		0.24
Pyrene	DETSC 3303#	0.03	mg/kg		0.85		0.17		0.23
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.32		0.06		0.10
Chrysene	DETSC 3303	0.03	mg/kg		0.27		0.06		0.10
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.31		0.07		0.16
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.12		< 0.03		0.06
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.25		0.05		0.11
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.08		< 0.03		0.06
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03		< 0.03		< 0.03

Summary of Chemical Analysis Soil Samples

Our Ref 26-04475

Client Ref ~ P17617_3271

Contract Title ~ Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Lab No	2646900	2646901	2646902	2646903	2646904	2646905
Sample ID ~	WS01	WS01	TP02	TP02	WS02	WS02
Depth ~	1.50	0.50	0.50	0.10	2.20	0.05
Other ID ~						
Sample Type ~	D	SOIL	D	SOIL	D	SOIL
Sampling Date ~	19/02/2026	19/02/2026	19/02/2026	19/02/2026	19/02/2026	19/02/2026
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.11		< 0.03		0.08
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		4.5		0.71		1.2

Summary of Asbestos Analysis Soil Samples

Our Ref 26-04475

Client Ref ~ P17617_3271

Contract Title ~ Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2646901	WS01 0.50	SOIL	NAD	none	James Heath
2646903	TP02 0.10	SOIL	NAD	none	James Heath
2646905	WS02 0.05	SOIL	NAD	none	James Heath

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

WASTE ACCEPTANCE CRITERIA TESTING

v20.25.02.03

Our Ref 26-04475

Client Ref P17617_3271

Contract Title Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex Sample Numbers 2646901 2646906

Sample Id WS01 0.50

Date Analysed 09/03/2026

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.5	3	5	6
DETSC 2003# Loss On Ignition	%	3.9	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	9.2	100	n/a	n/a
DETSC 2008# pH	pH Units	8.2	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.513	0.02	0.5	2	25
DETSC 2306 Barium as Ba	12.02	0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.0300	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	6.182	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.469	0.03	2	50	100
DETSC 2306 Mercury as Hg	1.391	0.014	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	10.87	0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.114	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.362	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	2.305	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.7761	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	5.42	0.05	4	50	200
DETSC 2055 Chloride as Cl	52000	520	800	15,000	25,000
DETSC 2055* Fluoride as F	260	2.6	10	150	500
DETSC 2055 Sulphate as SO4	26000	260	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	130000	1300	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	7400	74	500	800	1000

Additional Information	
DETSC 2008 pH	8.3
DETSC 2009 Conductivity uS/cm	183.0
* Temperature*	17.0

Mass of Sample Kg	0.103
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.887
Volume of Eluate VE1	0

TBE - To Be Evaluated
 SNRHW - Stable Non-Reactive
 Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 26-04475

Client Ref P17617_3271

Contract Title Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex Sample Numbers 2646903 2646907

Sample Id TP02 0.10

Date Analysed 09/03/2026

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.2	3	5	6
DETSC 2003# Loss On Ignition	%	15.0	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311* Mineral Oil (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	9.7	100	n/a	n/a
DETSC 2008# pH	pH Units	7.0	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	2.39	0.02	0.5	2	25
DETSC 2306 Barium as Ba	10.74	0.1	20	100	300
DETSC 2306 Cadmium as Cd	0.0311	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	3.556	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	11	0.11	2	50	100
DETSC 2306 Mercury as Hg	0.4097	0.004	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	3.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	3.123	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	4.573	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.6287	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.7179	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	19.27	0.19	4	50	200
DETSC 2055 Chloride as Cl	5800	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	230	2.3	10	150	500
DETSC 2055 Sulphate as SO4	6600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	62000	620	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	11000	110	500	800	1000

Additional Information	
DETSC 2008 pH	7.7
DETSC 2009 Conductivity uS/cm	88.3
* Temperature*	18.0

Mass of Sample Kg	0.122
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.868
Volume of Eluate VE1	0

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive
Hazardous Waste

Disclaimer: The WAC limit values are provided for guidance only. Normec DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.

Information in Support of the Analytical Results

Our Ref 26-04475

Client Ref ~ P17617_3271

Contract ~ Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2646900	WS01 1.50 SOIL	19/02/26	PG		
2646901	WS01 0.50 SOIL	19/02/26	GJ 250ml, GJ 60ml, PT 1L x2		
2646902	TP02 0.50 SOIL	19/02/26	PG		
2646903	TP02 0.10 SOIL	19/02/26	GJ 250ml, GJ 60ml, PT 1L x2		
2646904	WS02 2.20 SOIL	19/02/26	PG		
2646905	WS02 0.05 SOIL	19/02/26	GJ 250ml, GJ 60ml, PT 1L x2		
2646906	WS01 0.50 LEACHATE	19/02/26	GJ 250ml, GJ 60ml, PT 1L x2		
2646907	TP02 0.10 LEACHATE	19/02/26	GJ 250ml, GJ 60ml, PT 1L x2		

Lab No	Sample ID	Comments
2646906	WS01 0.50 LEACH	Insufficient sample 1782g (<2kg) Sample received
2646907	TP02 0.10 LEACH	Insufficient sample 1017g (<2kg) Sample received

Key: P-Plastic G-Bag G-Glass J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Information in Support of the Analytical Results

List of HWOL Acronyms and Operators

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det	Acronym
VPH (C8-C10)	HS_1D_Total
EPH (C10-C12)	EH_1D_Total
EPH (C12-C16)	EH_1D_Total
EPH (C16-C21)	EH_1D_Total
EPH (C21-C40)	EH_1D_Total
Mineral Oil (C10-C40) + Clean Up	EH_CU_1D_Total
TPH (C8-C40)	HS_1D_Total

Key:

~ Sample details are provided by the client and can affect the validity of the results

* -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report Ver 25.10.03

APPENDIX C

Aggressivity To Concrete Assessment
Trial Pit In Situ Infiltration Test Results

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Chemical Laboratory Test Results

[illegible]

Notes: Chemical testing was undertaken by an external laboratory with recognised (UKAS and MCERTS) accreditation for quality control. Testing scheduled in line with the BRE Special Digest 1:2005 Concrete in Aggressive Ground Suites A-D and as such some determinands were not required to be tested.

Assessment of the Chemical Analysis of the Soil

Ground Condition	Natural Ground Conditions
Groundwater Condition	Mobile Groundwater Conditions
Pyrite Soil Condition	Soils present beneath the site are not expected to contain pyrite

	Characteristic Value	Design Sulfate Class	ACEC Classification
pH	5.3	-	-
Water Soluble Sulphate (mg/l as SO ₄) *	<100	DS-1	AC-2z
Total Potential Sulphate (TPS % SO ₄)	N/A - Non Pyrite Soil Present	-	-
Magnesium (mg/l) *	N/A - Natural Ground Conditions	-	-
Water Soluble Sulphate including mineral acids (mg/l as SO ₄) *	N/A - Natural Ground Conditions	-	-

Notes: * Characteristic value rounded to nearest 100.

The aggressivity of the soils to concrete has been assessed in accordance with guidance published by the BRE Special Digest 1:2005 Concrete in Aggressive Ground.

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Test Location Reference	TP01
Test Number	1

Width of Pit	0.34 m	W
Length of Pit	1.03 m	L
Depth of Pit	0.98 m	D
Pit type	Open	

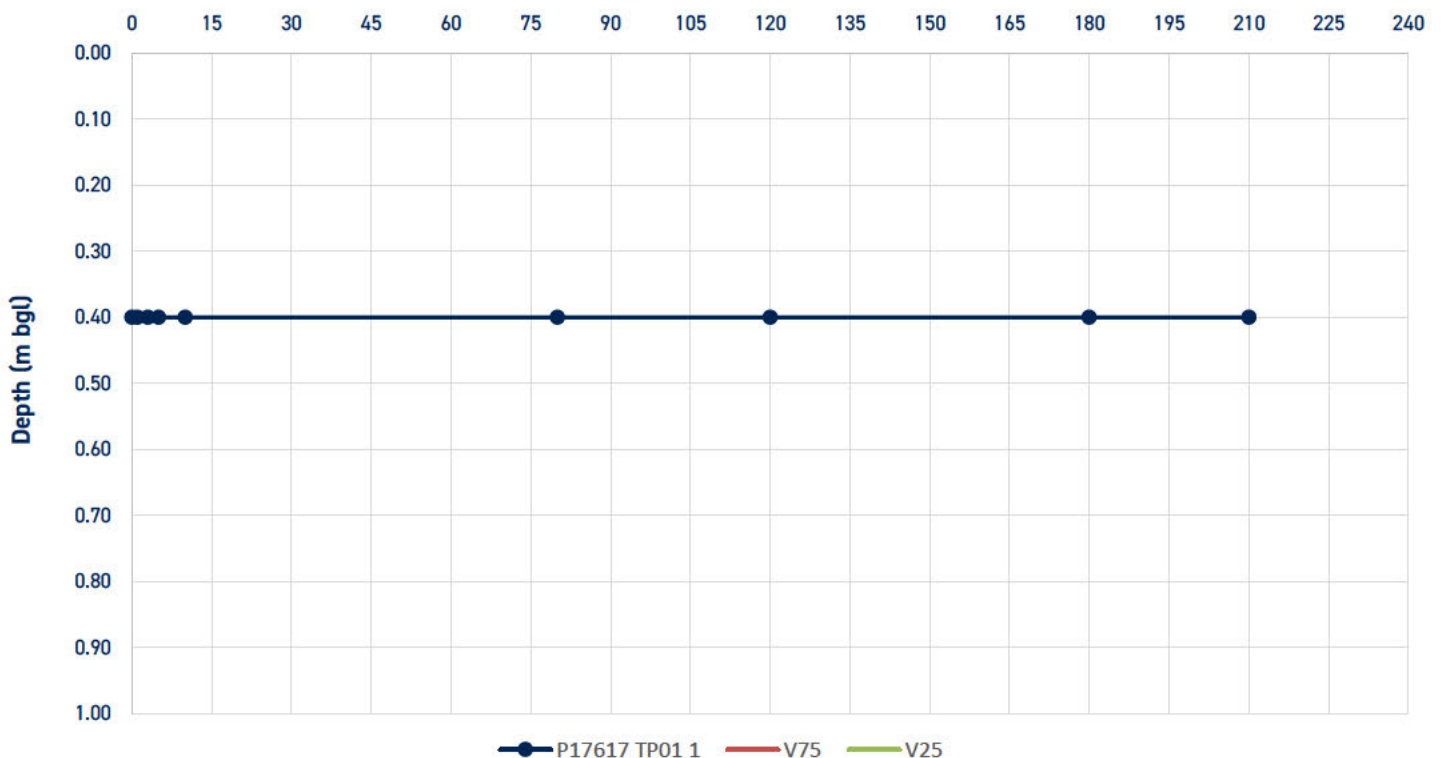
Volume of water introduced into pit	0.203 m ³	
Initial head of water	0.58 m	h_o
Water level at start of test	0.40 m	
Water level at end of test	0.40 m	
Volume of water discharged from pit	0.000 m ³	
Duration of test	210 min	
Average soaked surface area	1.94 m ²	
Time for water level to fall to 75% of initial head	Not reached min	t_{p75}
Time for water level to fall to 25% of initial head	Not reached min	t_{p25}
Depth to water at 75% of initial head	Not reached m	d_{75}
Depth to water at 25% of initial head	Not reached m	d_{25}
Time for the water level to fall from 75% to 25% of initial head	Not reached min	t_{p75-25}
Effective storage volume of water in the soakage trial pit between 75% and 25% of initial head	Not reached m ³	V_{p75-25}
Internal surface area of the soakage trial pit up to 50% of initial head and including the base area	1.14 m ²	a_{s50}

Infiltration rate

Negligible

Calculation method: Negligible. The water level did not fall over a period of 210 minutes.

Elapsed Time (min)



Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Test Location Reference	TP03
Test Number	Test 1

Width of Pit	0.33 m	W
Length of Pit	1.05 m	L
Depth of Pit	1.09 m	D
Pit type	Open	

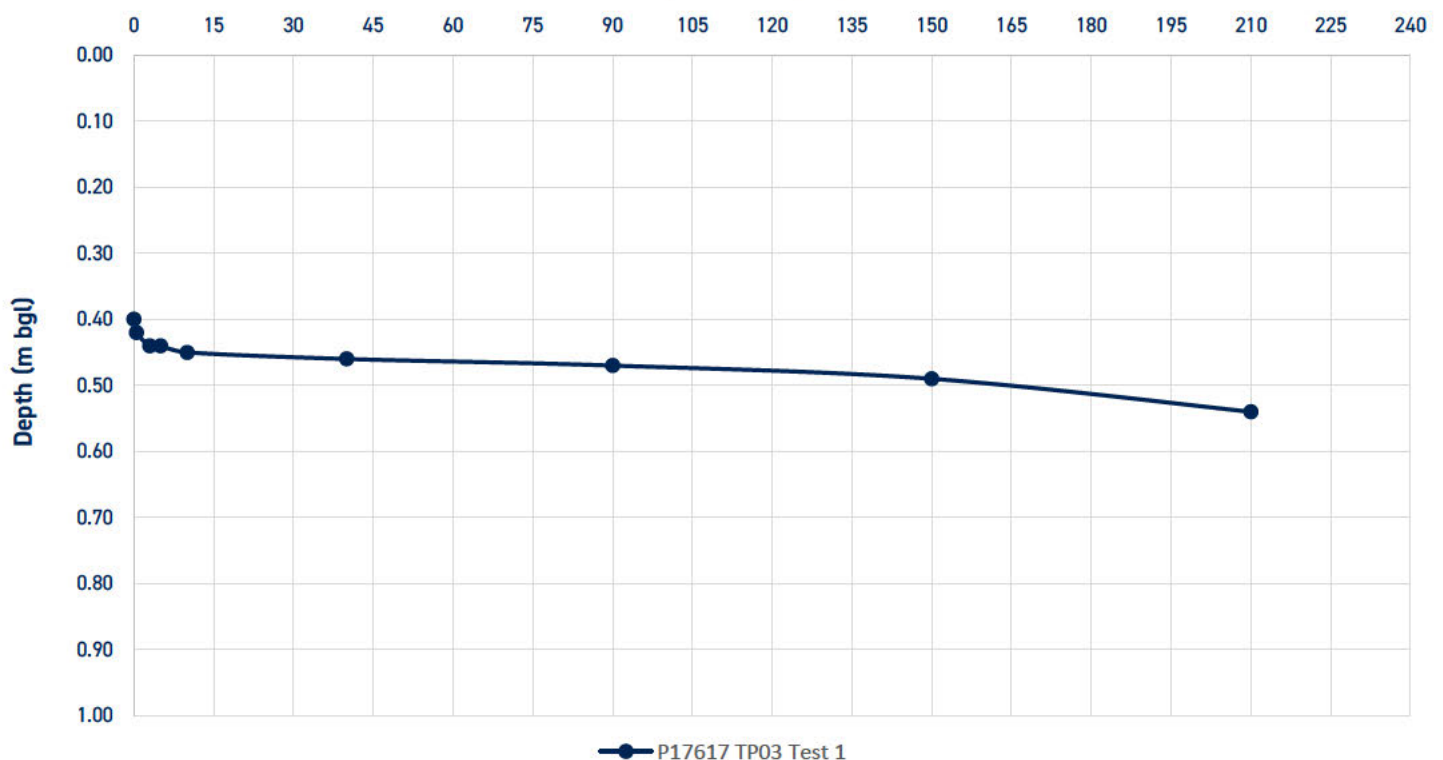
Volume of water introduced into pit	0.235 m ³	
Initial head of water	0.69 m	h_o
Water level at start of test	0.40 m	
Water level at end of test	0.54 m	
Volume of water discharged from pit	0.048 m ³	
Duration of test	210 min	
Average soaked surface area	2.04 m ²	
Time for water level to fall to 75% of initial head	Not reached min	t_{p75}
Time for water level to fall to 25% of initial head	Not reached min	t_{p25}
Depth to water at 75% of initial head	Not reached m	d_{75}
Depth to water at 25% of initial head	Not reached m	d_{25}
Time for the water level to fall from 75% to 25% of initial head	Not reached min	t_{p75-25}
Effective storage volume of water in the soakage trial pit between 75% and 25% of initial head	Not reached m ³	V_{p75-25}
Internal surface area of the soakage trial pit up to 50% of initial head and including the base area	1.29 m ²	a_{s50}

Infiltration rate

1.86E-06 m/sec f

Calculation method: The water level did not fall below 25% of the effective storage depth. 'f' has been calculated by dividing the volume of water lost during the test by the product of the average surface area in contact with water during the test and the test duration.

Elapsed Time (min)



APPENDIX D

Preliminary Conceptual Model

Site: Imberhorne Lower School, Windmill Lane, East Grinstead

Project Ref: P17617

Potential Source	Potential Receptor	Potential Contaminants	Potential Pathway	Complete Linkage Present?	Probability	Consequence	Risk
No potential sources of contamination identified	End Users		Dermal contact with soil and dust (indoor & outdoor)	Pathway severed by hard surfacing			N/A
			Ingestion of soil and indoor dust	Pathway severed by hard surfacing			N/A
			Consumption of home-grown produce and attached soil	No private gardens proposed			N/A
			Inhalation of soil dust (indoor and outdoor)	Pathway severed by hard surfacing			N/A
			Inhalation of soil vapours	No potential contaminants identified			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	No potential contaminants identified			N/A
	Groundwater		Migration to groundwater	No contaminants likely to impact groundwater identified			N/A

APPENDIX E

Classification of Probability, Consequence and Risk

Probability Of Risk Being Realised	
Classification	Definition
High	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Moderate	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Very Low	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Consequence Of Risk Being Realised		
Classification	Category	Definition
Severe	Human Health	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA.
	Controlled Waters	Short term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource.
	Property	Catastrophic damage to buildings/property.
	Ecological Systems	A short term risk to a particular ecosystem or organisation forming part of such ecosystem.
Moderate	Human Health	Chronic damage to Human Health.
	Controlled Waters	Pollution of sensitive water resources (note: Water Resources Act contains no scope for considering significance of pollution).
	Ecological System	A significant change in a particular ecosystem or organism forming part of such ecosystem.
Minor	Controlled Waters	Pollution of non-sensitive water resources.
	Property	Significant damage to crops, buildings, structures and services.
	Ecological Systems	Damage to sensitive buildings/structures/services or the environment.
Very Minor	Human Health	Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc).
	Property	Easily repairable effects of damage to buildings, structures and services.
	Project	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve.

Risk Classification Definitions	
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the long term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but there is a low likelihood of this hazard occurring and if realised, harm would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

APPENDIX F

Quantitative Conceptual Model

Site: Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Project Ref: P17617

Source	Receptor	Contaminants	Pathway	Complete Linkage Present?	Probability	Consequence	Risk
No sources of contamination identified	End Users		Dermal contact with soil and dust (indoor & outdoor)	Pathway severed by hard surfacing			N/A
			Ingestion of soil and indoor dust	Pathway severed by hard surfacing			N/A
			Consumption of home-grown produce and attached soil	No private gardens proposed			N/A
			Inhalation of soil dust (indoor and outdoor)	Pathway severed by hard surfacing			N/A
			Inhalation of soil vapours	No contaminants present above SSVs			N/A
			Inhalation of soil gases/ Risk of explosion	No potential gas source identified			N/A
	End Users (via Water Supply Pipework)		Contamination of incoming services	No contaminants present above screening criteria			N/A
	Groundwater		Migration to groundwater	No contaminants present at concentrations posing risk to groundwater			N/A

APPENDIX G

HazWasteOnline Output Sheets

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)



K924M-0HQCT-ASEY6

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

P17617 - Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Description/Comments

Project

P17617

Site

Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Classified by

Name: Stuart Card
Date: 20 Mar 2026 14:03 GMT
Telephone: 01273 483119
Company: Ashdown Site Investigation Ltd
Unit 3, The Old Grain Store Ditchling
Common Business Park
Ditchling
BN6 8SG

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:	CERTIFIED
Course	Date
Hazardous Waste Classification	05 Dec 2013
Most recent 3 year Refresher	02 Dec 2025

Next 3 year Refresher due by Dec 2028

Purpose of classification

2 - Material Characterisation

Address of the waste

Imberhorne Lower School, Windmill Lane, East Grinstead, West Sussex

Post Code N/A

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Installation of modular classroom buildings in playground and internal courtyard

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

Soils removed during installation of foundations

Description of the waste

As per Ashdown Site Investigation Ltd. Report. Project Ref: P17617, Report Ref: 17152

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	WAC Results			Page
					Inert	SNRHW	Hazardous	
1	WS01/0.50/2026-02-19	0.5	Non Hazardous		Fail	Pass	N/A	3
2	TP02/0.10/2026-02-19	0.1	Non Hazardous		Fail	Pass	N/A	6
3	WS02/0.05/2026-02-19	0.05	Non Hazardous		-	-	-	9

Related documents

#	Name	Description
1	26-04475.howl	DETS North .howl file used to populate the Job
2	DETS-N	waste stream template used to create this Job

WAC Results

WAC Settings: samples in this Job do not constitute a single population.

WAC limits used to evaluate the samples in this Job: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

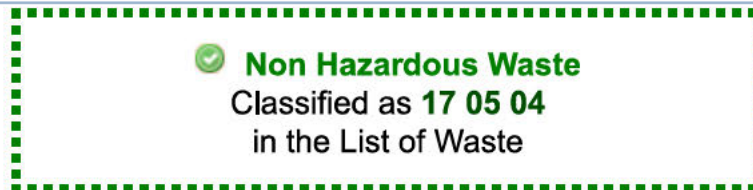
Report

Created by: Stuart Card

Created date: 20 Mar 2026 14:03 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	11
Appendix B: Rationale for selection of metal species	12
Appendix C: Version	13

Classification of sample: WS01/0.50/2026-02-19



Sample details

Sample name:	LoW Code:	
WS01/0.50/2026-02-19	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)
0.5 m		
Moisture content:		
13%		
(no correction)		

Hazard properties

None identified

Determinands

Moisture content: 13% 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	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				9.5 mg/kg	1.895	17.998 mg/kg	0.0018 %		
	033-005-00-1									
3	boron { boric acid; [1] boric acid; [2] }				0.5 mg/kg	5.719	2.86 mg/kg	0.000286 %		
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
4	cadmium { cadmium sulfate }				<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4							
5	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				21 mg/kg	1.462	30.693 mg/kg	0.00307 %		
		215-160-9	1308-38-9							
6	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
7	copper { copper sulphate pentahydrate }				23 mg/kg	3.929	90.368 mg/kg	0.00904 %		
	029-023-00-4	231-847-6	7758-99-8							
8	lead { lead chromate }			1	56 mg/kg	1.56	87.35 mg/kg	0.0056 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.08 mg/kg	1.353	0.108 mg/kg	0.0000108 %		
	080-010-00-X	231-299-8	7487-94-7							
10	nickel { nickel dibromate }				9.7 mg/kg	5.358	51.976 mg/kg	0.0052 %		
	028-053-00-5	238-596-1	14550-87-9							
11	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
12	zinc { zinc chromate }				42 mg/kg	2.774	116.514 mg/kg	0.0117 %		
	024-007-00-3	236-878-9	13530-65-9							
13	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
14	pH				8.2 pH		8.2 pH	8.2 pH		
			PH							
15	naphthalene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
	601-052-00-2	202-049-5	91-20-3							

#	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								
16	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	acenaphthene	201-469-6	83-32-9		0.09 mg/kg		0.09 mg/kg	0.000009 %			
18	fluorene	201-695-5	86-73-7		0.12 mg/kg		0.12 mg/kg	0.000012 %			
19	phenanthrene	201-581-5	85-01-8		0.72 mg/kg		0.72 mg/kg	0.000072 %			
20	anthracene	204-371-1	120-12-7		0.2 mg/kg		0.2 mg/kg	0.00002 %			
21	fluoranthene	205-912-4	206-44-0		1 mg/kg		1 mg/kg	0.0001 %			
22	pyrene	204-927-3	129-00-0		0.85 mg/kg		0.85 mg/kg	0.000085 %			
23	benzo[a]anthracene	601-033-00-9	200-280-6		0.32 mg/kg		0.32 mg/kg	0.000032 %			
24	chrysene	601-048-00-0	205-923-4		0.27 mg/kg		0.27 mg/kg	0.000027 %			
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.31 mg/kg		0.31 mg/kg	0.000031 %			
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.12 mg/kg		0.12 mg/kg	0.000012 %			
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.25 mg/kg		0.25 mg/kg	0.000025 %			
28	indeno[123-cd]pyrene	205-893-2	193-39-5		0.08 mg/kg		0.08 mg/kg	0.000008 %			
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	benzo[ghi]perylene	205-883-8	191-24-2		0.11 mg/kg		0.11 mg/kg	0.000011 %			
31	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
Total:									0.0371 %		

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
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS01/0.50/2026-02-19

WAC Settings: samples in this Job do not constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **FAILS** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand Header		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	1.5	3	5	6
2	LOI (loss on ignition)	%	3.9	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.01	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	9.2	100	-	-
7	pH	pH	8.2	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	0.015	0.5	2	25
10	barium	mg/kg	0.12	20	100	300
11	cadmium	mg/kg	<0.02	0.04	1	5
12	chromium	mg/kg	<0.1	0.5	10	70
13	copper	mg/kg	0.035	2	50	100
14	mercury	mg/kg	0.0139	0.01	0.2	2
15	molybdenum	mg/kg	0.11	0.5	10	30
16	nickel	mg/kg	<0.1	0.4	10	40
17	lead	mg/kg	<0.05	0.5	10	50
18	antimony	mg/kg	<0.05	0.06	0.7	5
19	selenium	mg/kg	<0.03	0.1	0.5	7
20	zinc	mg/kg	0.054	4	50	200
21	chloride	mg/kg	520	800	15000	25000
22	fluoride	mg/kg	2.6	10	150	500
23	sulphate	mg/kg	260	1000	20000	50000
24	phenol index	mg/kg	<1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	74	500	800	1000
26	TDS (total dissolved solids)	mg/kg	1300	4000	60000	100000

Key

	User supplied data
	Not applicable
	Inert WAC criteria fail

Classification of sample: TP02/0.10/2026-02-19

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

Sample details

Sample name:	LoW Code:
TP02/0.10/2026-02-19	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.1 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
26%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **26% 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	asbestos fibres detected (Yes/No)				No					
			ACM_FIBRES							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				6.5 mg/kg	1.895	12.314 mg/kg	0.00123 %		
	033-005-00-1									
3	boron { boric acid; [1] boric acid; [2] }				0.5 mg/kg	5.719	2.86 mg/kg	0.000286 %		
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
4	cadmium { cadmium sulfate }				0.1 mg/kg	1.855	0.185 mg/kg	0.0000185 %		
	048-009-00-9	233-331-6	10124-36-4							
5	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }				12 mg/kg	1.462	17.539 mg/kg	0.00175 %		
		215-160-9	1308-38-9							
6	chromium in Cr(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
7	copper { copper sulphate pentahydrate }				19 mg/kg	3.929	74.652 mg/kg	0.00747 %		
	029-023-00-4	231-847-6	7758-99-8							
8	lead { lead chromate }			1	50 mg/kg	1.56	77.991 mg/kg	0.005 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.37 mg/kg	1.353	0.501 mg/kg	0.0000501 %		
	080-010-00-X	231-299-8	7487-94-7							
10	nickel { nickel dibromate }				6.7 mg/kg	5.358	35.901 mg/kg	0.00359 %		
	028-053-00-5	238-596-1	14550-87-9							
11	selenium { nickel selenate }				<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
12	zinc { zinc chromate }				82 mg/kg	2.774	227.48 mg/kg	0.0227 %		
	024-007-00-3	236-878-9	13530-65-9							
13	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
14	pH				7 pH		7 pH	7pH		
			PH							
15	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							

#	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							
16	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
17	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
18	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
19	phenanthrene	201-581-5	85-01-8		0.09 mg/kg		0.09 mg/kg	0.000009 %		
20	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
21	fluoranthene	205-912-4	206-44-0		0.2 mg/kg		0.2 mg/kg	0.00002 %		
22	pyrene	204-927-3	129-00-0		0.17 mg/kg		0.17 mg/kg	0.000017 %		
23	benzo[a]anthracene	601-033-00-9	200-280-6		0.06 mg/kg		0.06 mg/kg	0.000006 %		
24	chrysene	601-048-00-0	205-923-4		0.06 mg/kg		0.06 mg/kg	0.000006 %		
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.07 mg/kg		0.07 mg/kg	0.000007 %		
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.05 mg/kg		0.05 mg/kg	0.000005 %		
28	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
30	benzo[ghi]perylene	205-883-8	191-24-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
31	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
Total:								0.0422 %		

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
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: TP02/0.10/2026-02-19

WAC Settings: samples in this Job do not constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample FAILS the Inert (Inert waste landfill) criteria.

The sample PASSES the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

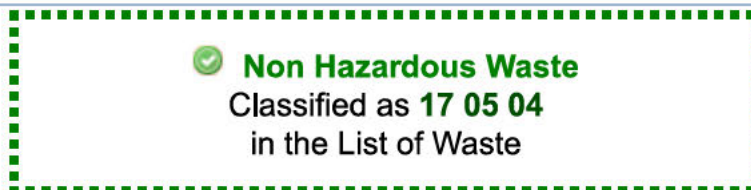
WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand Header		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	4.2	3	5	6
2	LOI (loss on ignition)	%	15	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.04	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.01	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	9.7	100	-	-
7	pH	pH	7	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	0.024	0.5	2	25
10	barium	mg/kg	0.11	20	100	300
11	cadmium	mg/kg	<0.02	0.04	1	5
12	chromium	mg/kg	<0.1	0.5	10	70
13	copper	mg/kg	0.11	2	50	100
14	mercury	mg/kg	0.0041	0.01	0.2	2
15	molybdenum	mg/kg	<0.1	0.5	10	30
16	nickel	mg/kg	<0.1	0.4	10	40
17	lead	mg/kg	<0.05	0.5	10	50
18	antimony	mg/kg	<0.05	0.06	0.7	5
19	selenium	mg/kg	<0.03	0.1	0.5	7
20	zinc	mg/kg	0.193	4	50	200
21	chloride	mg/kg	<100	800	15000	25000
22	fluoride	mg/kg	2.3	10	150	500
23	sulphate	mg/kg	<100	1000	20000	50000
24	phenol index	mg/kg	<1	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	110	500	800	1000
26	TDS (total dissolved solids)	mg/kg	620	4000	60000	100000

Key

	User supplied data
	Not applicable
	Inert WAC criteria fail

Classification of sample: WS02/0.05/2026-02-19



Sample details

Sample name:	WS02/0.05/2026-02-19	LoW Code:	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	0.05 m	Entry:		17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: None

#	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	asbestos fibres detected (Yes/No)			ACM_FIBRES	No							
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }			033-005-00-1	6.2 mg/kg		1.895	11.746 mg/kg		0.00117 %		
3	boron { boric acid; [1] boric acid; [2] }			005-007-00-2 233-139-2 [1] 234-343-4 [2]	0.5 mg/kg		5.719	2.86 mg/kg		0.000286 %		
4	cadmium { cadmium sulfate }			048-009-00-9 233-331-6	0.1 mg/kg		1.855	0.185 mg/kg		0.0000185 %		
5	chromium in Cr(III) compounds { chromium(III) oxide (worst case) }			215-160-9 1308-38-9	12 mg/kg		1.462	17.539 mg/kg		0.00175 %		
6	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }			024-017-00-8	<1 mg/kg		2.27	<2.27 mg/kg		<0.000227 %		<LOD
7	copper { copper sulphate pentahydrate }			029-023-00-4 231-847-6	12 mg/kg		3.929	47.149 mg/kg		0.00471 %		
8	lead { lead chromate }			082-004-00-2 231-846-0	33 mg/kg		1.56	51.474 mg/kg		0.0033 %		
9	mercury { mercury dichloride }			080-010-00-X 231-299-8	0.12 mg/kg		1.353	0.162 mg/kg		0.0000162 %		
10	nickel { nickel dibromate }			028-053-00-5 238-596-1	6 mg/kg		5.358	32.15 mg/kg		0.00321 %		
11	selenium { nickel selenate }			028-031-00-5 239-125-2	<0.5 mg/kg		2.554	<1.277 mg/kg		<0.000128 %		<LOD
12	zinc { zinc chromate }			024-007-00-3 236-878-9	37 mg/kg		2.774	102.643 mg/kg		0.0103 %		
13	TPH (C6 to C40) petroleum group			TPH	<10 mg/kg			<10 mg/kg		<0.001 %		<LOD
14	pH			PH	7,3 pH			7,3 pH		7,3 pH		
15	naphthalene			601-052-00-2 202-049-5	<0,03 mg/kg			<0,03 mg/kg		<0,000003 %		<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							
16	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
17	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
18	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
19	phenanthrene	201-581-5	85-01-8		0.06 mg/kg		0.06 mg/kg	0.000006 %		
20	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
21	fluoranthene	205-912-4	206-44-0		0.24 mg/kg		0.24 mg/kg	0.000024 %		
22	pyrene	204-927-3	129-00-0		0.23 mg/kg		0.23 mg/kg	0.000023 %		
23	benzo[a]anthracene	601-033-00-9	200-280-6		0.1 mg/kg		0.1 mg/kg	0.00001 %		
24	chrysene	601-048-00-0	205-923-4		0.1 mg/kg		0.1 mg/kg	0.00001 %		
25	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.16 mg/kg		0.16 mg/kg	0.000016 %		
26	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.06 mg/kg		0.06 mg/kg	0.000006 %		
27	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.11 mg/kg		0.11 mg/kg	0.000011 %		
28	indeno[123-cd]pyrene	205-893-2	193-39-5		0.06 mg/kg		0.06 mg/kg	0.000006 %		
29	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
30	benzo[ghi]perylene	205-883-8	191-24-2		0.08 mg/kg		0.08 mg/kg	0.000008 %		
Total:								0.0249 %		

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
<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

▀ **asbestos fibres detected (Yes/No)** (CAS Number: ACM_FIBRES)

Description/Comments: not classified, information only

Data source: N/A

Data source date: 15 Jan 2020

Hazard Statements: None.

▀ **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▀ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

▀ **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

■ **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 Hazard 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 acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for arsenic acid H₃AsO₄. (edit as required)

boron {boric acid; [1] boric acid; [2]}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming water is or has been present.

cadmium {cadmium sulfate}

Worst case CLP species based on hazard statements/molecular weight.

chromium in Cr(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weights. Industrial sources include: tanning, pigment in paint, inks and glass

chromium in Cr(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight

copper {copper sulphate pentahydrate}

Worst case CLP species based on hazard statements/molecular weight.

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight

mercury {mercury dichloride}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming no evidence for the use of explosives. (edit as required)

nickel {nickel dibromate}

Worst case CLP species based on hazard statements/molecular weight.

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2026.56.7002.12617 (25 Feb 2026)

HazWasteOnline Database: 2026.56.7002.12617 (25 Feb 2026)

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