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IBEX CONSULTING ENGINEERS

GROUND APPRAISAL REPORT

FOR THE SITE AT
Longwater Road, Finchampstead, Wokingham, RG40 3TS

ON BEHALF OF
Stonebond Properties (Guildford) Limited

JOB REFERENCE
ICE0270-GAR-NOV25

Report:	**GROUND APPRAISAL REPORT**
Site:	**LONGWATER ROAD, FINCHAMSTEAD, WOKINGHAM, RG40 3TS**
Client:	**STONEBOND PROPERTIES (GUILDFORD) LIMITED**
Date:	**25/11/2025**
Reference:	**ICE0270-GAR-NOV25**
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AMENDMENT RECORD

Revision ref.	Date	Reasons for amendment	Prepared & Approved by
1.0	04/06/2025	First issue	LD
1.1	11/06/2025	Inclusion of the outstanding geotechnical laboratory testing results	LD
1.2	25/11/2025	Inclusion of the outstanding groundwater monitoring results	LD

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Site Details	Site Address	Longwater Road, Finchampstead, Wokingham, RG40 3TS
	National Grid Reference	479651, 162698
	Site Area (Approx.)	2.24Ha
	Current Site Use(s)	Undeveloped parcel of land
	Form of Development	It is understood that the development proposals comprise residential properties with private gardens, services, estate roads and associated infrastructure.
Encountered Conditions	Scope of Works	The investigation included an intrusive investigation and laboratory testing to inform a geotechnical and geo-environmental assessment.
	Ground Conditions	The ground conditions comprised a thickness of Topsoil overlying the cohesive and granular soils of the River Terrace Deposits overlying the Bagshot Formation.
	Groundwater	Groundwater and slow to fast water seepages were recorded within the vast majority of exploratory holes at depths of between 1.00m and 3.00m bgl during the investigation. In addition, eight groundwater monitoring wells were installed within the selected dynamic sampler boreholes to a maximum depth of 4.0m bgl and these boreholes were monitored on three occasions between April and May 2025. Groundwater was encountered at depths of between 0.30m and 2.19m bgl within all of the boreholes during the latest return visits.
Geotechnical Considerations	Foundations	Foundations should be taken down through any topsoil, soft clay, loose soils, root or desiccated zones, or disturbed ground and bear wholly into or onto the medium clay of the River Terrace Deposits or underlying granular River Terrace Deposits. A presumed bearing capacity of 75kPa is recommended (after BS8004:2015) for foundations terminating wholly within the medium strength cohesive River Terrace Deposit or underlying granular River Terrace Deposits. Under this loading, total settlements should remain within tolerable limits, i.e.≤25mm.
	Excavations	Shallow excavations within the Topsoil, granular elements of the River Terrace Deposits above the groundwater table are likely to remain stable in the short term only, though instability should be expected where water is encountered. A rapid reduction in stability should be expected if water ingress occurs in the more granular strata and allowance should be made for inclusion of measures to control water ingress and support excavations for such an occurrence. Excavations within the cohesive elements of the River Terrace Deposits and within the Bagshot Formation are likely be stable in the short to medium term, however exposure to water may reduce stability and lead to a requirement for support. Support should also be considered when excavations are left open for prolonged periods.
	Buried Concrete	Buried concrete for foundations should be designed to Class DS2 (AC-2s).
	Pavement and Subgrade	Design value CBR of 1.5% is recommended for River Terrace Deposits.
	Soakaways	Based on the above results and ground conditions encountered on site, it is considered that conventional soakaways would not be suitable for discharging storm water run-off to the ground. Therefore, it is considered that an alternative form of storm water disposal would be required, such as on-site storage and attenuation of peak storm flow with discharge to the drainage ditch network, possible at greenfield run-off rate, under an extension of riparian rights.
Contamination	Human Health	With the exception of the presence of arsenic identified within SA06, no other evidence of contamination was encountered within the soils within the remaining portions of the site. As such, localised remedial measures might be required in the immediate vicinity

EXECUTIVE SUMMARY		
		of the SA06 to protect future end users of the proposed development from soils on site if these areas are to be utilised as soft landscaping. It is also understood that SA06 is located in the immediate vicinity of the proposed communal open space areas where screening criteria for Arsenic is 168mg/kg in accordance with C4SL, therefore no remediation is considered necessary at this site.
	Groundwater	No evidence of mobile contamination was encountered within the soils. In the absence of any specific pollutant linkages, no risk mitigation measures are considered to be required.
	Ground Gases	No ground gas protection measures are required.
	Built Environment	The use of PE or PVC or similar is recommended, but subject to confirmation from the water utility company.
	Waste Disposal	Natural uncontaminated soil arisings of the River Terrace Deposits and Bagshot Formation are likely to be classified as 'inert' waste and it is recommended that the chemical testing results should be forwarded to the proposed landfill facility to confirm the waste classification.

Further Action:

- Advancement of two cable percussive boreholes (15m deep) to provide parameters for pile design.
- Submit chemical testing results to appropriate waste facility to confirm waste classification.
- During the construction, any abnormal conditions (geotechnical or potential contamination) are identified shall be reported to a competent engineer (Geotechnical and/or Geo-Environmental Consultant).

This Executive Summary is intended to provide a brief summary of the main findings and conclusions of this report. For detailed information, the reader is referred to the main report ref. ICE0270-GAR-NOV25.

1. INTRODUCTION

1.1 General

IBEX Consulting Engineers Limited ('IBEX') was instructed by Stonebond Properties (Guildford) Limited ('the Client') to undertake a ground investigation of the geotechnical and geo-environmental factors pertaining to the proposed residential development at Longwater Road, Finchampstead, Wokingham, RG40 3TS ('the site'). The site's location is presented in Figure 1.

A Phase I Geo-Environmental Desk Study Report was undertaken by GRM Development Solutions Limited (GRM) on behalf of Catesby Strategic Land Ltd, dated December 2023, entitled 'Land to the East of Longwater Road, Finchamstead. Phase I Desk Study Report', reference no: GRM/P7995/DS.4.

A summary of this report is presented in Section 2. For full details reference should be made to the individual reports.

1.2 Proposed Development

It is understood that the site is proposed to be developed with new residential properties with private gardens, services, access roads and associated development infrastructure.

1.3 Objectives

The investigation was to comprise geotechnical and environmental factors pertaining to the site, including a review of available reports and an examination of other sources of geo-environmental and geotechnical information. Subject to the findings of the desk study, an intrusive investigation was to be undertaken into the geo-environmental conditions pertaining to the site.

The data from the geotechnical investigation was to form the basis of a preliminary interpretation with respect to foundation design, pavement design, concrete specification and excavation stability.

In terms of the environmental investigation, a Preliminary Risk Assessment (PRA) was undertaken as part of the desk study in accordance with LCRM by others, in order to provide a basis for the scope and rationale of the subsequent Phase II ground investigation. The data from Phase I and Phase II were then to form the basis of a subsequent preliminary Generic Quantitative Risk Assessment (GQRA). The objective of the risk assessments was to evaluate the risks posed to the proposed residential development, adjacent land uses, and the wider environment, in the context of the development options, immediate liabilities under the Environmental Protection Act 1990, and risks posed to Controlled Waters under the Water Resources Act.

1.4 Standards

Where practicable, the geo-environmental assessment presented in this report was undertaken in accordance with the following documents and guidance:

- British Standards Institute - Code of Practice for Earth Retaining Structures (BS8002:2015).
- British Standards Institute - Code of Practice for Site Investigations (BS5930:2015).
- British Standards Institute - Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gasses for New Buildings (BS 8485:2015+A:2019).
- British Standards Institute - Eurocode 7 - Geotechnical Design - Parts 1 & 2 (BS EN1997-1:2004 & BS EN1997-2:2007).
- British Standards Institute - Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs) (BS8576:2013).
- British Standards Institute - Investigation of Potentially Contaminated Sites - Code of Practice (BS10175:2011).
- British Standards Institute - Soils for Civil Engineering Purposes (BS1377:1990).

- British Standards Institute - Specification for Topsoil and Requirements for Use (BS3882:2015).
- Building Research Establishment - The Performance of Building Materials in Contaminated Land (BRE255) (1994).
- Construction Industry Research and Information Association - Assessing risks posed by hazardous ground gases to buildings (C665) (2007).
- Department for Communities and Local Government - National Planning Policy Framework (2012).
- Department for Environment Food and Rural Affairs and CL:AIRE - Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination (SP1010) (2014).
- Department of Environment - Industry Profiles (1995 - 1996).
- Environment Agency - Guidance for waste destined for disposal in landfills (2006).
- Environment Agency - Guidance on Requirements for Land Contamination Reports (2005).
- Environment Agency – Land Contamination Risk Management (2020).
- National House Building Council, Environment Agency & Chartered Institute of Environmental Health - Guidance for the Safe Development of Housing on Land Affected by Contamination (R&D Publication 66) (2008).
- National House Building Council - Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present (10627-R01[04]) (2007).
- National House Building Council - Standards, Chapter 4.1 Land Quality - Managing Ground Conditions (2018).

1.5 Conditions

The data collected from the investigations have been used to provide an interpretation of the geotechnical conditions pertaining to the site. The recommendations and opinions expressed in this report are based on the data obtained. IBEX takes no responsibility for conditions that either have not been revealed in the available records, or that occurs between or under points of physical investigation. Whilst every effort has been made to interpret the conditions, such information is only indicative and liability cannot be accepted for its accuracy.

It should be noted that in particular the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore only be representative of the conditions at the time of sampling. This report should not be taken as any guarantee that a site is free of hazardous or potentially contaminative materials.

Information contained in this report is intended for the use of the Client, and IBEX can take no responsibility for the use of this information by any party for uses other than that described in this report. IBEX makes no warranty or representation whatsoever express or implied with respect to the use of this information by any third party. IBEX does not indemnify the Client or any third parties against any dispute or claim arising from any finding or other result of this investigation report or any consequential losses.

Assessment criteria or other parameters developed for the evaluation of contamination on this site are based on a number of assumptions regarding exposure and toxicology, and exposure to contaminants and levels of adverse effects may therefore vary. Whilst every care and expertise has been employed in the development of such criteria, no liability is accepted in this respect. Other criteria or guidance on the development of assessment criteria may be published in the future, and no liability is accepted in this respect.

2. DESK STUDY

As previously noted, a Phase I Desk Study Report was undertaken by GRM Development Solutions Limited (GRM) on behalf of Catesby Strategic Land Ltd, dated December 2023, entitled 'Land to the East of Longwater Road, Finchamstead. Phase I Desk Study Report', reference no: GRM/P7995/DS.4. The findings of the Phase I desk study are presented in the following section. Reference should be made to the original reports and documents for further details. Comments made in the following section regarding possible ground conditions on the site and within the surrounding area are based purely on the desk study. Where appropriate, this information will be used in the later sections of this report as supplementary information to assist in the evaluation of the ground conditions and aid the identification of geotechnical and geochemical constraints and hazards that could impact on the scheme.

2.1 Summary of Site History

The third-party desk study reported that the earliest map studied, dated 1800s, showed the site to have comprised as undeveloped pastureland and the site remained undeveloped over the mapped period.

The surrounding lands were reported to have been slowly developed with residential properties, roads, a well, as well as sewage treatment works located 120m to the west. The adjacent site to the immediate south shown a potential infilled area (gravel quarry or similar) from the aerial maps.

2.2 Site Description

The site location plan is presented in Figure 1.

Name of Site		Longwater Road, Finchampstead
Address of Site		Longwater Road Finchampstead Wokingham RG40 3TS
National Grid Reference		479651, 162698
Site Area (Approx.)		2.24Ha
Current Site Use		Undeveloped parcel of land
Local Authority		Wokingham Borough Council
Surfaces		Soft landscaping
Vegetation		Mature trees and shrubs along the site boundaries
Topography/Slope Stability		Topography of the site sloped gently towards the south
Drainage		Unknown
Services		Unknown
Controlled waters		Inland river along the southern site boundary
Surrounding Land Uses	North	Residential properties and associated private gardens
	East	Undeveloped open field and associated small sheds and grazing areas for livestock
	South	Woodland and undeveloped open lands
	West	B3016 single carriageway (Longwater Road), a woodland and open farmlands

2.3 Geology

With reference to British Geological Survey (BGS) mapping, the geology of the site was anticipated to comprise Alluvium along the southern site boundary and River Terrace Deposits along the southern half of the site overlying Bagshot Formation. Whilst no superficial deposits were recorded along the northern half of the site, Topsoil is also anticipated to be present over the natural deposits. Given that the surrounding areas and boundaries of the site had been developed previously, there is the potential for a thickness of Made Ground to be present over the natural deposits.

BS5930:2015 defines **Made Ground** as anthropogenic ground in which the material has been placed without engineering control and/or manufactured by man in some way, such as through crushing or washing, or arising from an industrial process. Great variations in material type, thickness and degree of compaction invariably occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material.

Alluvium is the most recent river or estuarine deposit and generally comprises silty clay usually with an appreciable organic content. The clay soils often exhibit low strength and high settlement characteristics. Lenses of sand and gravel are also commonly found, as are pockets of peat.

The rivers of the southern of England have been subject to several changes of level since Pleistocene times. One result has been the formation of a complex series of **River Terrace Deposits**. The deposits are generally found at an elevation close to or higher than that of the existing rivers, and generally comprise sand and gravel of roughly bedded flint or chert gravel.

The **Bagshot Formation** mostly comprises pale yellow-brown to pale grey or white, locally orange or crimson, fine- to coarse-grained sand that is frequently micaceous and locally clayey, with sparse glauconite and sparse seams of gravel. The sands are commonly cross-bedded but some are laminated. Thin beds and lenses of laminated pale grey to white sandy or silty clay or clay ('pipe-clay') occur sporadically, becoming thicker towards the top of the formation.

2.4 Hydrogeology

With reference to the 2023 GRM Phase I Desk Study Report, both underlying superficial deposits (Alluvium and River Terrace Deposits) and underlying bedrock geology (Bagshot Formation) on the site are designated as a Secondary 'A' Aquifer.

Secondary 'A' Aquifers are defined as areas of permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

Source Protection Zones (SPZ)

The site was indicated to be outside of any Source Protection Zone (SPZ). An SPZ is a protection zone placed around a well or borehole that supplies groundwater of potable quality.

No licenced surface water abstractions and pollution incidents to controlled waters were recorded within a radius of 250m of the site boundary.

2.5 Hydrology

The nearest water feature (unlined drainage ditches) was located along the eastern and southern site boundaries.

The desk study did not identify any pollution incidents to groundwater and licensed groundwater abstractions within a radius of 250m of the site boundary.

The site was indicated to be at risk of flooding (Flood Zone 1).

2.6 Previous Ground Investigations

This report has been prepared by IBEX Consulting Engineers Limited, as the Client's Geotechnical Engineer for the proposed development. The site has been the subject of a Phase I Desk Study as well as an intrusive investigation. The pertinent report(s) which relate to the proposed scheme, or have been used to inform the design comprise the following:

- GRM Phase I Desk Study Report for Land to the East of Longwater Road, Finchamstead, referenced GRM/P7995/DS.4, dated December 2023.
- GRM Soakaway Testing Letter Report for Longwater Road, Finchamstead, referenced P7995.SA.1, dated 28th June 2017.

Reference should be made to the original report and associated documents for further details. The ground conditions encountered at the adjacent site are summarised below.

A Phase I Desk Study Report was undertaken by GRM Development Solutions Limited (GRM) on behalf of Catesby Strategic Land Ltd, dated December 2023, entitled 'Land to the East of Longwater Road, Finchamstead. Phase I Desk Study Report', reference no: GRM/P7995/DS.4. The 2023 GRM Phase I Desk Study Report suggested that the risk from contamination and ground gas is considered to be negligible, however further Phase II intrusive investigation was recommended to assess the potential contamination linkages (if any).

A ground investigation (GI) was undertaken by GRM, dated 28th June 2017, entitled 'Longwater Road, Finchamstead. Soakaway Testing Letter Report', reference no: P7995.SA.1. The GI comprised four trial pits to a maximum depth of 2.0m bgl. The GI indicated that the ground conditions beneath the site comprised a thickness of Topsoil overlying the River Terrace Deposits and Bagshot Formation. Topsoil was reported to depths of between 0.30m and 0.40m underlain by River Terrace Deposits which were noted to be extremely variable in composition across the site but predominately comprising orange brown mottled grey very clayey slightly gravelly fine to coarse grained SAND with pockets of sandy clay to firm light brown mottled grey very sandy slightly gravelly CLAY with pockets of clayey SAND. The Bagshot Formation were previously reported to depths of between 1.70m and 2.00m beneath the site within a single position and the composition of the Bagshot Formation encountered was noted to be light brown slightly clayey fine to coarse grained SAND.

2.7 Conceptual Site Model

An illustrative Conceptual Site Model (CSM) produced by GRM (which is generally concurred by IBEX) is presented below.

3 PHASE I CONCEPTUAL SITE MODEL

HUMAN HEALTH			
Source	**Pathway**	**Receptor**	**Level of Risk**
No sources of contamination have been identified.	Indoor and outdoor inhalation of soil dust, the ingestion of, and dermal contact with, contaminated soil and soil dust, ingestion of vegetables that have taken up contamination and contaminated soil attached to vegetables.	End users.	Negligible.
		Construction and Maintenance Workers.	
No significant sources of ground gas have been identified.	Inhalation of ground gas.	End users.	Negligible.

CONTROLLED WATERS			
No sources of contamination have been identified.	Leaching of contaminants and vertical migration to the groundwater.	Secondary A aquifers.	Negligible.
No sources of contamination have been identified.	Leaching of contaminants and lateral migration to surface waters.	Nearby drains.	Negligible.

2.8 Investigation Rationale

The strategy comprised investigation locations to provide a general coverage of the site to assess ground and groundwater conditions and to support the geotechnical and geochemical assessment. The investigation included:

- Provision of a RAMS pack presenting a risk assessment and method statement(s) specific to the proposed monitoring works.
- Provision of a BGS Radon Report
- Attendance of an Engineer to set out and supervise the intrusive investigation and logging of recovered soils from exploratory holes.
- Attendance of a mini digger or similar to excavate the trial pits.
- Attendance of a 4x4 water bowser and crew to supply water for trial pit soakage tests for a two-day period.
- Undertake Dynamic Cone Penetrometer (DCP) tests to determine the in-situ CBR profile in the upper metre of ground at 6No. locations along the proposed site access roads.
- Undertake trial pit soakage tests in general accordance with BRE Digest 365 within six accessible trial pits. BRE Digest 365 requires three consecutive filling and drainage cycles to be completed.
- Construction of up to 14No. window sampler boreholes to depths of up to 5.00m bgl, or maximum achievable depth depending on drilling conditions.
- Installation of groundwater monitoring wells within 8No. dynamic sampler boreholes to facilitate return monitoring on six occasions (at fortnightly intervals). The wells would be completed with lockable flush fitted covers in the immediate vicinity of the borehole positions.
- Geotechnical Laboratory Testing to be carried out by a UKAS Accredited Laboratory in accordance with BS1377.
- Undertake 6No. soaked CBR tests in accordance with BS1377.
- Geochemical laboratory testing for IBEX Suite 4 of commonly occurring brownfield contaminants including speciated total petroleum hydrocarbons (TPH) and asbestos screening by a UKAS/MCERTS Accredited Laboratory where possible.
- Provision of a Waste Classification Report (in accordance with WM3) based on the findings of the geochemical soil laboratory testing results using HazWasteOnline® software.
- Provision of a Ground Appraisal Report.

Soil samples were collected and placed into amber jars and cool boxes on site for transit to the office, where they were stored under chilled conditions (<4°C) prior to final transportation in cool boxes to the laboratory by their in-house courier. Both the geotechnical and contamination testing were undertaken by UKAS accredited laboratories. Contamination testing of soil

samples was also undertaken in accordance with accredited MCERTs protocols. Samples were stored in temperature controlled conditions from sampling until receipt at the laboratory from which time sample preparation and storage was determined by testing requirements and in line with laboratory's protocols.

3. ENCOUNTERED CONDITIONS

A factual record of the conditions encountered during the physical investigation of the site is presented in the following section.

For further details of the encountered ground conditions, reference should be made to the exploratory hole logs presented in Appendix A and the geochemical testing results in Appendix B.

The physical ground investigation works were undertaken between 21st and 23rd April 2025.

Unless stated otherwise, all depths are reported as metres below ground level (m bgl).

3.1 Ground Conditions

A summary of the encountered soil conditions is presented in Table 3.1.

Top (m bgl)	Base (m bgl)	Geology
0.00	0.18-0.50	**Topsoil:** Grass over greyish brown gravelly sandy silty clay
0.18-0.50	>4.00	**Cohesive River Terrace Deposits:** Varied from firm brown, bluish grey and orangish brown slightly sandy slightly organic silty CLAY to Soft yellowish brown, brown and grey slightly gravelly slightly sandy slightly organic silty CLAY with frequent fine rootlets. Gravel is fine to medium and sub-angular.
0.45-1.80	>4.00	**Granular River Terrace Deposits:** Varied from Medium dense becoming loose bluish grey gravelly silty clayey SAND to loose brown clayey sandy GRAVEL. Gravel is fine to coarse and sub-angular to sub-rounded.
* Given the similarities in soil types around the geological boundary, it was not possible to form a clear distinction between the River Terrace Deposits and underlying Bagshot Formation. Therefore, materials were encountered at shallow depths (≤4.0m bgl) have been described as 'River Terrace Deposits' during this assessment.		

Table 3.1 Summary of Ground Conditions

Whilst Alluvium deposits were not encountered during the intrusive investigation, the composition of the River Terrace Deposits encountered was noted to be highly variable within short distances across the site. Therefore, it was not possible to differentiate between River Terrace Deposits and Bagshot Formation.

For more detailed descriptions of the ground conditions at specific locations, reference should be made to the exploratory hole logs presented in Appendix A.

During the investigation, a photo-ionisation detector (PID) screening was also undertaken to screen for volatiles in-situ at the locations during sampling round, using TIGER LT® VOC Gas Detector device. The recorded PID screening results during sampling round together with engineer logs are presented in Appendix A.

3.2 Groundwater

Groundwater and slow to fast water seepages were recorded within the vast majority of exploratory holes at depths of between 1.00m and 3.00m bgl during the investigation. In addition, eight groundwater monitoring wells were installed within the selected dynamic sampler boreholes to a maximum depth of 4.0m bgl and these boreholes were monitored on six occasions between April and July 2025. Groundwater was encountered at depths of between 0.30m and 2.29m bgl within all of the boreholes during the latest return visits.

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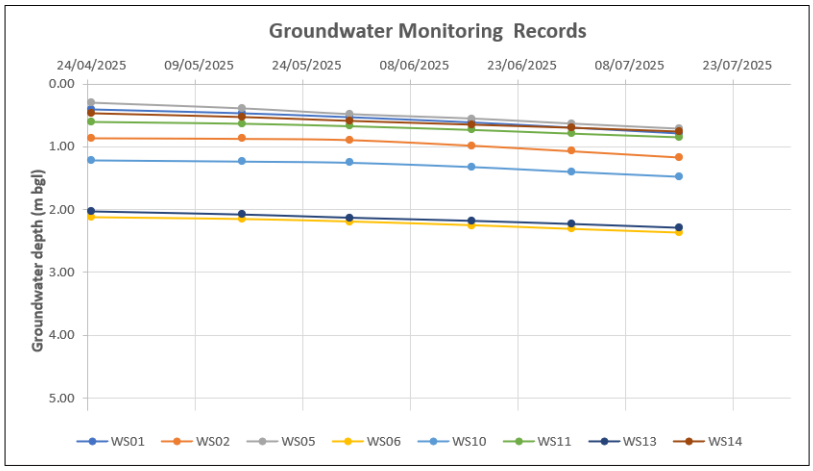
	24/04/2025	15/05/2025	30/05/2025	16/06/2025	30/06/2025	15/07/2025						
WS01	0.41	0.47	0.53	0.61	0.69	0.78						
WS02	0.86	0.87	0.89	0.98	1.07	1.17						
WS05	0.30	0.39	0.48	0.55	0.63	0.71						
WS06	2.12	2.15	2.19	2.25	2.31	2.37						
WS10	1.21	1.23	1.25	1.32	1.40	1.48						
WS11	0.60	0.63	0.67	0.73	0.79	0.85						
WS13	2.03	2.08	2.13	2.18	2.23	2.29						
WS14	0.47	0.53	0.59	0.65	0.70	0.76						



Furthermore, it should also be noted that changes in groundwater levels do occur for a number of reasons including seasonal effects and variations in drainage. Such fluctuations may only be recorded by the measurement of the groundwater level within a series of standpipes or piezometers installed within appropriate response zones.

3.3 Obstructions

Although no impenetrable obstructions were during the intrusive ground investigation, some of the samples couldn't be recovered due to coarse nature of the granular soils encountered at variable depths across the site. Therefore, the presence of natural and/or manmade obstructions elsewhere on site cannot be discounted.

3.4 Geotechnical Testing Results

The following laboratory geotechnical tests were undertaken:

Geotechnical Test	Methodology	Number of Tests
Natural Moisture Content	BS EN ISO 17892 Part 1: 2014+A1:2022	24
Atterberg Limits	BS EN ISO 17892 Part 12: 2018+A2:2022	6
Particle Size Distribution – Sieving	BS EN ISO 17892: Part 4: Clause 9: 2016	4
IBEX BRE D Suite		8

Table 3.2 Laboratory Geotechnical Tests Undertaken

The results of geotechnical laboratory testing undertaken from the recovered samples are summarised in Table 3.3.

Parameter	Granular River Terrace Deposits	Cohesive River Terrace Deposits
Moisture Content (%)	13.5 – 19.7	15.4 – 56.5
Liquid Limit (%)	-	35 – 60
Plastic Limit (%)	-	14 – 20
Plasticity Index (%)	-	21 – 40
Modified Plasticity Index (%)	-	16.3 – 38.8
Volume Change Potential [NHBC and BRE]	Non-shrinkable	Low to Medium

Parameter		Granular River Terrace Deposits	Cohesive River Terrace Deposits
Particle Size Distribution	Gravel (%)	0 – 9	-
	Sand (%)	65 – 73	-
	Clay/Silt (%)	9 – 33	-
pH		5.8 – 6.1	4.8 – 7.2
Water soluble sulphate (mg/kg)		16.0 – 197.0	<4.00 – 1250
Acid soluble sulphate (%)		0.010 – 0.080	0.020 – 0.030
Total Sulphur (%)		<0.0032 – 0.2150	<0.0032 – 0.0278
SPT 'N' Values		3 – 55	4 – 30

Table 3.3 Summary of Geotechnical Testing Results

3.5 Summary of General Properties Derived for River Terrace Deposits

Based on the analysis of the ground investigation data and past experience with similar deposits, the following derived general parameters are given in Table 3.4.

Parameter	Granular River Terrace Deposits	Cohesive River Terrace Deposits
Unit Weight	20	18
Drained Friction, ϕ' (◦)	30	22 – 25[1)]
Drained Cohesion, c' (kPa)	0	0
SPT 'N' Value	3 – 55	4 – 30
Drained Young's Modulus, E' (MPa)[2)]	3 – 55	N/A
Undrained Young's Modulus, E_u (MPa)[3)]	N/A	5 – 36
Undrained Shear Strength, c_u (kPa)[4)]	N/A	18 – 135 Low Strength to High Strength
Plasticity Index (%)	-	21 – 40
Modified Plasticity Index (%)	-	16.3 – 38.8
Volume Change Potential [NHBC and BRE]	Non-shrinkable	Low to Medium
Modulus of Volume Compressibility, m_v (m^2/MN)[5)]	N/A	0.074 – 0.555

NOTES:

[1)] Calculated from: $\phi' = (42° - 12.5\log 10 I_p)$ for $5\% \leq I_p \leq 100\%$ Where, I_p is the soil's plasticity index (BS8002:2015).

[2)] Calculated from: E' = 1.0 N MPa, based on the guidance given in CIRIA Report 143.

[3)] Calculated from: E_u = 1.2 N MPa, based on the guidance given in CIRIA Report 143.

[4)] The undrained shear strength (c_u) of the cohesive soils was correlated to the SPT "N" values using Stroud (1974), where $c_u = f_1 N$ and f_1 is factor related to the Plasticity Index (PI) of the clay (a value of f_1 equal to 5.0 for PI ≤ 25% and a value of f_1 value equal to 4.5 for PI>25).

[5)] Calculated from: $m_v = 1/f_2$ N m²/MN, f_2 is a coefficient proposed by Stroud and Butler (1975) and varies with Plasticity Index (PI) and presented in Figure 27 of CIRIA Report 27 or $10/c_u$.

*These reported values are not considered as '*Characteristic Values*'.

Table 3.4 Derived Parameters for River Terrace Deposits

3.6 Chemical Analysis

In order to assess the general chemical quality of the strata encountered, samples of soils recovered from the exploratory holes were submitted for analysis for a range of potential contaminants selected on the basis of the findings of the desk study and supported by the joint National House Building Council (NHBC), Environment Agency (EA) and Chartered Institute of Environmental Health (CIEH) publication, 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008).

Soil samples were placed into plastic containers for general inorganic analysis and into amber jars for organic analysis. Samples were stored in temperature-controlled conditions from sampling until receipt at the laboratory from which time sample preparation and storage was determined by testing requirements and in line with the laboratory's protocols.

Five samples of the encountered soils were submitted for analysis for a comprehensive suite of common zootoxic and phytotoxic elements based upon determinands listed within the above guidance including speciated petroleum hydrocarbon analysis and asbestos screens.

4. ENGINEERING ASSESSMENT

Subsequent to intrusive investigation of the site and receipt of the laboratory test results, the following geotechnical assessments have been made.

4.1 Foundations

It is considered that conventional foundations could be suitable for the proposed low rise development across the site, albeit taken through any topsoil, soft clay, loose soils, root or desiccated zones, or disturbed ground to terminate in the medium strength cohesive River Terrace Deposits or underlying granular River Terrace Deposits. However, due to the presence of hedgerows and mature trees on the site boundaries, foundations within the zone of influence of trees (existing, removed and/or proposed) may need to be deepened in accordance with NHBC Standards, Chapter 4.2.

A presumed bearing capacity of 75kPa is recommended (after BS8004:2015) for foundations terminating wholly within the medium strength cohesive River Terrace Deposit or underlying granular River Terrace Deposits. Under this loading, total settlements should remain within tolerable limits, i.e.≤25mm.

On the basis of the results of the Atterberg Limit tests in conjunction with the field observations it is considered that the cohesive elements of the River Terrace Deposits should be classified 'en-masse' as medium volume change potential, as defined by NHBC Standards, Chapter 4.2. Therefore, a minimum founding depth of 0.90m bgl is recommended. It is acknowledged that a number of the Atterberg tests indicated more granular samples of the River Terrace Deposits to be non-shrinkable or low volume change potential but where clay soils were more persistent, testing indicated a low to medium volume change potential. As such, recommendations are made based on an assumption that more persistent clay layers could be present at locations across the site and should be used as a key driver in the geotechnical assessment.

There is potential for some seasonal softening of soils, e.g. during winter months, and this might adversely impact the constructability of conventional foundations. This should be reviewed following the winter groundwater monitoring and may require use of a lower bearing capacity, careful construction programming or the use of alternative foundation solutions in affected areas.

Given the variability in soil composition as encountered within exploratory holes, it is considered unlikely that foundations would terminate within a single soil type. As such, it is recommended that mesh reinforcement is incorporated into conventional foundations during construction. The specification and detailing of any such reinforcement should be confirmed by the Structural Engineer or Foundation Designer.

Heave protection measures in accordance with NHBC Standards will be required where foundation depths exceed 1.50m and where foundations pass through desiccated ground. Preliminary assessment in line with NHBC Standards indicates a minimum thickness of 50mm for any compressible media to the sides of foundations. Foundations greater than 2.50m deep would require structure-specific design by a structural engineer. Alternatively, piled foundations could be constructed in lieu of deep strip foundations. Foundations should be a minimum 450mm in width.

It is recommended that foundation excavations be concreted or blinded as soon after excavation as possible. Where concreting could take place the following day it is recommended that excavations are not taken to full depth overnight and that the final 0.5m of cover is only removed immediately prior to concreting.

Dependent on the time of year that construction took place and prevailing weather conditions, it may be difficult to form excavations for some conventional foundations, particularly if water is present within or close to the construction depth zone. This represents a construction risk for conventional foundations.

Foundations should be taken down through any Made Ground, disturbed, soft clay or loose sand or desiccated materials to bear upon the medium strength clay of the River Terrace Deposits, or granular soils of the River Terrace Deposits. Where foundations span two different soil types e.g. cohesive and granular River Terrace Deposits, shallow foundations should be reinforced to mitigate potential for differential settlement.

Heave protection measures in accordance with NHBC Standards will be required where foundation depths exceed 1.50m and where foundations pass through desiccated ground. Foundations greater than 2.50m deep would require structure-specific design by a structural engineer. Foundations should be a minimum 450mm in width.

Based on the groundwater depths recorded to date, it is possible that groundwater would be encountered within the construction depth zone of conventional foundations, and this could have a detrimental impact on constructability, even with sump pumping or other groundwater control options. Additionally, it is anticipated that winter groundwater levels could be much shallower than those encountered during the intrusive investigation. As such, allowance should be made for groundwater control and possible excavation support during foundation construction on this site.

If foundation bases span different strata, e.g. sand and clay, either they should be deepened to terminate in a single soil stratum, or suitable reinforcement included (to be detailed by the Structural Engineer).

Where any unexpected or soft ground conditions are encountered during the groundworks, works in that area should cease and the advice of a suitably qualified geotechnical engineer sought.

In addition, the current foundation zoning assumes that ground levels will remain the same. However, given the presence of low height undulations in relation to the topography of the site, some earthworks exercise or reprofiling and possible raising of ground levels locally might be proposed for some areas to achieve the required development formation level. As such, where ground levels are proposed to be raised, the implications for foundation type and depth should be reviewed. This could result in a requirement for deepening of conventional foundations, or possible requirement for alternative foundation construction such as piled foundations. Foundations terminating in fill is not considered suitable and thus all foundations should terminate in the competent underlying natural strata.

In the event that conventional foundations are not suitable, e.g. due to the required depth of construction, high structural loads and/or where the presence of deeper zones of soft and loose soils would dictate conventional foundations exceeding 2.5m bgl, an alternative such as piled foundations would be considered suitable. In order to obtain the necessary geotechnical parameters required for a pile design, further ground investigation will be required, e.g. with a cable percussion rig.

4.2 Floor Slabs

Given the presence of shrinkable soils, it is recommended that suspended floor slabs are used with an adequate void designed according to NHBC Standards. As a guide, initial modelling indicates a requirement for a sub-floor void of at least 250mm due to the presence of shrinkable soils of medium-volume change potential.

4.3 Excavations

Shallow excavations within the Topsoil, granular elements of the River Terrace Deposits above the groundwater table are likely to remain stable in the short term only, though instability should be expected where water is encountered. A rapid reduction in stability should be expected if water ingress occurs in the more granular strata and allowance should be made for inclusion of measures to control water ingress and support excavations for such an occurrence.

Excavations within the cohesive elements of the River Terrace Deposits and within the Bagshot Formation are likely be stable in the short to medium term, however exposure to water may reduce stability and lead to a requirement for support. Support should also be considered when excavations are left open for prolonged periods.

Ground works should always be designed in such a manner so as to avoid entry into excavations by construction or maintenance personnel. However, in the event that such works cannot be avoided or designed out, they should only be undertaken in accordance with a safe system of work, following an appropriate risk assessment and in accordance with any legislative requirements, e.g. Confined Spaces Regulations.

4.4 Sulphates

Sulphate attack on building foundations occurs where sulphate solutions react with the various products of hydration in Ordinary Portland Cement (OPC) or converted High-Alumina Cement (HAC). The reaction is expansive, and therefore disruptive, not only due to the formation of minute cracks, but also due to loss of cohesion in the matrix.
In accordance with BRE Special Digest 1, the characteristic values of sulphate used to determine the concrete classification are determined using the methodology summarised in the table below.

No Samples in the dataset	Method for determining the sulphate characteristic value
1 – 4	Highest Value
5 – 9	Mean of the top 2No highest results
10 or greater	Mean of the top 20% highest results

Table 4.1 Concrete in the Ground Characteristic Value Determination

Based on the guidance given in BRE Special Digest 1, Part 1 (2005), the results of the laboratory tests correspond to design class DS-2. The pH analysis indicates that the ACEC Class corresponds to AC-2s. It is recommended that the advice of this publication be taken for the design and specification of all sub-surface concrete.

pH (2.5:1 water/soil)	Water Soluble Sulphate (mg/l as SO4)	Acid Soluble Sulphate (% SO4)	Total Sulpur (% SO4)	Total Potential Sulphate (% SO4)	pH	Water Soluble Sulphate (mg/l as SO	Oxidisable Sulphates (% SO4	OS > 0.3 %	DS	ACEC - Static Groundwat	ACEC - Mobile Groundwate
7.2	1250								DS-2	AC-1s	AC-2
5.8	3.99								DS-1	AC-1s	AC-1
4.8	142								DS-1	AC-1s	AC2z
6.0	197	0.070	0.2150	0.645			0.575	Yes	DS-3	AC-2s	AC-3
5.2	128	0.030	0.0278	0.0834			0.0534		DS-1	AC-1s	AC2z
6.8	14.8								DS-1	AC-1s	AC-1
6.1	102	0.020	0.0032	0.00957			-0.01043		DS-1	AC-1s	AC-1
6.1	32.6	0.020	0.0032	0.00957			-0.01043		DS-1	AC-1s	AC-1
5.8	56.2	0.010	0.0032	0.00957			-0.00043		DS-1	AC-1s	AC-1
6.1	16	0.080	0.0111	0.0333			-0.0467		DS-1	AC-1s	AC-1
5.9	3.99								DS-1	AC-1s	AC-1
5.8	14.8	0.020	0.0134	0.0402			0.0202		DS-1	AC-1s	AC-1
5.6	242	0.020	0.0098	0.0294			0.0094		DS-1	AC-1s	AC-1

Chart 1: Summary of ACEC Classification

4.5 Pavement and Subgrade

Six in-situ California Bearing Ratio (CBR) tests were undertaken along the proposed access roads using a Transport Research Laboratory (TRL) Dynamic Penetrometer (DCP or Mexe Cone). Table 4.2 summarises the results of the in-situ CBR testing at variable depths.

Reference	Start Level	Stratum*	Depth Range (mm)	Min. DCP CBR (%)	Average DCP CBR (%)	Max. DCP CBR (%)
CBR01	Ground Level	River Terrace Deposits	200-1000	2	4	8
CBR02	Ground Level	River Terrace Deposits	160-1000	2	6	11
CBR03	Ground Level	River Terrace Deposits	450-1000	2	4	6
CBR04	Ground Level	River Terrace Deposits	190-1000	6	11	22
CBR05	Ground Level	River Terrace Deposits	290-1000	2	4	7
CBR06	Ground Level	River Terrace Deposits	230-1000	3	8	17

Reference	Start Level	Stratum*	Depth Range (mm)	Min. DCP CBR (%)	Average DCP CBR (%)	Max. DCP CBR (%)
* Refers to the natural deposits beneath the Topsoil/Made Ground.						

Table 4.2 Summary of CBR Results

If/where applicable, the engineering characteristics of Made Ground are variable and unpredictable and the CBR value of these materials does not predict the overall settlements that may occur. It would be prudent to assume a worst case CBR value of 1% for the preliminary design of pavements constructed upon the Made Ground and these materials should also be deemed frost susceptible throughout thus a minimum pavement thickness of 450mm would be appropriate.

In addition, CBR values were also estimated based on the Atterberg Limit Test results and the Transport and Road Research Laboratory Report (LR1132) entitled 'The Structural Design of Bituminous Roads' (1984) cites estimated equilibrium suction indices of between 2.5% and 3.0% for silty clay with a Plasticity Index values between 21% and 40%, such as those of the clayey soils at anticipated formation depth, under average construction conditions and a presumed high-water table.

Furthermore, six soaked CBR tests were carried out in accordance with BS1377: Part 4:1990 using a 2.5kg rammer compaction method. A maximum dry unit weight of 17.2kN/m^3 (CBR02) and natural moisture contents ranged from 19% to 53% with soaked CBR values ranging from 0.32% to 6.1%.

Based on both the estimated CBR value and the results of the in-situ and laboratory testing, it is recommended that a CBR design value of 1.5% is adopted.

Any hard or soft spots in the formation level such may induce reflective cracking in the pavement and allowance should be made for localised treatment or removal.

4.6 Soakaways

Table 4.3 summarises the soakage rates, which were calculated based on the results of the soakage testing:

Reference	Geology	Calculated Infiltration Rates (m/s)		
		1st Cycle	2nd Cycle	3rd Cycle
SA01	River Terrace Deposits	N/D	N/D	N/D
SA02	River Terrace Deposits	N/D	N/D	N/D
SA03	River Terrace Deposits	N/D	N/D	N/D
SA04	River Terrace Deposits	N/D	N/D	N/D
SA05	River Terrace Deposits	N/D	N/D	N/D
SA06	River Terrace Deposits	N/D	N/D	N/D
N/D: Not determined due to insufficient fall in head over a three day period.				

Table 4.3 Summary of Soakage Test Results

Based on the above results and ground conditions encountered on site, it is considered that conventional soakaways would not be suitable for discharging storm water run-off to the ground. Therefore, it is considered that an alternative form of storm water disposal would be required, such as on-site storage and attenuation of peak storm flow with discharge to the drainage ditch network, possible at greenfield run-off rate, under an extension of riparian rights.

4.7 Earthworks

Based on the ground conditions encountered and results of testing undertaken, it is considered that site won soils would be most likely to comprise wet cohesive fill (SHW Class 2A and SHW Class 2B as defined in Specification for Highway Works). A

summary of geotechnical tests for the potential site won materials and associated SHW classification range (excluding Topsoil and Made Ground) are presented in Table 4.4 overleaf.

Strata	Depth	Location	As per BS6031	Earthwork Highway Specification Series 600
River Terrace Deposits	2.0m	WS03	Sand	Class 2A & Class 2B
	2.0m	WS06	Gravelly Sandy Silts/Clays	Class 2A & Class 2B
	4.0m	WS10	Sand	Class 1B
	3.0m	WS13	Gravelly Sandy Silts/Clays	Class 2A & Class 2B

Table 4.4 Highway Series 600 Classification Range for Source Site based on the PSD test results

Examination of Particle Size Distribution (PSD) results of the River Terrace Deposits, in accordance with Specification for Highways Works Series 600, classifies them to be predominantly SHW Class 2A or SHW Class 2B or SHW Class 1B materials.

The indicative classifications set out in Table 4.4 above are based solely on the particle size distribution results and grading envelopes in Table 6/2 of SHW using IBEX in house Software.

Where soils are to be placed as engineered fill beneath roads, permanent hard standing and the like, it is recommended that an end product (performance) specification is used such that post compaction verification testing demonstrates that a minimum compaction condition (or similar appropriate measure) has been achieved. Where soils are to be placed in gardens, open landscaping or other areas which are less sensitive to settlement (total and differential settlement), a method compaction specification may be suitable, albeit that some compliance testing should be included to demonstrate that the method is consistent and meets the minimum 90% compaction condition on which the methods set out in Specification for Highway Works were based.

Fill material acceptability could be controlled by measures such as moisture content and Moisture Condition Value and these, together with classification and compliance testing, should form part of testing undertaken as part of any earthworks contract. BS6031 sets an MCV range of 8-12 for wet cohesive fill. Testing may also be required to set compaction related compliance criteria (e.g. laboratory compaction tests) and verify compaction achieved (e.g. in-situ density testing using a Nuclear Density Meter following compaction of fill layers).

Engineered fill to raise ground levels would not be suitable as a bearing stratum for foundations.

An Earthworks Specification and additional geotechnical testing is recommended where any cut and fill exercise is proposed.

5. CONTAMINATION ASSESSMENT

A Generic Quantitative Risk Assessment (GQRA) incorporating the results of the ground investigations were undertaken in accordance with LCRM, the findings of which are presented in the following sections.

5.1 Outline Risk Assessment

The presence of a possible contaminant does not necessarily imply that a site or area is contaminated or that there is any unacceptable risk to human health. A Preliminary Quantitative Risk Assessment has been undertaken in accordance with LCRM, in order to evaluate any unacceptable risks posed to human health with respect to the proposed residential development. It should be noted that this assessment is protective of the chronic long-term effects of contaminants, which is also likely to be protective of any possible immediate acute effects.

Based on the findings of the previous reports and a visual assessment of the soils encountered, in conjunction with the proposed end use, five soil samples were submitted for general chemical contamination analysis.

A quantitative risk assessment has been undertaken by comparing the results of the laboratory chemical testing of shallow soils against the ATRISKSOIL Soil Screening Values (SSVs) derived by Atkins, or against the Suitable for Use Levels (S4ULs) published by LQM (Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3453. All rights Reserved) and Category 4 Screening Levels (C4SLs) published by DEFRA. Although the C4SLs were released for Part 2A use, the associated policy companion document for the C4SLs indicated that they may also be used for planning. Although the C4SLs represent a marginally higher risk level than the SSACs (low risk rather than minimal risk) it is considered that the risk levels remain very low. Therefore, the final C4SLs are considered to be suitable to assess soils under the planning regime.

Samples were selected for analysis to provide general coverage of the site. The analysis included metals, metalloids, inorganic compounds, TPH, PAH and asbestos screening and these are summarised in Table 5.1 below:

Substance Group	Determinand(s)	Assessment Criteria Selected
Organic Substances		
Non-halogenated Hydrocarbons	Total Petroleum Hydrocarbons (TPHCWG banded)	ATRISK SSV
	Total Phenols	ATRISK SSV
Polycyclic Aromatic Hydrocarbons (PAH-16)	Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene	ATRISK SSV
Volatile Organic Compounds (VOCs/sVOCs).	Toluene, Ethylbenzene, Benzene, Xylenes	ATRISK SSV
Inorganic Substances		
Heavy Metals and Metalloids	Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Copper, Zinc	ATRISK SSV
	Copper, Zinc, Nickel	ATRISK SSV
Cyanides	Free Cyanide	ATRISK SSV
Sulphates	Water Soluble Sulphate	BRE Special Digest 1:2005

Table 5.1 Selected Assessment Criteria – Contamination in Soils

5.2 Soil Contamination vs End Users

In the first instance the results have been screened against thresholds for a residential end use with plant uptake. The results of the geochemical analyses undertaken compared against appropriate Tier 1 screening criteria for a residential with plant uptake end use, which has demonstrated that all concentrations were below the respective threshold with the exception of arsenic as summarised in Table 5.2.

Determinand	Unit	No. samples tested	Screening Criteria	GAC Exceedances
Arsenic	mg/kg	5	ATRISK SSV – 37.0 (1-6% SOM*)	**Yes**
Beryllium	mg/kg	5	ATRISK SSV – 1.71 (1-6% SOM*)	No
Cadmium	mg/kg	5	ATRISK SSV – 22.1 (1-6% SOM*)	No
Chromium	mg/kg	5	ATRISK SSV – 14300 (1-6% SOM*)	No
Lead	mg/kg	5	ATRISK SSV – 200 (1-6% SOM*)	No
Mercury	mg/kg	5	C4SL – 40 (1-6% SOM*)	No
Nickel	mg/kg	5	ATRISK SSV – 136 (1-6% SOM*)	No
Copper	mg/kg	5	ATRISK SSV – 4730 (1-6% SOM*)	No
Zinc	mg/kg	5	ATRISK SSV – 20000 (1-6% SOM*)	No
Total Cyanide	mg/kg	5	ATRISK SSV – 34 (1-6% SOM*)	No
Selenium	mg/kg	5	ATRISK SSV – 375 (1-6% SOM*)	No
Vanadium	mg/kg	5	ATRISK SSV – 136 (1-6% SOM*)	No
Boron Water Soluble	mg/kg	5	C4SL – 5.00 (1-6% SOM*)	No
Phenols	mg/kg	5	ATRISK SSV – 267 (1-6% SOM*)	No
**Based on Soil Organic Matter (SOM) = [(Average Value of Total Organic Carbon (TOC)) *1.72] which is 2.95% for this site.*				

Table 5.2 Summary of Geochemical Testing Results (Heavy Metals, Metalloids, Boron, Phenol and Cyanide)

As such, localised remedial measures might be required in the immediate vicinity of the SA06 to protect future end users of the proposed development from soils on site if these areas are to be utilised as soft landscaping. It is also understood that SA06 is located in the immediate vicinity of the proposed communal open space areas where screening criteria for Arsenic is 168mg/kg in accordance with C4SL, therefore no remediation is considered necessary at this site.

The TPH bands, were all returned as below the laboratory detection limits. In addition, no asbestos fibres were reported in samples analysed in the laboratory.

5.3 Soil Contamination vs Adjacent Land Users

Surrounding land uses were identified as comprising mostly residential properties, undeveloped lands, ponds and roads. No significant concentrations of potentially harmful mobile contaminants were identified as part of the investigation.

Furthermore, any proposed remedial works recommended to protect future end users would effectively negate the need for any remedial measures to protect adjacent land users. Therefore, no further specific remedial action is considered necessary to protect adjacent land users from soils on site.

This aside, it is recommended that dust suppression techniques, e.g. damping down exposed soils, are employed during the construction phases on site in order to minimise the potential for airborne migration of specific hazards and to manage potential nuisance issues for adjacent land users.

5.4 Soil Contamination vs Soft Landscaping

British Standard BS3882:2015 Specification for topsoil and requirements for use provides assessment criteria for a number of potentially phytotoxic contaminants in terms of new planting.

The results of the chemical analysis for determinants known to pose a potential phytotoxic risk to plant growth are summarised in Table 5.3 together with the respective adopted Generic Assessment Criteria (GAC) for plant growth. The compliance criteria set out in BS3882:2015 are pH dependent and thus the GAC used relate to the pH range measured on samples recovered from the site.

Determinant	Phytotoxicity GAC (mg/kg)			GAC Exceedances
	pH <6.0	pH 6.0-7.0	pH >7.0	
Zinc	200	200	300	No
Copper	100	135	200	No
Nickel	60	75	110	No

Table 5.3 Summary of Plant Phytotoxicity Assessment

The phytotoxicity assessment identified no exceedances of zinc, copper and nickel and therefore no remedial measures to protect plants from phytotoxic effects are considered necessary for the proposed development.

5.5 Soil Contamination vs Building Materials

Recommendations with respect to sulphate and buried concrete are made in Section 4.4.

The current guidance on selection of materials for water supply pipes to be laid in contaminated land is contained in UK Water Industry Research's (UKWIR) report reference 10/WM/03/21 (re-issued 2010). However, the guidance is not mandatory and there have been concerns raised by various industry technical associations regarding the document and the methodologies proposed.

The results of the relevant chemical analyses indicate that the results were below the specific thresholds with the exception of arsenic at SA06, as such the use of PE or PVC piping or similar should be suitable for water supply pipes on the site. However, it is recommended that the results of this investigation be presented to the water utility company as soon as reasonably practicable to confirm the pipe material.

As a matter of good practice, and to maximise the protection to utilities, it is recommended that clean, granular backfill is used in service runs and that marker tapes are used for all buried services.

5.6 Soil Contamination vs Groundwater

Given the absence of any significant concentrations of potentially mobile contamination identified as part of the chemical analysis it is considered unlikely that the site poses any significant risk to groundwater chemical quality. Therefore, no further specific remedial action is considered necessary to protect groundwater from soils on site.

5.7 Ground Gases & Vapours

The desk study has identified the presence of one area of potentially infilled lands (gravel quarry) located to the immediate south of the site. However, given the 'impermeable' nature of the underlying geology (cohesive River Terrace Deposits), it is very unlikely that these areas may pose a risk to the end users at this site. In addition, given the site itself has not been developed previously and no specific industrial or potentially contaminative land uses have been identified on or near the site in relation to the desk study. No viable sources of ground gases (carbon dioxide and methane) have been identified within the desk study.

Based on the information contained within the Desk Study, radon and ground gas protection measures are not considered necessary in the construction of new dwellings on site.

5.8 Waste

5.8.1 Reuse of Material

In accordance with CL:AIRE Code of Practice (2011) materials are only considered waste if 'they are discarded, intended to be discarded or required to be discarded by the holder'.

The Code of Practice therefore allows soils to be reused on site where the following criteria are met:

- Pollution of the environment and harm to human health is prevented in reusing the excavated materials;
- The materials are suitable for use (without any further processing);
- There is certainty of use; and
- The quantity that is absolutely necessary (and no more) is used.

In order to comply with the Code of Practice, a material management plan that confirms the above criteria are met has to be prepared. The material management plan must be reviewed by a 'Qualified Person' who then issues a declaration to the Environment Agency. IBEX can provide this service should it be required.

Where materials do not meet the required criteria, it may be possible to treat them under an environmental permit so that they may be re-used on site.

5.8.2 Reuse of Waste

Where material is discarded as waste, it may still be possible to reuse the waste on site under a standard rules environmental permit or a U1 waste exemption. However, strict limits on the volumes that can be reused apply in these cases.

5.8.3 Disposal to Landfill

Under current legislation, where wastes are to be disposed of to landfill they may, depending on their classification, require pre-treatment. Pre-treatment shall comprise a chemical, physical (including sorting), thermal or biological process. The pre-treatment is required to change the characteristics of the waste, reduce its volume, reduce its hazardous nature, and facilitate its handling and enhance its recovery.

5.8.4 Waste Classification

The following information is provided for preliminary guidance purposes, as different facilities or operators may have differing acceptance criteria and Waste Acceptance Criteria (WAC) analysis may be required to confirm the exact classification. In addition, if the intention is to retain excess spoil/arisings on site for specific purposes, then these soils would not comprise waste, although this is subject to confirmation and relevant declaration under the Definition of Waste Code of Practice.

Where waste soil is being disposed to landfill it must first be classified as either Hazardous or Non-Hazardous. The classification is carried out in accordance with the Environment Agency's publication WM3 'Waste Classification- Guidance on the classification and assessment of waste'. Waste that is classified as Non-Hazardous in accordance with WM3 may be disposed without further testing to a Non-Hazardous landfill. Alternatively, once the waste soils have been identified, Waste Acceptance Criteria (WAC) testing can be undertaken to establish whether the material can be disposed to an Inert landfill, a subgroup of Non-Hazardous landfill. It should be noted that inert wastes are typically from a consistent source that meet a number of qualifying criteria, and thus Topsoil commonly will not meet the requirements to be disposed as Inert.

In addition, the geochemical testing results of three samples were uploaded to HazWasteOnline™ Waste Classification Tool which demonstrated that both samples fall into '**Non-Hazardous Waste**' in accordance with European Waste Code WM3 (17 05 03 & 17 05 04). The HazWasteOnline™ Waste Classification Report is presented in Appendix D.

Natural uncontaminated soil arisings of the River Terrace Deposits and Bagshot Formation are likely to be classified as 'inert' waste. However, confirmation of the above assessments should be sought from the receiving landfill facility.

5.9 Conclusions and Recommendations

Whilst an intrusive investigation has been undertaken on the site, it remains possible that unexpected ground and/or groundwater conditions may be encountered during the process of construction.

Based on the findings of the geochemical tests and statistical analysis, elevated concentrations of contamination were not identified as part of the chemical analysis with the exception of arsenic at SA06. Therefore, it is considered unlikely that the site poses any significant risk to human health, end users, groundwater chemical quality and the surrounding environs.

In addition, asbestos fibres were not detected in the samples analysed in the laboratory and a significant risk to plant growth has not been identified.

The risk to controlled waters and groundwater from soils is considered negligible.

The results of the relevant chemical analyses indicate that the results were below the specific thresholds with the exception of arsenic at SA06, as such the use of PE or PVC piping or similar should be suitable for water supply pipes on the site. However, it is recommended that the results of this investigation be presented to the water utility company as soon as reasonably practicable to confirm the pipe material. Therefore, upgraded potable water supply pipe materials are unlikely to be required. The water supply pipe requirements for this site should be discussed at an early stage with the relevant Utility provider.

As a matter of good practice, and to maximise the protection to utilities, it is recommended that clean, granular backfill is used in service runs and that marker tapes are used for all buried services.

Natural uncontaminated soil arisings of the River Terrace Deposits and Bagshot Formation are likely to be classified as 'inert' waste. However, confirmation of the above assessments should be sought from the receiving landfill facility.

Should previously undiscovered contamination or unforeseen ground conditions be encountered during construction by the ground worker's, this must be reported to the site manager immediately in order that the consultant is notified. Where deemed necessary, the consultant shall attend the site to inspect the discovery and provide recommendations on the further actions required, if any. Where necessary the regulatory authority shall be informed. Following any additional investigation or laboratory testing the results and any proposed remedial measures shall be reported to the regulatory authority or other appropriate organisation for consent, before proceeding or implementing the remedial measures.

The provisions shall be made to ensure that all workers are made aware of their responsibility to observe, report, and act on any potentially suspicious, abnormal, unforeseen or contaminated ground and/or groundwater conditions they may encounter.

Depending on the type, nature and extent of any such 'discovery', it may be necessary to halt works in that location until such time as the assessment has been completed. This should be reviewed on a 'discovery' specific basis and in conjunction with consultation with the regulator, client, other technical personnel and/or regulatory/approval organisations.

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Figures

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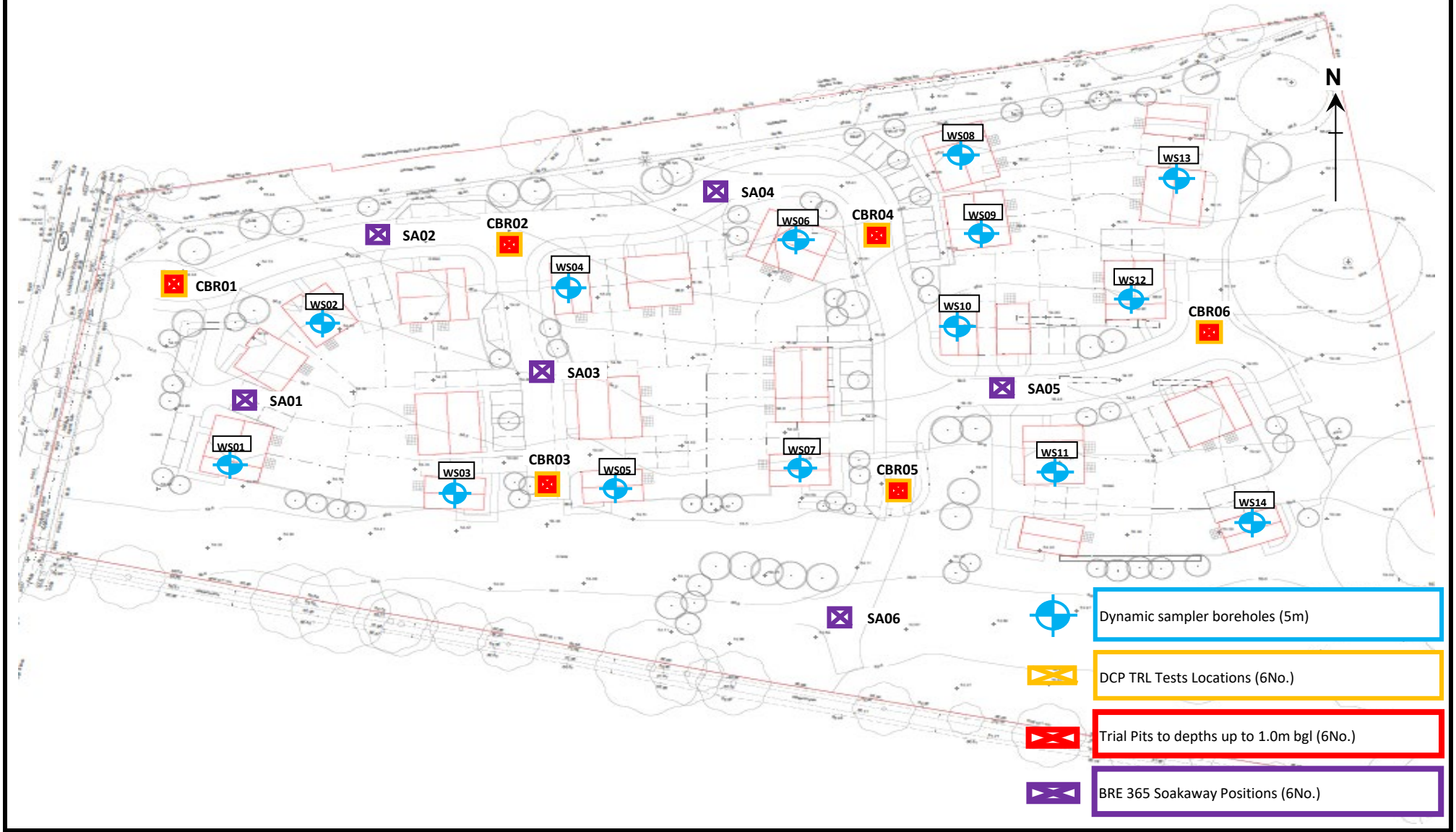
Project:	Longwater Road, Finchampstead, Wokingham, RG40 3TS			**Title**	Site Location Plan
Client:	Stonebond Properties (Guildford) Limited			**IBEX Consulting Engineers Limited**	
Ref No:	ICE0270	**Revision:**	0	**Abbey House, 25 Clarendon Road**	
Drawn:	LD	**Date:**	04/06/2025	**Redhill, Surrey. RH1 1QZ**	
Figure:	1	**Scale:**	Not To Scale	**+44(0)1737 452622 www.ibexconsultant.com**	



Project:	Longwater Road, Finchampstead, Wokingham, RG40 3TS			**Title**	Exploratory Hole Logs Location Plan
Client:	Stonebond Properties (Guildford) Limited			**IBEX Consulting Engineers Limited** **Abbey House, 25 Clarendon Road** **Redhill, Surrey. RH1 1QZ** **+44(0)1737 452622 www.ibexconsultant.com**	IBEX CONSULTING ENGINEERS
Ref No:	ICE0270	**Revision:**	0		
Drawn:	LD	**Date:**	04/06/2025		
Figure:	2	**Scale:**	Not To Scale		

Appendix A

Exploratory Hole Logs and In-situ Testing Results

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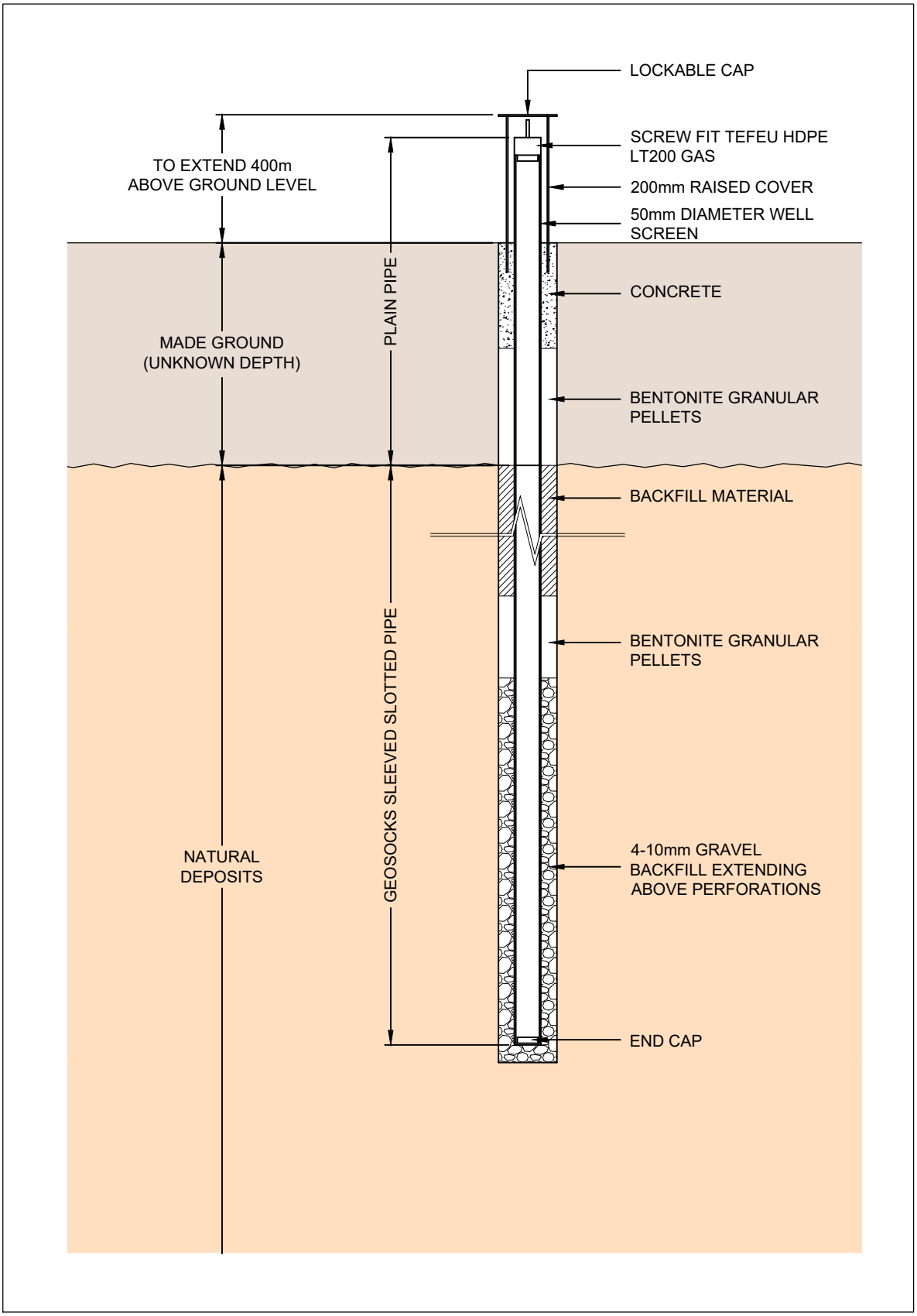
Do not scale. All dimensions in mm (U.N.O) and to be checked. Report any omissions or errors.



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TYPICAL IBEX GROUNDWATER AND GROUND GAS MONITORING WELL SPECIFICATION

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Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample
AMAL - Amalgamated sample
B - Bulk disturbed sample
BLK - Block sample
C - Core sample
CBR - CBR test sample
D - Disturbed sample
ES - Environmental sample
EW - Environmental water sample
G - Gas sample
J - Jar sample
L - Liner sample
TW - Pushed thin wall sample
U - Undisturbed sample
UT - Undisturbed thin wall sample
W - Water sample

IN-SITU TESTS

HV - Hand shear vane
HV(r) - Hand shear vane residual
PID - Photo ionisation detector
PP - Hand penetrometer
SPT - Standard penetration test
SPT(C) - SPT using cone

GROUNDWATER

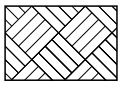
 Groundwater strike

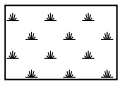
 Groundwater rest level

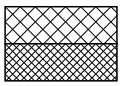
ROTARY CORE DETAILS

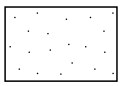
TCR - Total core recovery (%)
SCR - Solid core recovery (%)
RQD - Rock quality designation (%)
FI - Fracture index
NI - Non-intact core
AZCL - Assumed zone of core loss

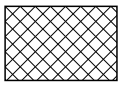
LEGEND

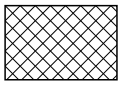
 Topsoil

 Peat

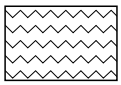
 Made ground [cohesive]

 Concrete

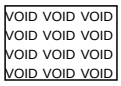
 Wood

 Brick

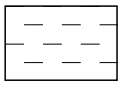
 Bituminous material

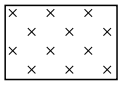
 Gypsum

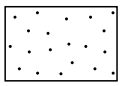
 Coal

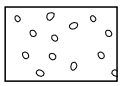


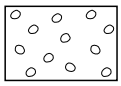
Void

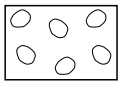
 Clay

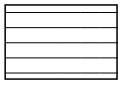
 Silt

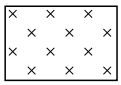
 Sand

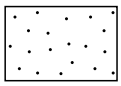
 Gravel

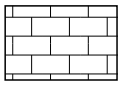
 Cobbles

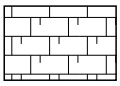
 Boulders

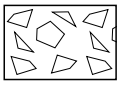
 Mudstone

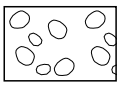
 Siltstone

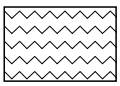
 Sandstone

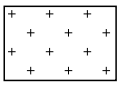
 Limestone

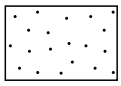
 Chalk

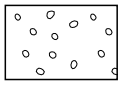
 Breccia

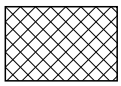
 Conglomerate

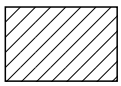
 Metamorphic

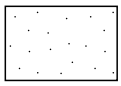
 Igneous

 Sand backfill

 Gravel backfill

 Arisings

 Bentonite

 Concrete

 Grout

 Plain pipe

 Slotted pipe

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Dynamic (Windowless) Sampler

WS01
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479551.86	162687.02	53.69	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.30)		Grass over reddish brown sandy silty clay. [TOPSOIL]
					53.39	0.30		Firm brown, bluish grey and orangish brown slightly sandy slightly organic silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=12 (1,2/1,3,3,5)		(1.05)		
		1.50	ES		52.34	1.35		Medium dense bluish grey clayey SAND. [RIVER TERRACE DEPOSITS]
					51.89	(0.45) 1.80		
		2.00 2.00	SPT D	N=14 (2,3/3,3,4,4)	51.69	(0.20) 2.00		Medium dense orange brown clayey SAND. [RIVER TERRACE DEPOSITS]
								NO RECOVERY
						(1.00)		
					50.69	3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 1.5m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 1.5m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS02
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479565.69	162714.39	54.51	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

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LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					54.31	(0.20) 0.20		Grass over brown sandy silty clay. [TOPSOIL]
						(0.85)		Very soft yellowish brown green mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=4 (1,0/1,1,1,1)	53.46	1.05		Orangish brown and bluish grey slightly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.95)		
	▼	2.00 2.00	SPT D	N=7 (2,2/2,1,2,2)	52.51	2.00		Loose becoming medium dense greenish grey clayey SAND. [RIVER TERRACE DEPOSITS]
						(1.20)		
		3.00 3.00	SPT D	N=17 (2,3/5,4,4,4)	51.31	3.20		Medium dense orangish brown gravelly clayey SAND. Gravel is fine to medium and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
						(0.80)		
		4.00 4.00	SPT D	N=20 (2,3/3,6,5,6)	50.51	4.00		*End of Borehole at 4.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.5m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 3.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS03

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479587.25	162680.74	53.70	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					53.51	(0.19) 0.19		Grass over reddish brown sandy silty clay with black flecks. [TOPSOIL]
						(0.81)		Firm orange brown greenish grey sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=9 (1,2/2,2,3,2)	52.70	1.00		NO RECOVERY
					52.20	(0.50) 1.50		Firm greenish grey gravelly very sandy CLAY. [RIVER TERRACE DEPOSITS]
		2.00 2.00	SPT D	N=11 (2,2/2,2,3,4)	51.90	(0.30) 1.80		Medium dense becoming loose bluish grey gravelly silty clayey SAND. Gravel is fine to coarse and sub-angular. [RIVER TERRACE DEPOSITS]
		3.00 3.00	SPT D	N=6 (2,1/1,1,2,2)	50.70	(1.20) 3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.0m depth, rose to 0.5m depth after 20 minutes.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS04
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479605.98	162719.77	55.26	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.30)		Grass over reddish brown sandy silty clay. [TOPSOIL]
					54.96	0.30		Soft greyish brown slightly gravelly slightly sandy silty CLAY. Gravel is fine to coarse and sub-angular to angular. [RIVER TERRACE DEPOSITS]
		1.00 1.00 1.00	SPT D ES	N=7 (1,1/2,1,2,2)		(1.30)		
					53.66	1.60		Soft greenish grey sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.40)		
		2.00 2.00	SPT D	N=6 (1,1/1,2,2,1)	53.26	2.00		Soft to stiff bluish grey and occasional orangish brown sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(1.00)		
	▼	3.00 3.00	SPT D	N=30 (6,10/9,7,6,8)	52.26	3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.0m depth.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

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Dynamic (Windowless) Sampler

WS05

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479612.54	162682.76	53.72	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					53.47	(0.25) 0.25		Grass over reddish brown sandy silty clay with black flecks. [TOPSOIL]
		1.00 1.00	SPT D	N=6 (1,1/2,1,1,2)		(1.55)		Soft yellowish brown, brown and grey slightly gravelly slightly sandy slightly organic silty CLAY with frequent fine rootlets. Gravel is fine to medium and sub-angular. [RIVER TERRACE DEPOSITS]
		2.00 2.00	SPT D	N=19 (1,2/4,5,5,5)	51.92	1.80		Medium dense becoming very loose orange brown gravelly clayey SAND. [RIVER TERRACE DEPOSITS]
		3.00 3.00	SPT D	N=3 (2,1/1,0,1,1)		(1.70)		
		4.00 4.00	SPT D	N=10 (2,2/3,3,2,2)	50.22	3.50		Firm greenish grey gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
					49.72	(0.50) 4.00		*End of Borehole at 4.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.0m depth, rose to 0.6m depth after 20 minutes.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 3.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS06
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479641.54	162727.74	56.03	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.39)		Grass over greyish brown gravelly sandy silty clay. [TOPSOIL]
					55.64	0.39		
						(0.30)		Yellowish brown gravelly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
					55.34	0.69		
		1.00 1.00	SPT D	N=13 (1,2/3,3,3,4)				Medium dense bluish grey and orangish brown silty clayey SAND. [RIVER TERRACE DEPOSITS]
						(2.11)		
		2.00 2.00	SPT D	N=14 (3,2/3,3,4,4)				
		2.50	ES					
					53.23	2.80		
						(0.20)		Soft greenish grey very sandy CLAY. [RIVER TERRACE DEPOSITS]
		3.00 3.00	SPT D	N=7 (2,1/1,2,2,2)	53.03	3.00		Soft greenish grey, bluish grey and occasional orangish brown sandy silty CLAY. [RIVER TERRACE DEPOSITS]
	▼					(1.00)		
		4.00 4.00	SPT D	N=7 (1,1/2,2,1,2)	52.03	4.00		*End of Borehole at 4.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.5m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 4.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS07
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479642.62	162685.46	53.96	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-23	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.30)		Grass over reddish brown grey mottled sandy silty clay. [TOPSOIL]
					53.66	0.30		Soft orange brown grey mottled gravelly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.70)		
	▼	1.00	SPT	N=6 (3,2/2,1,1,2)	52.96	1.00		Soft greenish grey orange brown mottled sandy silty CLAY/Clayey SAND. [RIVER TERRACE DEPOSITS]
						(0.50)		
		1.50	D		52.46	1.50		Firm bluish grey/Greenish grey sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.50)		
	▽	2.00	SPT	N=16 (2,1/2,2,4,8)	51.96	2.00		Firm orangish brown gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
		2.50	ES			(1.00)		
		3.00	SPT	N=9 (3,2/1,3,2,3)	50.96	3.00		*End of Borehole at 3.00m*
		3.00	D					

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.0m depth, rose to 0.8m depth after 20 minutes.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS08

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479668.81	162743.93	56.51	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					56.33	(0.18) 0.18		Grass over brown gravelly sandy silty clay. [TOPSOIL]
						(0.72)		Firm reddish brown gravelly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		0.75	ES		55.61	0.90		
		1.00 1.00	SPT D	N=12 (1,3/3,3,3,3)				Firm to soft bluish grey and orangish brown sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.50	ES					
		2.00 2.00	SPT D	N=8 (2,2/1,2,2,3)		(2.10)		
	▼	3.00 3.00	SPT D	N=6 (1,1/2,1,1,2)	53.51	3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.5m depth.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS09

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479671.56	162729.76	55.39	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.50)		Grass over greyish brown gravelly sandy silty clay. [TOPSOIL]
					54.89	0.50		Soft greenish grey orange brown mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00	SPT	N=7 (1,1/1,1,2,3)				
						(1.50)		
		1.50	D					
	▼	2.00	SPT	N=6 (1,1/1,2,1,2)	53.39	2.00		
						(0.30)		Loose greenis grey clayey SAND. [RIVER TERRACE DEPOSITS]
					53.09	2.30		Greenish grey sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		2.50	D			(0.40)		
					52.69	2.70		NO RECOVERY
						(0.30)		
		3.00	SPT	N=18 (2,3/4,5,5,4)	52.39	3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.0m depth.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

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Dynamic (Windowless) Sampler

WS10
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479667.93	162711.87	54.89	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.45)		Grass over greyish brown gravelly sandy silty clay. [TOPSOIL]
					54.44	0.45		Loose brown clayey sandy GRAVEL. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=8 (2,4/3,1,2,2)		(1.05)		
					53.39	1.50		Firm becoming stiff greenish grey and slightly orangish brown gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
		2.00 2.00	SPT D	N=13 (2,2/2,4,3,4)		(1.50)		
		3.00 3.00 3.00	SPT D ES	N=22 (3,5/5,6,5,6)	51.89	3.00		Medium dense orangish brown slightly silty slightly clayey very gravelly SAND. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
						(1.00)		
		4.00 4.00	SPT D	N=24 (2,4/4,6,6,8)	50.89	4.00		*End of Borehole at 4.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.0m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 4.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

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Dynamic (Windowless) Sampler

WS11
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479683.45	162685.22	53.87	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					53.64	(0.23) 0.23		Grass over reddish brown sandy silty clay. [TOPSOIL]
						(0.77)		Stiff orange brown green mottled gravelly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=20 (1,3/4,6,6,4)	52.87	1.00		Stiff becoming firm greenish grey and bluish grey gravelly very sandy silty CLAY. Gravel is fine to medium and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
	▼	2.00 2.00	SPT D	N=15 (2,4/4,4,4,3)		(1.80)		
					51.07	2.80		Medium dense greenish grey clayey SAND with rare medium to coarse sub-rounded gravel. [RIVER TERRACE DEPOSITS]
		3.00 3.00	SPT D	N=17 (4,2/4,4,5,4)		(1.20)		
		4.00 4.00 4.00	SPT D ES	N=22 (3,4/5,5,5,7)	49.87	4.00		*End of Borehole at 4.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.5m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 3.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

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Dynamic (Windowless) Sampler

WS12
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479696.53	162716.74	55.02	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.29)		Grass over reddish brown gravelly sandy silty clay. [TOPSOIL]
					54.73	0.29		Soft brown, orangish brown and grey slightly gravelly slightly sandy silty CLAY. Gravel is fine to coarse and sub-angular to angular. [RIVER TERRACE DEPOSITS]
		1.00 1.00	SPT D	N=8 (1,1/2,2,2,2)		(1.46)		
					53.27	1.75		Medium dense greenish grey orange brown mottled clayey SAND. [RIVER TERRACE DEPOSITS]
		2.00 2.00 2.00	SPT D ES	N=10 (2,2/2,3,2,3)		(0.40)		
					52.87	2.15		Medium dense greenish grey clayey SAND. [RIVER TERRACE DEPOSITS]
						(0.85)		
		3.00 3.00	SPT D	N=11 (2,1/2,3,4,2)	52.02	3.00		*End of Borehole at 3.00m*

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.0m depth, rose to 2.5m depth after 20 minutes.
3. Borehole backfilled with arisings on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS13

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479702.96	162739.37	56.28	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.20	ES		56.00	(0.28) 0.28		Grass over reddish brown sandy silty clay. [TOPSOIL]
		1.00	SPT	N=13 (1,1/3,4,3,3)				Firm orangish brown and bluish grey sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00	ES			(1.72)		
		2.00	SPT	N=11 (1,2/2,4,2,3)	54.28	2.00		Medium dense becoming loose greenish grey and bluish grey silty clayey SAND with rare fine gravel. [RIVER TERRACE DEPOSITS]
		2.00	D					
		3.00	SPT	N=10 (2,1/2,3,2,3)		(2.00)		
		3.00	D					
		4.00	SPT	N=8 (1,1/2,2,2,2)	52.28	4.00		*End of Borehole at 4.00m*
		4.00	D					

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 3.0m depth, rose to 2.5m depth after 20 minutes.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 4.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Dynamic (Windowless) Sampler

WS14

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
WLS	479715.16	162674.34	53.31	1:50

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-22	2025-04-22

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					53.13	(0.18) 0.18		Grass over reddish brown sandy silty clay. [TOPSOIL]
						(0.62)		Orangish brown and bluish grey slightly organic sandy silty CLAY with dark grey carbonaceous stains and occasional rootlets. [RIVER TERRACE DEPOSITS]
		0.75	D		52.51	0.80		
		1.00	SPT	N=8 (2,2/2,3,1,2)				Soft greenish grey gravelly very sandy CLAY/clayey SAND. [RIVER TERRACE DEPOSITS]
		1.50	D			(1.20)		
		2.00	SPT	N=55 (11,13/11,14,15,15)	51.31	2.00		
					51.11	(0.20) 2.20		Very dense yellowish brown gravelly clayey SAND. [RIVER TERRACE DEPOSITS]
								End of Borehole at 2.20m

Remarks
1. Borehole location was scanned with CAT, GENNY and GPR prior to breaking the ground.
2. Water strike at 2.5m depth.
3. 35mm diameter standpipe with a lockable flush fitted cover installed to 2.0m.
4. Borehole backfilled with gravel backfill-bentonite-concrete on completion.

Method, Plant, Stability, Dimensions

Logger

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Trial Pit

SA01
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479553.60	162698.70	53.92	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.18)		Grass over reddish brown sandy silty clay. [TOPSOIL]
					53.74	0.18		Reddish brown grey mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		0.50	PID	0.3ppm				
		0.50	ES			(0.82)		
		1.00	D		52.92	1.00		Bluish grey, orangish brown and grey slightly gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
						(0.52)		
					52.40	1.52		*End of Trial Pit at 1.52m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Slow water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.52m TP 2t mini digger
Stable
L = 1.08m
W = 0.25m

Logger
LD

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Trial Pit

SA02
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479576.11	162729.54	55.21	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.24)		Grass over greyish brown sandy silty clay. [TOPSOIL]
		0.20	PID	0.1ppm	54.97	0.24		Brown orange brown greenish mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.56)		
					54.41	0.80		Orange brown greenish mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00	D			(0.90)		
					53.51	1.70		*End of Trial Pit at 1.70m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Slow water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.70m TP 2t mini digger
Stable
L = 0.90m
W = 0.25m

Logger
LD

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Trial Pit

SA03
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479599.47	162703.20	54.54	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.35)		Grass over light grey sandy silty clay. [TOPSOIL]
		0.30	PID	0.1ppm	54.19	0.35		Bluish grey and orangish brown and grey slightly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00	D			(1.29)		
					52.90	1.64		*End of Trial Pit at 1.64m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Slow water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.64m TP 2t mini digger
Stable
L = 1.00m
W = 0.25m

Logger
LD

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Trial Pit

SA04

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479627.83	162736.40	56.23	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(0.47)		Grass over reddish brown grey sandy silty clay. [TOPSOIL]
		0.40	PID	0.1ppm	55.76	0.47		Orange brown green mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
		1.00	D			(1.13)		
					54.63	1.60		*End of Trial Pit at 1.60m*

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Slow water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.60m TP 2t mini digger
Stable
L = 1.02m
W = 0.25m

Logger
LD

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Trial Pit

SA05
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479674.35	162699.75	54.43	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.49)		Grass over reddish brown grey sandy silty clay. [TOPSOIL]
		0.40 0.45	ES PID	0.1ppm	53.94	0.49		Greyish brown clayey sandy GRAVEL. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
		1.00	D			(1.13)		
					52.81	1.62		*End of Trial Pit at 1.62m*

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Slow water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.62m TP 2t mini digger
Stable
L = 1.02m
W = 0.25m

Logger
LD

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Trial Pit

SA06
Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479650.59	162657.31	52.85	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-23

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.36)		Grass over reddish brown sandy silty clay. [TOPSOIL]
		0.30 0.30	PID ES	1.3ppm	52.49	0.36		Black dark purple sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.46)		
					52.03	0.82		Brownish grey slightly gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to sub-rounded. [RIVER TERRACE DEPOSITS]
		1.00	D			(0.79)		
					51.24	1.61		*End of Trial Pit at 1.61m*

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Soakage test undertaken.
3. Fast water ingress at the base.
4. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.50m TP 2t mini digger
Stable
L = 1.20m
W = 0.25m

Logger
LD

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Trial Pit

CBR01

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479540.78	162719.75	54.35	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.23)		Grass over brown sandy silty clay. [TOPSOIL]
		0.23	B		54.12	0.23		Orange brown greenish mottled gravelly sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.79)		
					53.33	1.02		*End of Trial Pit at 1.02m*

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Slow water ingress at the base.
3. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.02m TP 2t mini digger
Stable
L = 0.97m
W = 0.25m

Logger
LD

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Trial Pit

CBR02

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479595.77	162729.00	55.46	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.22)		Grass over greyish brown sandy silty clay with occasional gravel. [TOPSOIL]
		0.22	B		55.24	0.22		Brown and grey mottled slightly gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to angular. [RIVER TERRACE DEPOSITS]
						(0.80)		
					54.43	1.02		*End of Trial Pit at 1.02m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Pit remained dry and backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.02m TP 2t mini digger
Stable
L = 0.92m
W = 0.25m

Logger
LD

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Trial Pit

CBR03

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479601.71	162683.05	53.70	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.24)		Grass over reddish brown black dark grey sandy silty clay. [TOPSOIL]
		0.24	B		53.46	0.24		Orange brown greenish mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.76)		
					52.70	1.00		*End of Trial Pit at 1.00m*

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Moderate to fast water ingress at the base.
3. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.00m TP 2t mini digger
Stable
L = 1.01m
W = 0.25m

Logger
LD

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Trial Pit

CBR04

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479654.89	162730.86	55.85	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.26)		Grass over greyish brown purple gravelly sandy silty clay. [TOPSOIL]
		0.26	B		55.59	0.26		Greenish orange brown mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.84)		
					54.75	1.10		*End of Trial Pit at 1.10m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Pit remained dry and backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.10m TP 2t mini digger
Stable
L = 1.00m
W = 0.25m

Logger
LD

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Trial Pit

CBR05

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479658.96	162681.05	53.74	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.30)		Grass over purplish brown sandy silty clay. [TOPSOIL]
		0.30	B		53.44	0.30		Brown and grey mottled slightly gravelly sandy silty CLAY. Gravel is fine to coarse and sub-angular to angular. [RIVER TERRACE DEPOSITS]
						(0.70)		
					52.74	1.00		*End of Trial Pit at 1.00m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Slow water ingress at the base.
3. Pit backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.00m TP 2t mini digger
Stable
L = 0.84m
W = 0.25m

Logger
LD

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Trial Pit

CBR06

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	479709.04	162709.54	54.87	1:25

Project Name	Project No.	Start Date	End Date
Longwater Road, Finchampstead, Wokingham	ICE0270	2025-04-21	2025-04-21

Client
Stonebond Properties (Guildford) Limited

Consultant
LD

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.35)		Grass over purplish brown sandy silty clay. [TOPSOIL]
		0.35	B		54.52	0.35		Greenish yellow brown mottled sandy silty CLAY. [RIVER TERRACE DEPOSITS]
						(0.65)		
					53.87	1.00		*End of Trial Pit at 1.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
1. Pit scanned with CAT&GENNY and GPR prior to breaking the ground.
2. Pit remained dry and backfilled with arisings on completion.

Method, Plant, Stability, Dimensions
0.00 - 1.00m TP 2t mini digger
Stable
L = 0.91m
W = 0.25m

Logger
LD

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	10.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	50	0.00					
2	1	1	110	60.00					
3	1	2	160	50.00					
4	1	3	200	40.00					
5	1	4	230	30.00					
6	1	5	260	30.00					
7	1	6	285	25.00					
8	1	7	315	30.00					
9	1	8	350	35.00					
10	1	9	370	20.00					
11	1	10	410	40.00					
12	1	11	450	40.00					
13	1	12	490	40.00					
14	1	13	560	70.00					
15	1	14	700	140.00					
16	1	15	840	140.00					
17	1	16	940	100.00					
18	1	17	1000	60.00					

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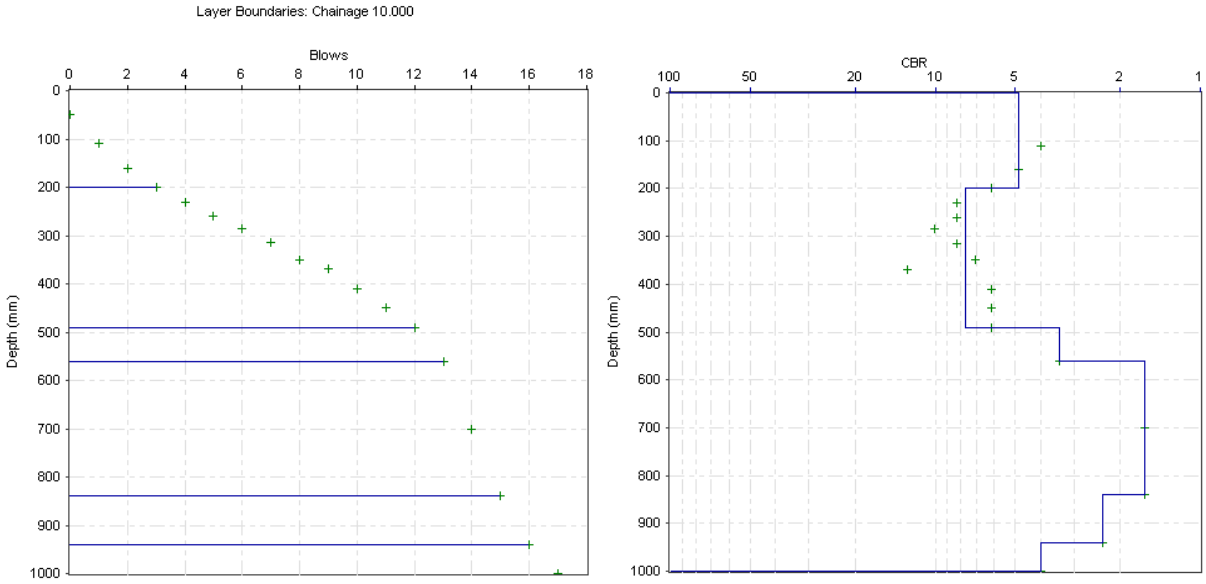
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	10.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart

CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	50.00	5	200	200
2	32.22	8	290	490
3	70.00	3	70	560
4	140.00	2	280	840
5	100.00	2	100	940
6	60.00	4	60	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	20.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

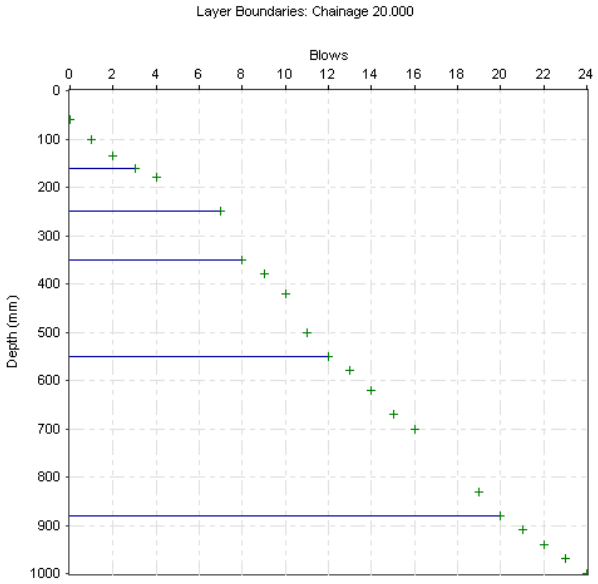
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	60	0.00					
2	1	1	100	40.00					
3	1	2	135	35.00					
4	1	3	160	25.00					
5	1	4	180	20.00					
6	3	7	250	23.33					
7	1	8	350	100.00					
8	1	9	380	30.00					
9	1	10	420	40.00					
10	1	11	500	80.00					
11	1	12	550	50.00					
12	1	13	580	30.00					
13	1	14	620	40.00					
14	1	15	670	50.00					
15	1	16	700	30.00					
16	3	19	830	43.33					
17	1	20	880	50.00					
18	1	21	910	30.00					
19	1	22	940	30.00					
20	1	23	970	30.00					
21	1	24	1000	30.00					

UK DCP V3.1

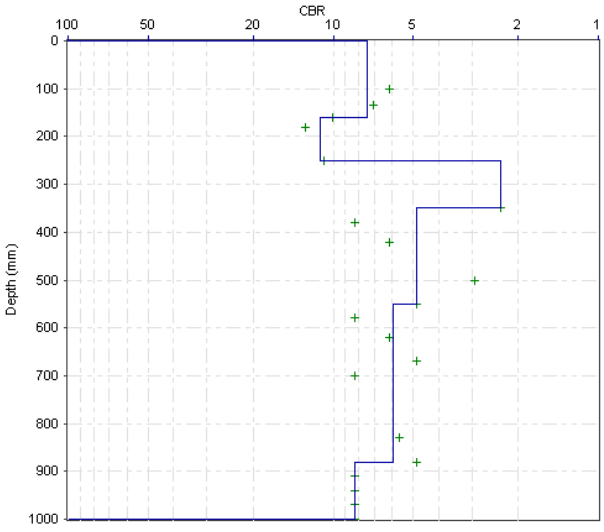
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	20.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	33.33	7	160	160
2	22.50	11	90	250
3	100.00	2	100	350
4	50.00	5	200	550
5	41.25	6	330	880
6	30.00	8	120	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	30.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

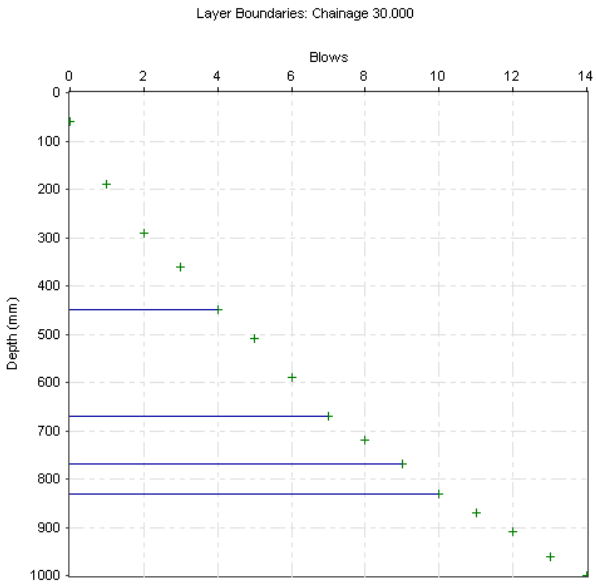
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	60	0.00					
2	1	1	190	130.00					
3	1	2	290	100.00					
4	1	3	360	70.00					
5	1	4	450	90.00					
6	1	5	510	60.00					
7	1	6	590	80.00					
8	1	7	670	80.00					
9	1	8	720	50.00					
10	1	9	770	50.00					
11	1	10	830	60.00					
12	1	11	870	40.00					
13	1	12	910	40.00					
14	1	13	960	50.00					
15	1	14	1000	40.00					

UK DCP V3.1

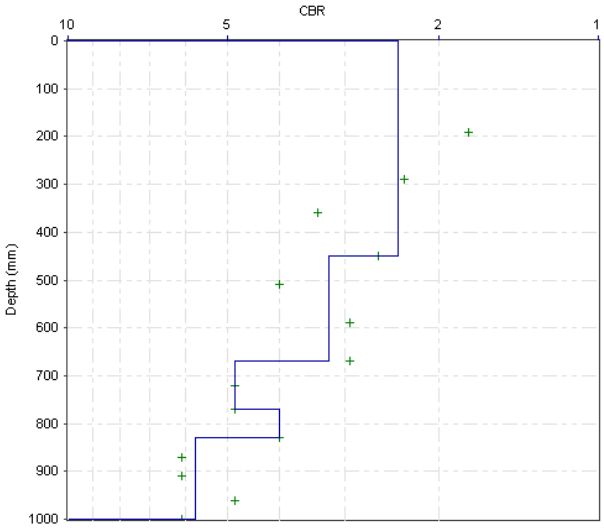
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	30.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	97.50	2	450	450
2	73.33	3	220	670
3	50.00	5	100	770
4	60.00	4	60	830
5	42.50	6	170	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	40.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	60	0.00	26	3	35	890	10.00
2	1	1	120	60.00	27	3	38	930	13.33
3	1	2	145	25.00	28	3	41	970	13.33
4	1	3	165	20.00	29	3	44	1000	10.00
5	1	4	190	25.00					
6	1	5	210	20.00					
7	1	6	220	10.00					
8	1	7	240	20.00					
9	1	8	260	20.00					
10	3	11	330	23.33					
11	3	14	430	33.33					
12	1	15	470	40.00					
13	1	16	510	40.00					
14	1	17	540	30.00					
15	1	18	580	40.00					
16	1	19	620	40.00					
17	1	20	660	40.00					
18	1	21	680	20.00					
19	1	22	710	30.00					
20	1	23	730	20.00					
21	1	24	745	15.00					
22	1	25	770	25.00					
23	1	26	780	10.00					
24	3	29	820	13.33					
25	3	32	860	13.33					

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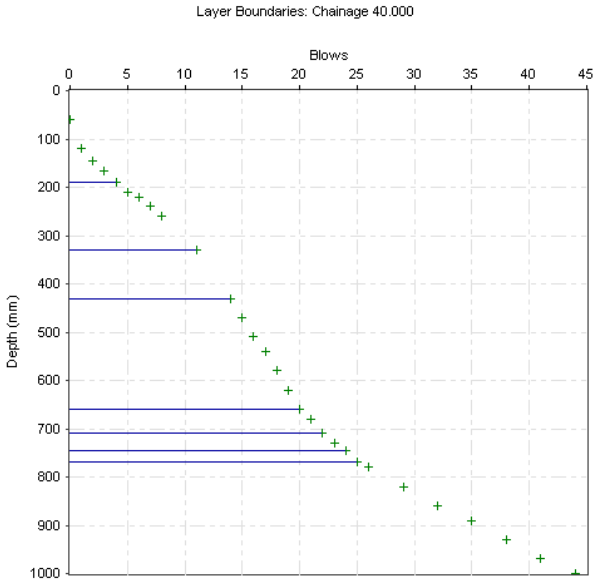
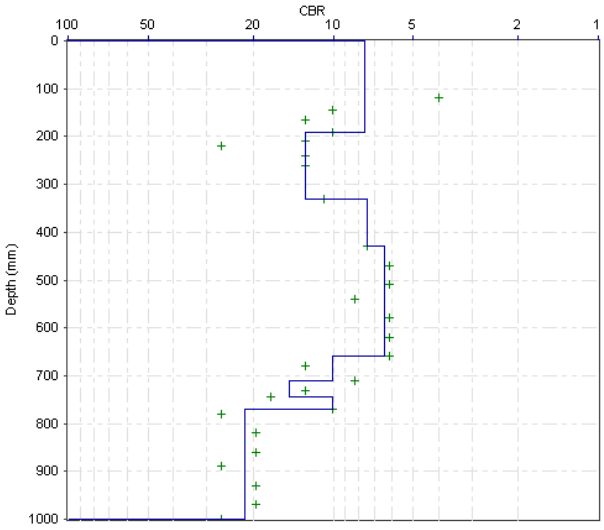
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	40.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	32.50	8	190	190
2	20.00	13	140	330
3	33.33	7	100	430
4	38.33	6	230	660
5	25.00	10	50	710
6	17.50	15	35	745
7	25.00	10	25	770
8	12.11	22	230	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	50.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

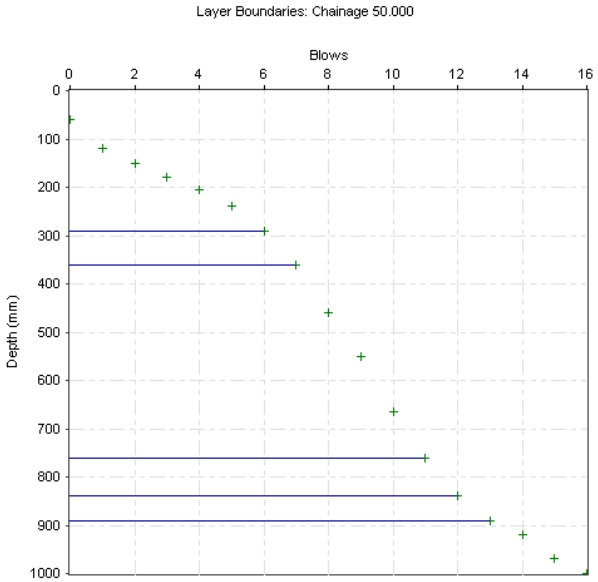
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	60	0.00					
2	1	1	120	60.00					
3	1	2	150	30.00					
4	1	3	180	30.00					
5	1	4	205	25.00					
6	1	5	240	35.00					
7	1	6	290	50.00					
8	1	7	360	70.00					
9	1	8	460	100.00					
10	1	9	550	90.00					
11	1	10	665	115.00					
12	1	11	760	95.00					
13	1	12	840	80.00					
14	1	13	890	50.00					
15	1	14	920	30.00					
16	1	15	970	50.00					
17	1	16	1000	30.00					

UK DCP V3.1

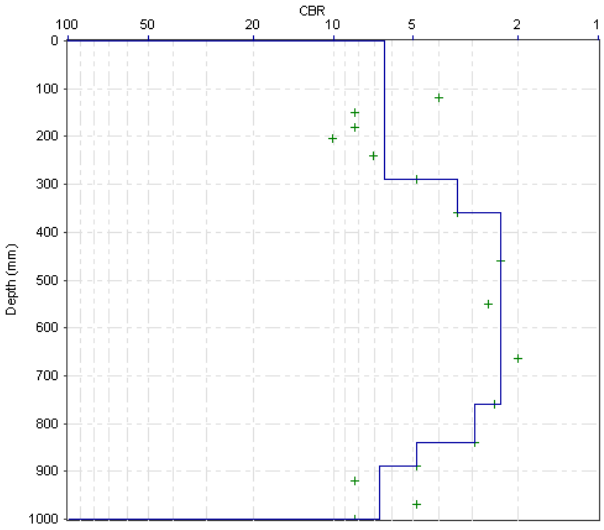
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	50.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	38.33	6	290	290
2	70.00	3	70	360
3	100.00	2	400	760
4	80.00	3	80	840
5	50.00	5	50	890
6	36.67	7	110	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Penetration Data Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	60.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted

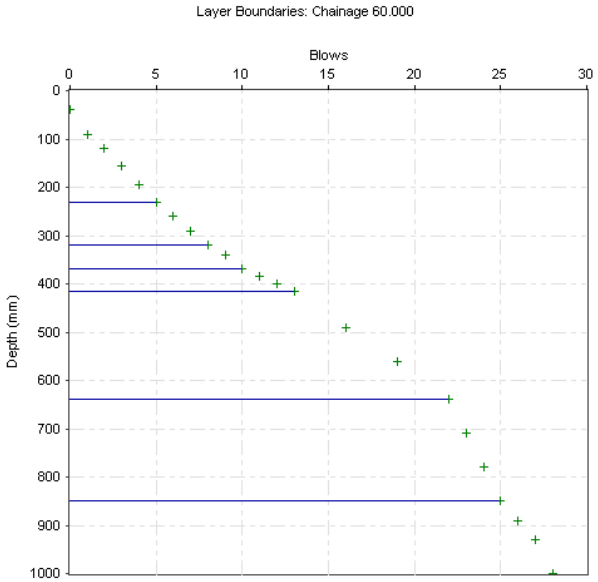
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)	No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/blow)
1	0	0	40	0.00					
2	1	1	90	50.00					
3	1	2	120	30.00					
4	1	3	155	35.00					
5	1	4	195	40.00					
6	1	5	230	35.00					
7	1	6	260	30.00					
8	1	7	290	30.00					
9	1	8	320	30.00					
10	1	9	340	20.00					
11	1	10	370	30.00					
12	1	11	385	15.00					
13	1	12	400	15.00					
14	1	13	415	15.00					
15	3	16	490	25.00					
16	3	19	560	23.33					
17	3	22	640	26.67					
18	1	23	710	70.00					
19	1	24	780	70.00					
20	1	25	850	70.00					
21	1	26	890	40.00					
22	1	27	930	40.00					
23	1	28	1000	70.00					

UK DCP V3.1

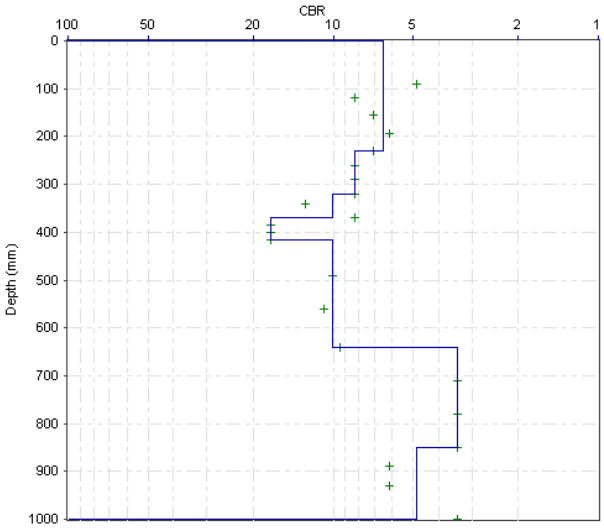
DCP Layer Strength Analysis Report

Project Name: ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Chainage (km):	60.000	Surface Type:	Unpaved
Direction:		Thickness (mm):	0
Location/Offset:	Carriageway	Base Type:	
Cone Angle:	60 degrees	Thickness (mm):	
Zero Error (mm):	0	Surface Moisture:	Wet
Test Date:	22/05/2025	Moisture adjustment factor:	Not adjusted



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	Penetration Rate (mm/blow)	CBR (%)	Thickness (mm)	Depth to layer bottom (mm)
1	38.00	6	230	230
2	30.00	8	90	320
3	25.00	10	50	370
4	15.00	17	45	415
5	25.00	10	225	640
6	70.00	3	210	850
7	50.00	5	150	1000

CBR Relationship:

TRL equation: $\log_{10}(CBR) = 2.48 - 1.057 \times \log_{10}(Strength)$

Report produced by .....

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA01**
Pit depth (m)	1.52
Pit width (m)	0.25
Pit length (m)	1.08
Depth to standing water (m)	

Test 1

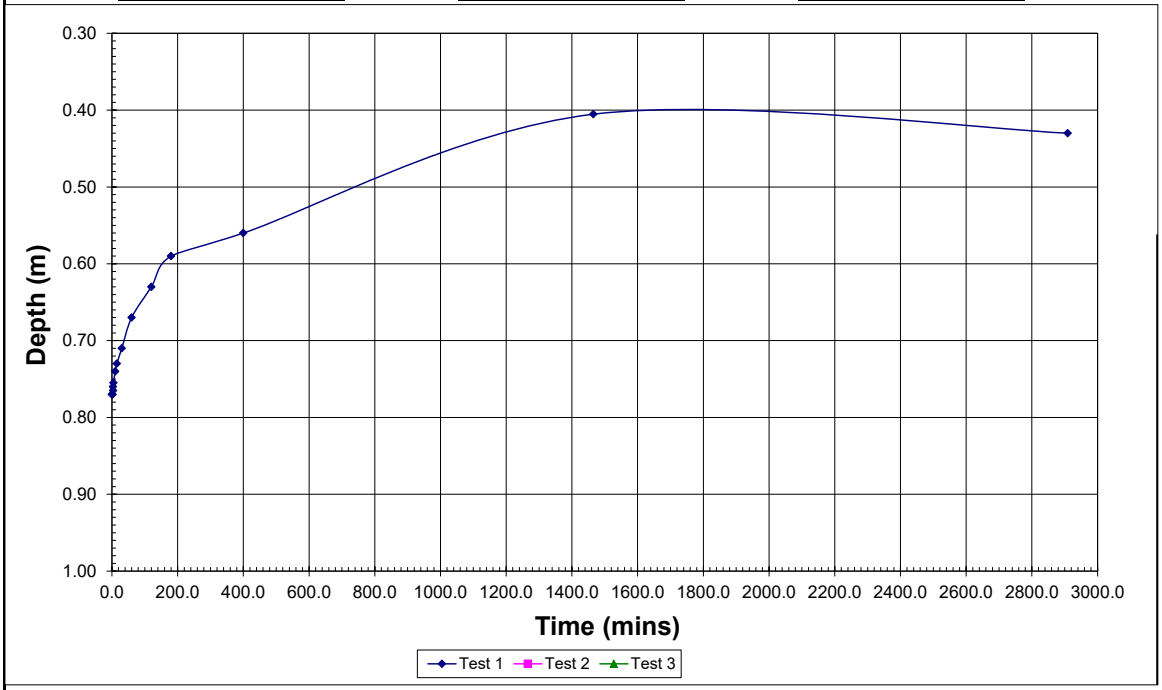
Time (min)	Depth (m)
0.0	0.77
1.0	0.77
2.0	0.77
3.0	0.76
4.0	0.77
5.0	0.76
10.0	0.74
15.0	0.73
30.0	0.71
60.0	0.67
120.0	0.63
180.0	0.59
400.0	0.56
1465.0	0.41
2909.0	0.43

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



Max. depth (m)	1.52	1.52	1.52
Effective depth (m)	0.75	1.52	1.52
75% effective depth (m)	0.96	0.38	0.38
50% effective depth (m)	1.15	0.76	0.76
25% effective depth (m)	1.33	1.14	1.14
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.10	0.21	0.21
ap 50	1.2675	2.2916	2.2916
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA02**
Pit depth (m)	1.70
Pit width (m)	0.25
Pit length (m)	0.90
Depth to standing water (m)	

Test 1

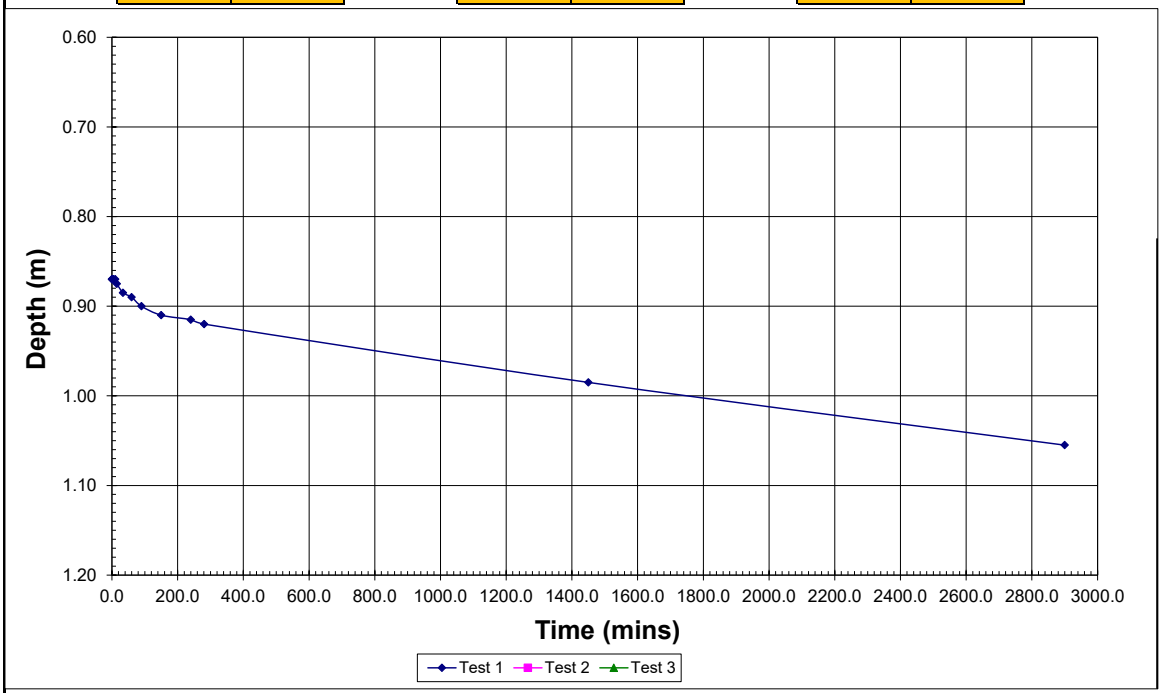
Time (min)	Depth (m)
0.0	0.87
1.0	0.87
2.0	0.87
3.0	0.87
4.0	0.87
5.0	0.87
10.0	0.87
15.0	0.88
34.0	0.89
60.0	0.89
90.0	0.90
150.0	0.91
240.0	0.92
281.0	0.92
1450.0	0.99
2900.0	1.06

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



Max. depth (m)	1.70	1.70	1.70
Effective depth (m)	0.83	1.70	1.70
75% effective depth (m)	1.08	0.43	0.43
50% effective depth (m)	1.29	0.85	0.85
25% effective depth (m)	1.49	1.28	1.28
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.09	0.19	0.19
ap 50	1.1795	2.18	2.18
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA03**
Pit depth (m)	1.64
Pit width (m)	0.25
Pit length (m)	1.00
Depth to standing water (m)	

Test 1

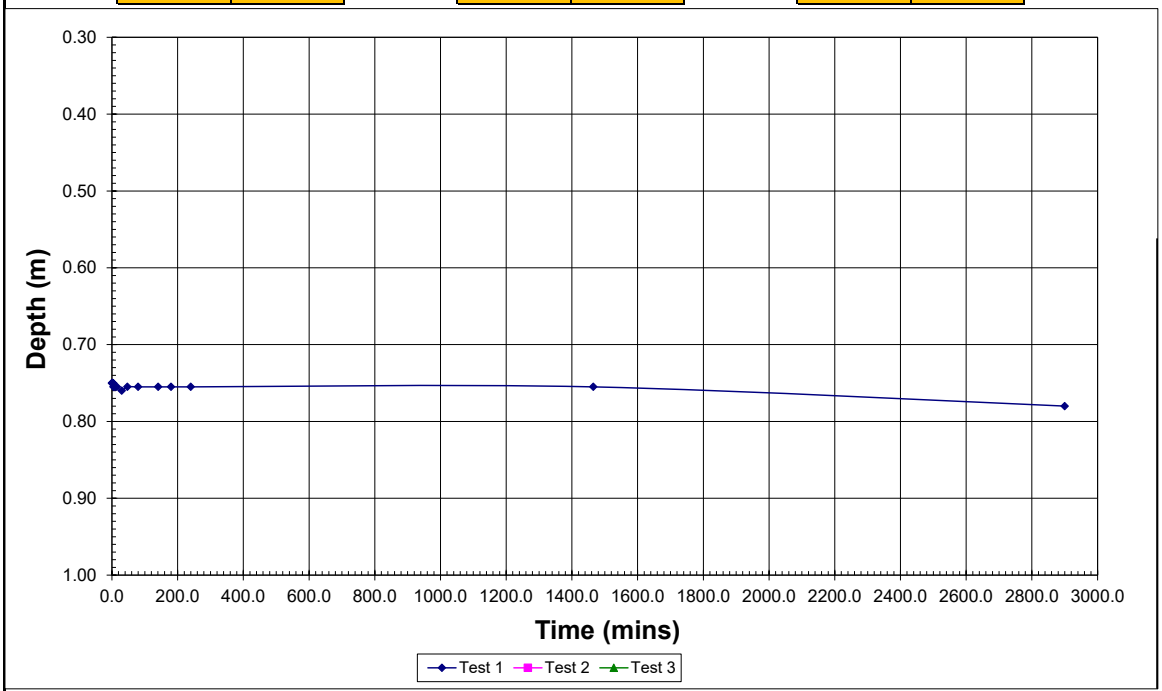
Time (min)	Depth (m)
0.0	0.75
1.0	0.75
2.0	0.75
3.0	0.75
4.0	0.75
5.0	0.76
10.0	0.76
15.0	0.76
30.0	0.76
47.0	0.76
80.0	0.76
141.0	0.76
180.0	0.76
240.0	0.76
1465.0	0.76
2900.0	0.78

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



Max. depth (m)	1.64	1.64	1.64
Effective depth (m)	0.89	1.64	1.64
75% effective depth (m)	0.97	0.41	0.41
50% effective depth (m)	1.20	0.82	0.82
25% effective depth (m)	1.42	1.23	1.23
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.11	0.21	0.21
ap 50	1.3625	2.3	2.3
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA04**
Pit depth (m)	1.60
Pit width (m)	0.25
Pit length (m)	1.02
Depth to standing water (m)	

Test 1

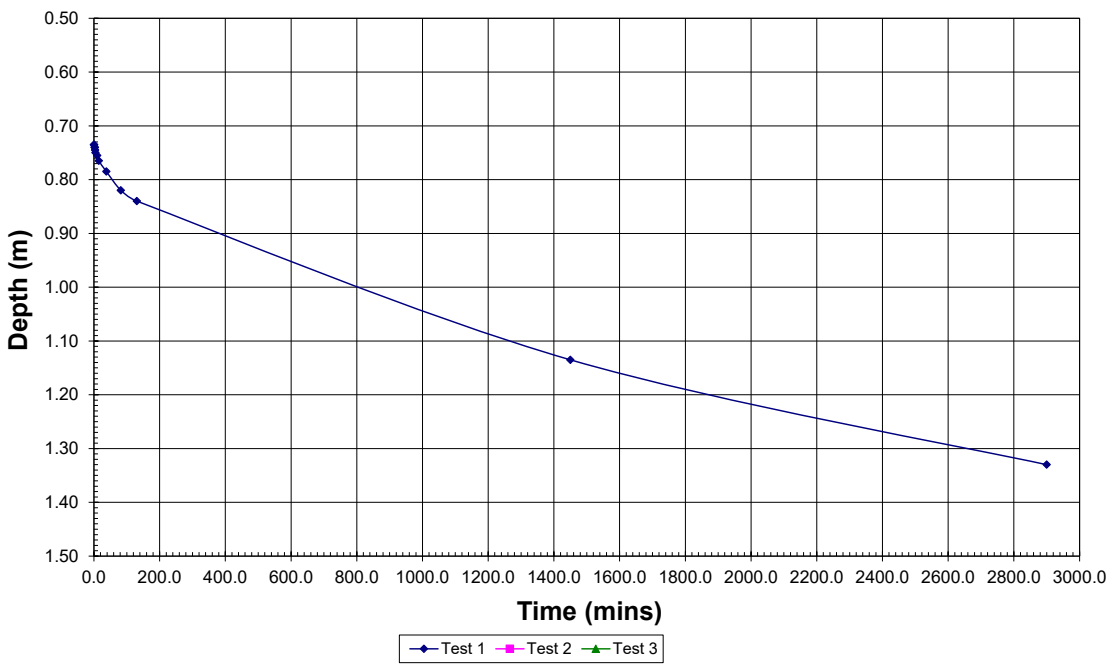
Time (min)	Depth (m)
0.0	0.74
1.0	0.74
2.0	0.74
3.0	0.74
4.0	0.75
5.0	0.75
10.0	0.76
15.0	0.77
38.0	0.79
82.0	0.82
131.0	0.84
1450.0	1.14
2900.0	1.33

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



Max. depth (m)	1.60	1.60	1.60
Effective depth (m)	0.87	1.60	1.60
75% effective depth (m)	0.95	0.40	0.40
50% effective depth (m)	1.17	0.80	0.80
25% effective depth (m)	1.38	1.20	1.20
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.11	0.20	0.20
ap 50	1.35355	2.287	2.287
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA05**
Pit depth (m)	1.62
Pit width (m)	0.25
Pit length (m)	1.02
Depth to standing water (m)	

Test 1

Time (min)	Depth (m)
0.0	0.77
1.0	0.77
2.0	0.77
3.0	0.78
4.0	0.78
5.0	0.78
10.0	0.78
15.0	0.79
47.0	0.80
106.0	0.82
151.0	0.82
1450.0	0.88
2910.0	0.94

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)

Max. depth (m)	1.62	1.62	1.62
Effective depth (m)	0.85	1.62	1.62
75% effective depth (m)	0.98	0.41	0.41
50% effective depth (m)	1.20	0.81	0.81
25% effective depth (m)	1.41	1.22	1.22
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.11	0.21	0.21
ap 50	1.3345	2.3124	2.3124
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Soakaway Test Results (after BRE Digest 365)

IBEX Consulting Engineers Limited
Abbey House, 25 Clarendon Road,
Redhill, Surrey, RH1 1QZ
+44(0)1737 452622 www.ibexconsultant.com

Project Name :	Longwater Road, Finchampstead, Wokingham, RG40 3TS	**Job No. :**	ICE0270
Client :	Stonebond Properties (Guildford) Limited	**Date :**	04/06/2025

Pit reference	**SA06**
Pit depth (m)	1.60
Pit width (m)	0.25
Pit length (m)	1.20
Depth to standing water (m)	

Test 1

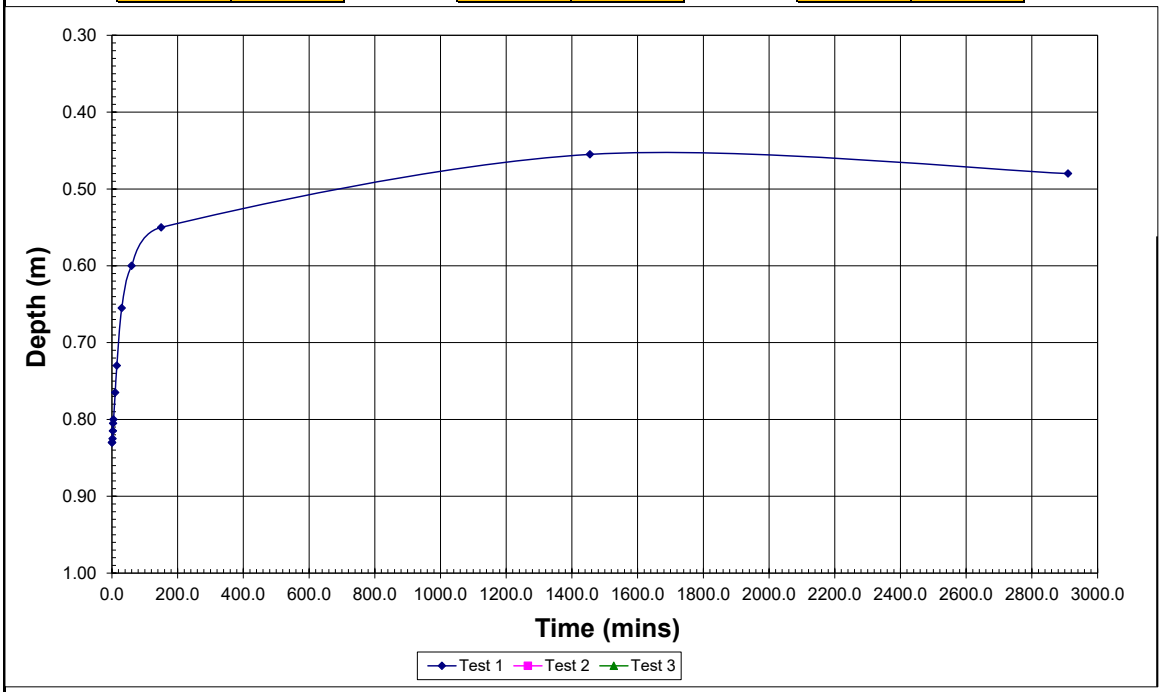
Time (min)	Depth (m)
0.0	0.83
1.0	0.83
2.0	0.83
3.0	0.82
4.0	0.81
5.0	0.80
10.0	0.77
15.0	0.73
30.0	0.66
60.0	0.60
150.0	0.55
1455.0	0.46
2910.0	0.48

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



Max. depth (m)	1.60	1.60	1.60
Effective depth (m)	0.77	1.60	1.60
75% effective depth (m)	1.02	0.40	0.40
50% effective depth (m)	1.22	0.80	0.80
25% effective depth (m)	1.41	1.20	1.20
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.12	0.24	0.24
ap 50	1.4165	2.62	2.62
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Soil infiltration rate (mm/hr)	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Notes:

1	Orange cells require input data
2	Infiltration calculated to method in 'BRE Digest 365 (1991) - Soakaway Design'
3	First line of table must be depth at time = 0

Appendix B

Geotechnical Testing Results

IBEX
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Summary of Water Content, Liquid Limit (1 point) and Plastic Limit Results

Job No.	Project Name	Programme	
37198	Longwater Road, Finchampstead, Wokingham, RG40 3TS	Samples received	25/04/2025
		Schedule received	27/04/2025
Project No.	Client	Project started	28/04/2025
ICE0270	IBEX Consulting Engineers Limited	Testing Started	20/05/2025

Hole No.	Sample				Soil Description	Water content	Passing 425µm	Preparation	LL	PL	PI	Remarks
	Ref	Top m	Base m	Type		%	%		%	%	%	
CBR02	-	0.22	1.00	B	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)	19.1	78	Tested after >425um removed by hand	35	14	21	
CBR05	-	0.30	1.00	B	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)	39.5	88	Tested after >425um removed by hand	40	18	22	
SA01	-	1.00	1.50	D	Bluish grey, orangish brown and grey slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)	20.4						
SA03	-	1.00	1.50	D	Bluish grey and orangish brown and grey slightly sandy silty CLAY	24.8						
SA05	-	1.00	1.50	D	Greyish brown clayey sandy GRAVEL (gravel is fmc and sub-angular to sub-rounded)	13.5						
SA06	-	1.00	1.50	D	Brownish grey slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)	25.2						
WS01	-	1.00	-	D	Brown, bluish grey and orangish brown slightly sandy slightly organic silty CLAY	56.5						
WS02	-	1.00	-	D	Orangish brown and bluish grey slightly sandy silty CLAY	39.0						
WS02	-	4.00	-	D	Orangish brown gravelly clayey SAND (gravel is fm and sub-angular to sub-rounded)	17.0						
WS04	-	1.00	-	D	Greyish brown slightly gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to angular)	29.8	92	Tested after >425um removed by hand	47	15	32	
WS04	-	3.00	-	D	Bluish grey and occasional orangish brown sandy silty CLAY	27.1						
WS05	-	1.00	-	D	Yellowish brown, brown and grey slightly gravelly slightly sandy slightly oragnic silty CLAY with frequent fine rootlets (gravel is fm and sub-angular)	51.6	97	Tested after >425um removed by hand	60	20	40	

80g/300 cone used unless otherwise stated, Corretation factor for 1 point method carried out using Table 1 (BS1377: 1990, Part 2)

Test Methods: BS EN ISO 17892
Part 1: 2014+A1:2022 Water content
Part 12: 2018 +A2:2022 Liquid & plastic limit

These results only apply to the items tested
NOTE: The report shall not be reproduced except in full without authority of the laboratory

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved
Initials J.P
Date: 23/05/2025

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

Summary of Water Content, Liquid Limit (1 point) and Plastic Limit Results

Job No.	Project Name	Programme	
37198	Longwater Road, Finchampstead, Wokingham, RG40 3TS	Samples received	25/04/2025
		Schedule received	27/04/2025
Project No.	Client	Project started	28/04/2025
ICE0270	IBEX Consulting Engineers Limited	Testing Started	20/05/2025

Hole No.	Sample				Soil Description	Water content	Passing 425µm	Preparation	LL	PL	PI	Remarks
	Ref	Top m	Base m	Type		%	%		%	%	%	
WS05	-	4.00	-	D	Greenish grey gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)	18.8						
WS06	-	4.00	-	D	Greenish grey, bluish grey and occasional orangish brown sandy silty CLAY	25.5						
WS07	-	3.00	-	D	Orangish brown gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)	15.4						
WS08	-	2.00	-	D	Bluish grey and orangish brown sandy silty CLAY	20.2						
WS09	-	2.50	-	D	Greenish grey sandy silty CLAY	27.5	100	Tested in natural condition	48	20	28	
WS10	-	1.00	-	D	Brown clayey sandy GRAVEL (gravel is fmc and sub-angular to sub-rounded)	13.6						
WS10	-	3.00	-	D	Greenish grey and slightly orangish brown gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)	15.6						
WS11	-	2.00	-	D	Greenish grey and bluish grey gravelly very sandy silty CLAY (gravel is fm and sub-angular to sub-rounded)	16.3						
WS11	-	4.00	-	D	Greenish grey clayey SAND with rare medium to coarse sub-rounded gravel	19.7						
WS12	-	1.00	-	D	Brown, orangish brown and grey slightly gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to angular)	23.3	81	Tested after >425um removed by hand	42	16	26	
WS13	-	2.00	-	D	Orangish brown and bluish grey sandy silty CLAY	18.9						
WS14	-	0.75	-	D	Orangish brown and bluish grey slightly oragnic sandy silty CLAY with dark grey carbonaceous stains and occasional rootlets	50.0						

80g/300 cone used unless otherwise stated, Corretation factor for 1 point method carried out using Table 1 (BS1377: 1990, Part 2)

Test Methods: BS EN ISO 17892
Part 1: 2014+A1:2022 Water content
Part 12: 2018 +A2:2022 Liquid & plastic limit

These results only apply to the items tested
NOTE: The report shall not be reproduced except in full without authority of the laboratory

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

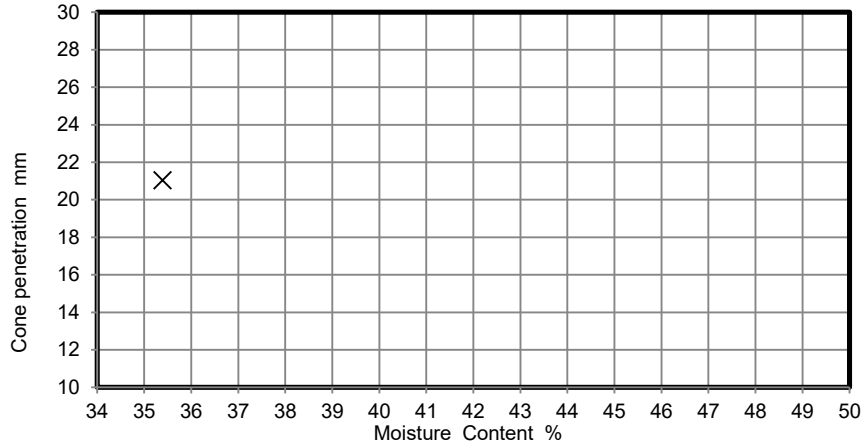
Checked and Approved
Initials J.P
Date: 23/05/2025

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	CBR02
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	0.22
Soil Description	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base m	1.00
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	21/05/2025



WATER CONTENT	**19.1**	**%**
% PASSING 425µm SIEVE	**78**	**%**
LIQUID LIMIT	**35**	**%**
PLASTIC LIMIT	**14**	**%**
PLASTICITY INDEX	**21**	**%**

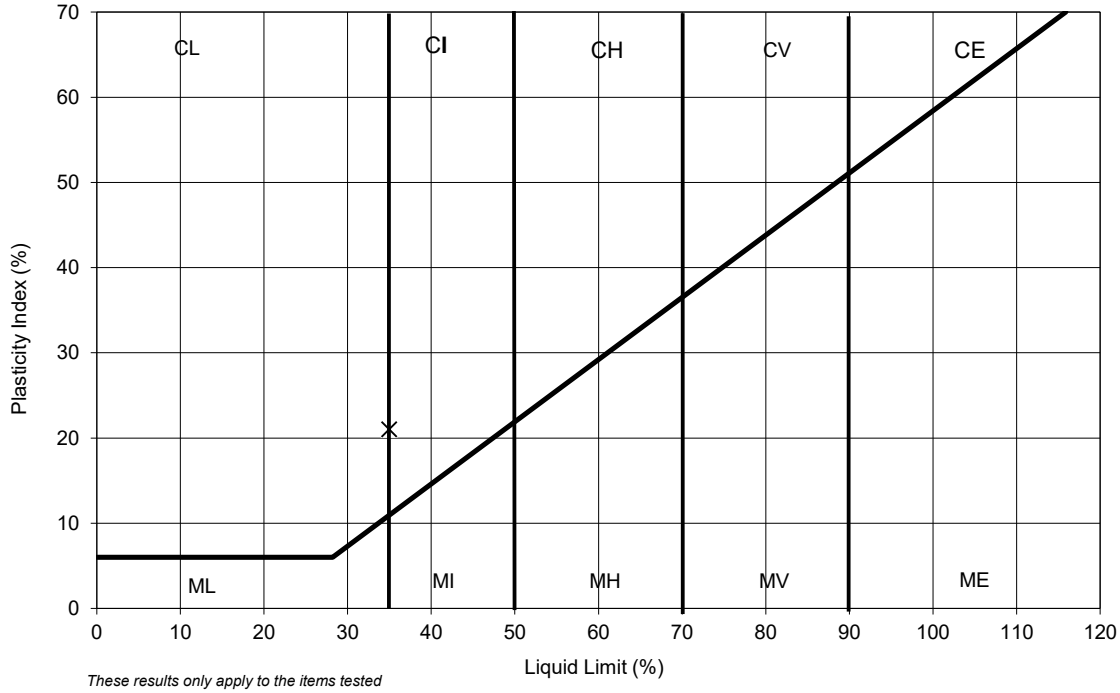
Preparation Method

Tested after >425um removed by hand

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU
Tel: 01923 711 288 Email: James@k4soils.com

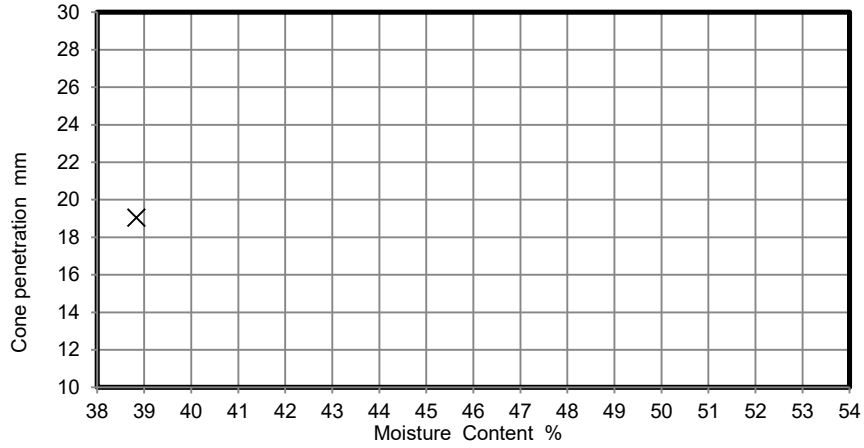
UKAS TESTING

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	CBR05
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	0.30
Soil Description	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base m	1.00
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	21/05/2025



WATER CONTENT	**39.5**	**%**
% PASSING 425µm SIEVE	**88**	**%**
LIQUID LIMIT	**40**	**%**
PLASTIC LIMIT	**18**	**%**
PLASTICITY INDEX	**22**	**%**

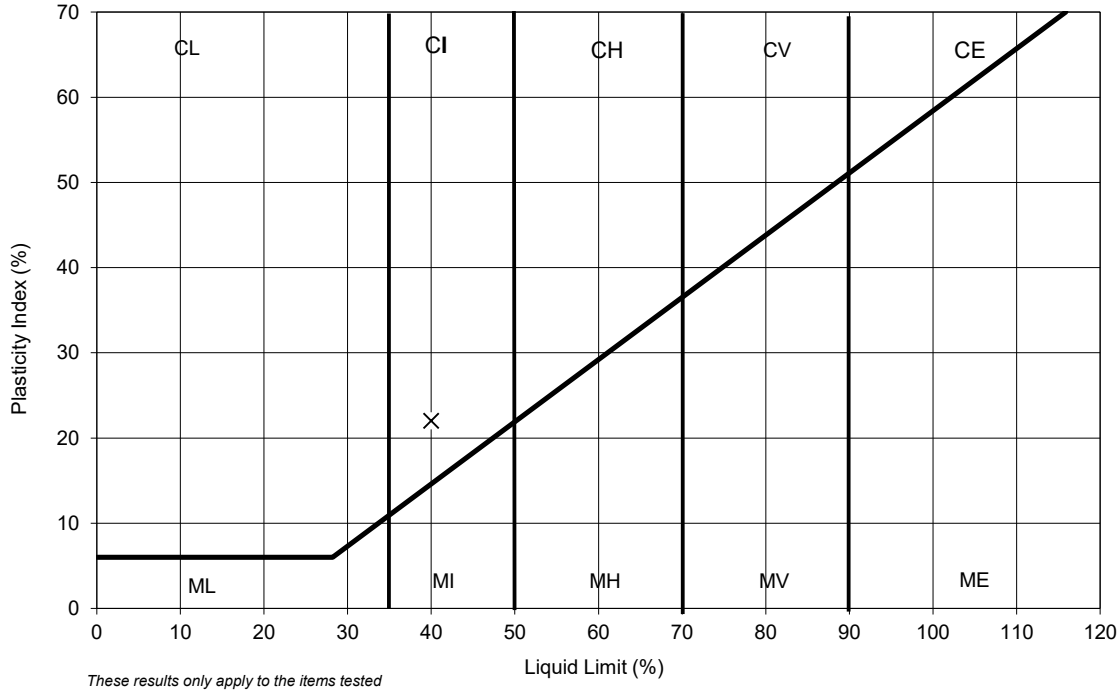
Preparation Method

Tested after >425um removed by hand

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

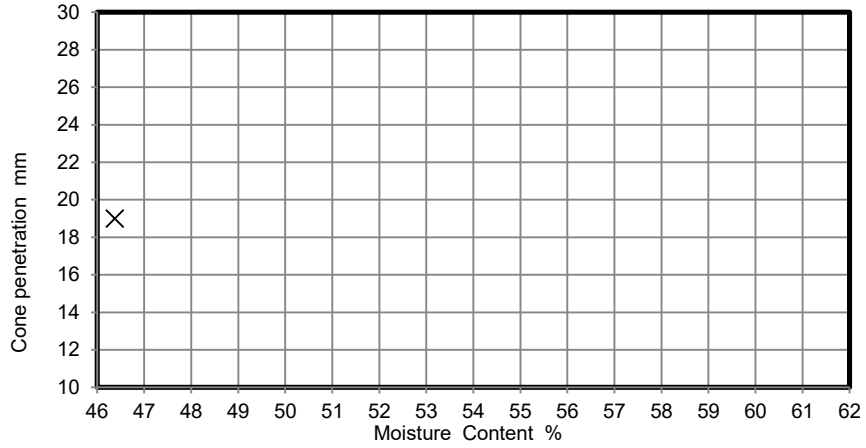
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU
Tel: 01923 711 288 Email: James@k4soils.com

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	WS04
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	1.00
Soil Description	Greyish brown slightly gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base m	-
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	20/05/2025



WATER CONTENT	**29.8**	**%**
% PASSING 425µm SIEVE	**92**	**%**
LIQUID LIMIT	**47**	**%**
PLASTIC LIMIT	**15**	**%**
PLASTICITY INDEX	**32**	**%**

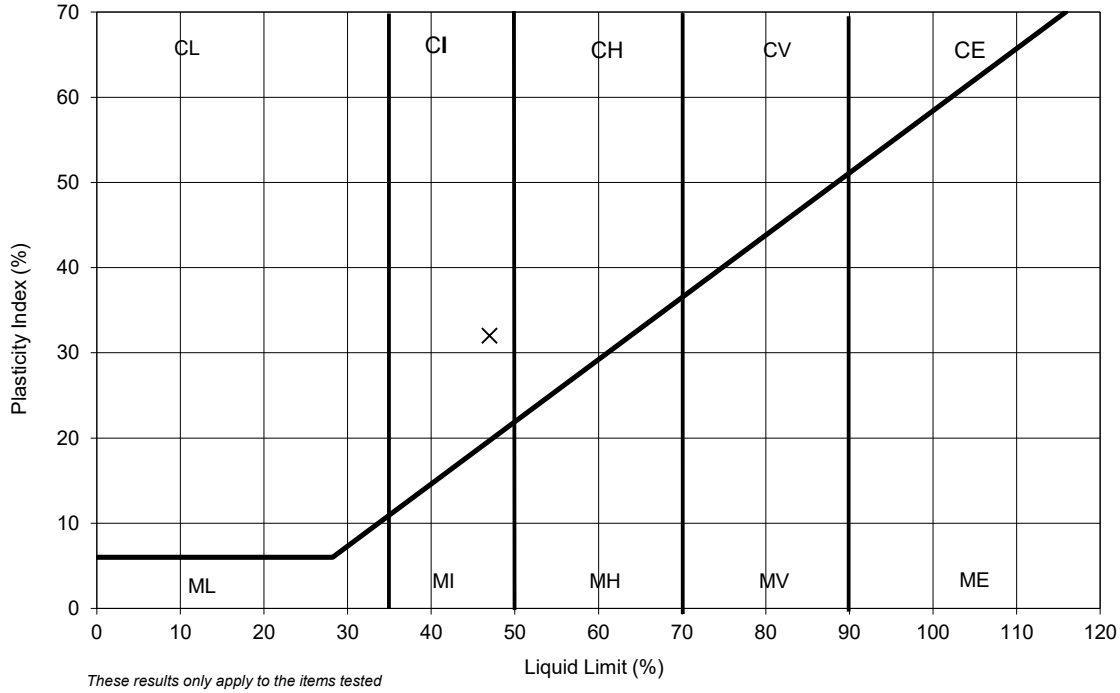
Preparation Method

Tested after >425um removed by hand

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

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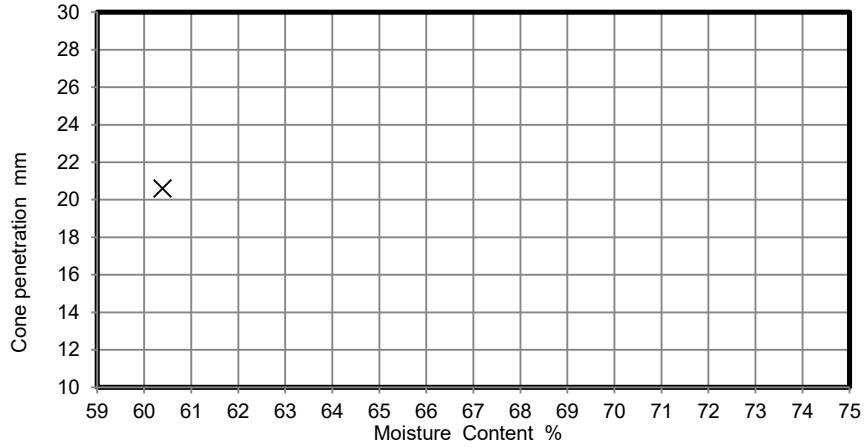
Tel: 01923 711 288 Email: James@k4soils.com

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	WS05
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	1.00
Soil Description	Yellowish brown, brown and grey slightly gravelly slightly sandy slightly oragnic silty CLAY with frequent fine rootlets (gravel is fm and sub-angular)			Depth Base m	-
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	20/05/2025



WATER CONTENT	**51.6**	**%**
% PASSING 425µm SIEVE	**97**	**%**
LIQUID LIMIT	**60**	**%**
PLASTIC LIMIT	**20**	**%**
PLASTICITY INDEX	**40**	**%**

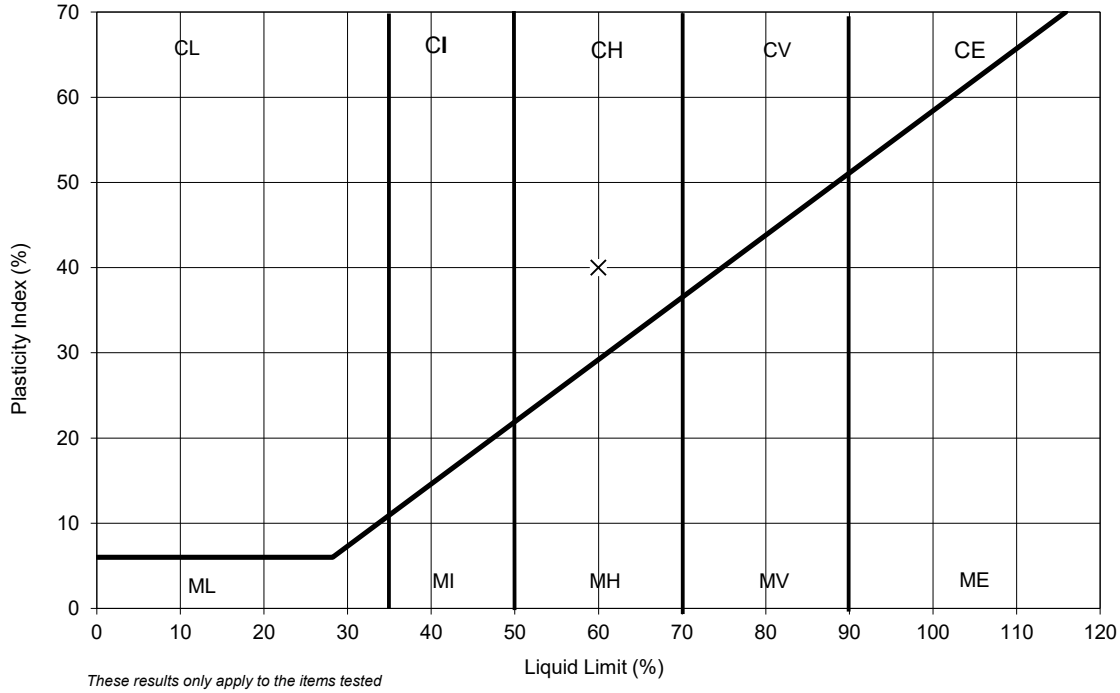
Preparation Method

Tested after >425um removed by hand

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU
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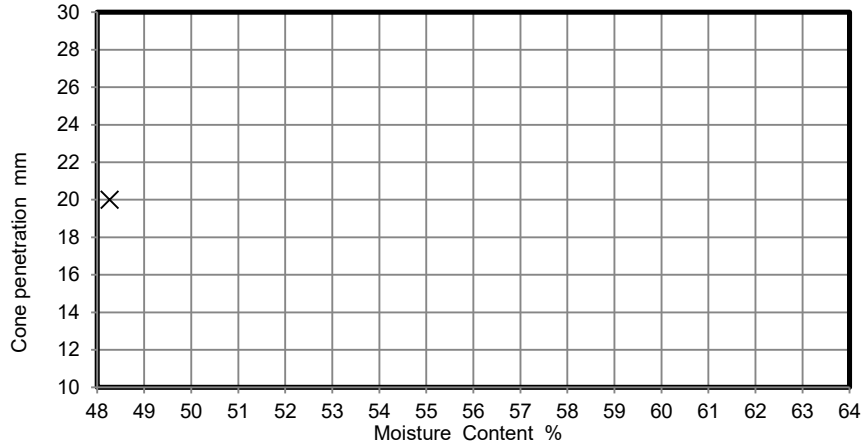
2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	WS09
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	2.50
Soil Description	Greenish grey sandy silty CLAY			Depth Base m	-
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	20/05/2025



WATER CONTENT	**27.5**	**%**
% PASSING 425µm SIEVE	**100**	**%**
LIQUID LIMIT	**48**	**%**
PLASTIC LIMIT	**20**	**%**
PLASTICITY INDEX	**28**	**%**

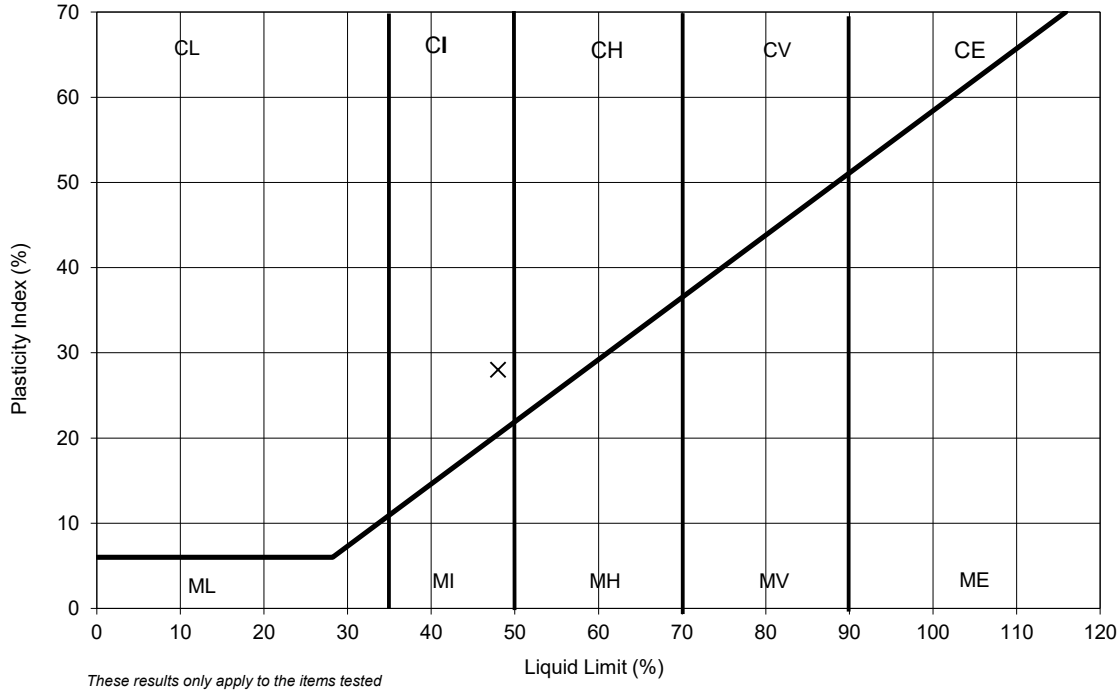
Preparation Method

Tested in natural condition

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

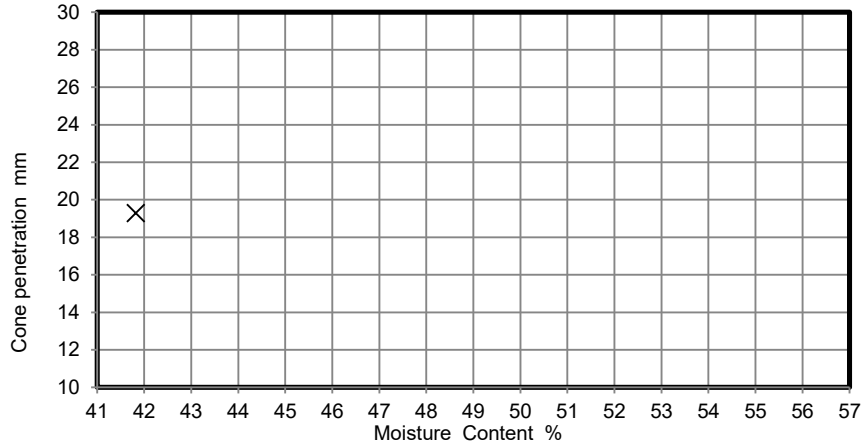
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU
Tel: 01923 711 288 Email: James@k4soils.com

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

				Job No.	37198
				Borehole/Pit No.	WS12
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top m	1.00
Soil Description	Brown, orangish brown and grey slightly gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base m	-
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
				Project Started	28/04/2025
				Date Tested	20/05/2025



WATER CONTENT	**23.3**	**%**
% PASSING 425µm SIEVE	**81**	**%**
LIQUID LIMIT	**42**	**%**
PLASTIC LIMIT	**16**	**%**
PLASTICITY INDEX	**26**	**%**

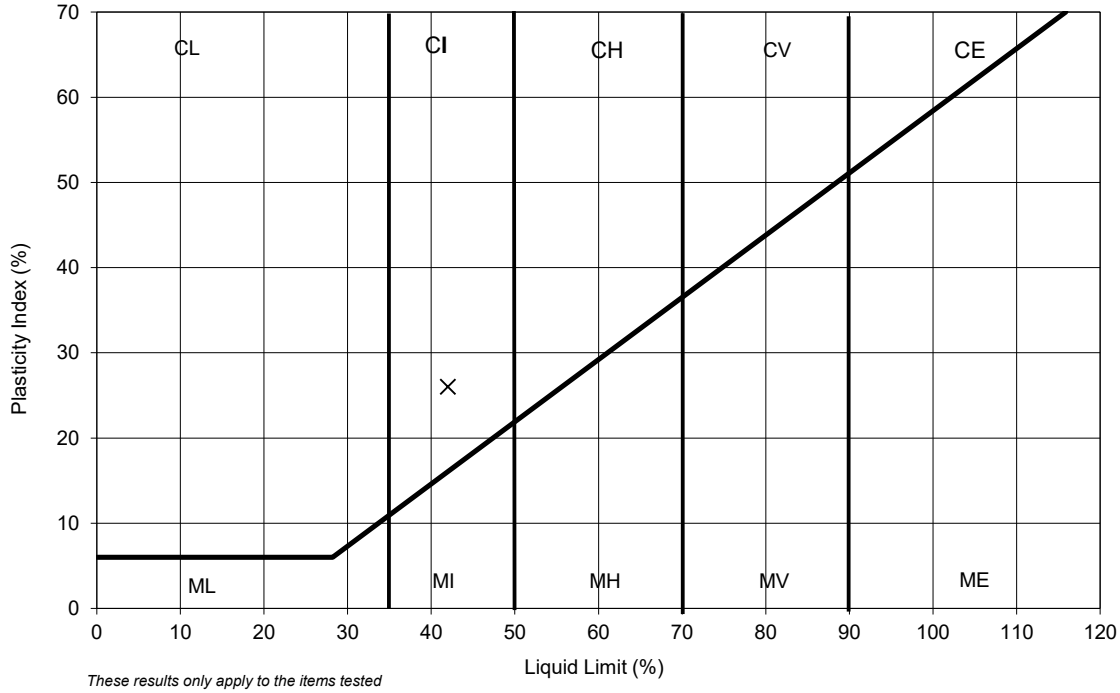
Preparation Method

Tested after >425um removed by hand

Remarks

Factors corresponding to the cone penetration and moisture content range in Table 1 (BS1377:1990 ; Part 2)

PLASTICITY INDEX



These results only apply to the items tested

TEST METHOD

BS EN ISO17892: Part 1:2014+A1:2022 Water Content
BS EN ISO 17892: Part 12:2018+A2:2022 Liquid Limit & Plastic Limit

Checked and Approved

Initials: J.P
Date: 23/05/2025

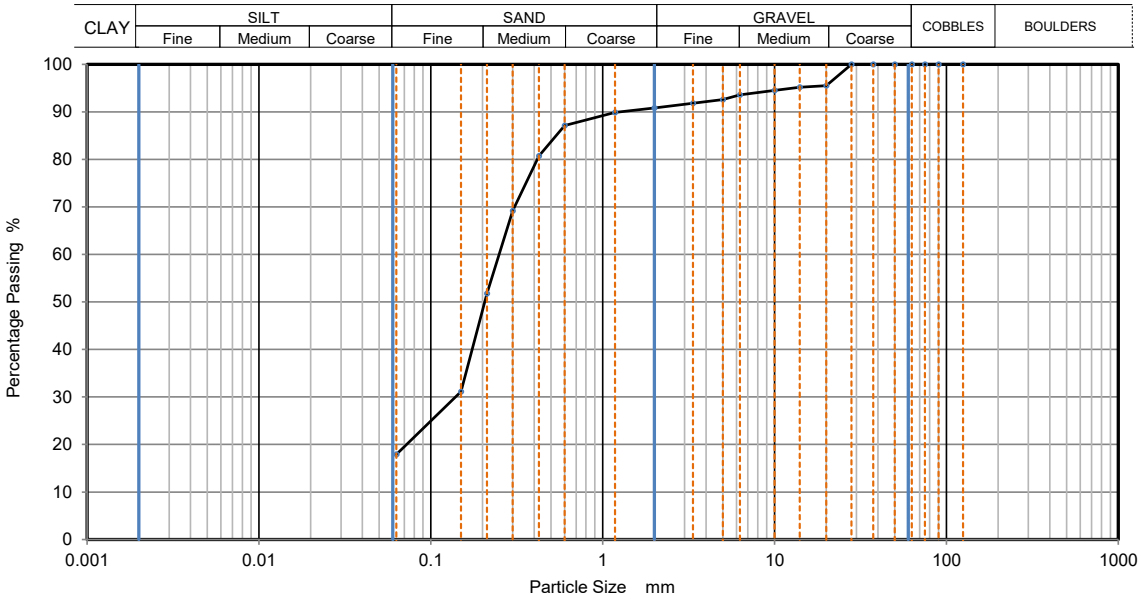
Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU
Tel: 01923 711 288 Email: James@k4soils.com

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Job Ref	37198
				Borehole/Pit No.	WS03
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Sample No.	-
				Depth Top	2.00 m
Soil Description	Bluish grey gravelly silty clayey SAND (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS EN ISO 17892 Part 4: 2016			Project started	28/04/2025
These results only apply to the items tested				Date tested	22/05/2025



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	96		
14	95		
10	95		
6.3	94		
5	93		
3.35	92		
2	91		
1.18	90		
0.6	87		
0.425	81		
0.3	69		
0.212	52		
0.15	31		
0.063	18		

Sample Proportions	% dry mass
Very coarse	0
Gravel	9
Sand	73
Fines <0.063mm	18

Grading Analysis		
D100	mm	
D60	mm	0.25
D30	mm	0.14
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with ISO17892 Part 4 unless noted below

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: **J.P**

Date: 23/05/2025

UKAS TESTING

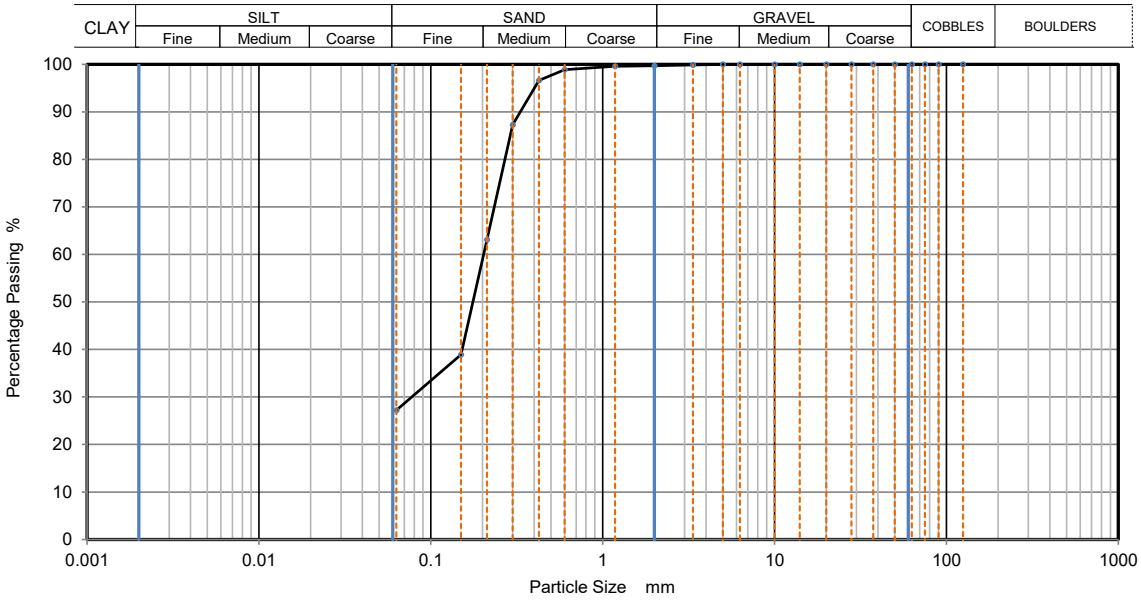
2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R3

PARTICLE SIZE DISTRIBUTION

Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Job Ref	37198
				Borehole/Pit No.	WS06
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Sample No.	-
				Depth Top	2.00 m
Soil Description	Bluish grey and orangish brown silty clayey SAND			Depth Base	- m
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS EN ISO 17892 Part 4: 2016			Project started	28/04/2025
These results only apply to the items tested				Date tested	22/05/2025



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	97		
0.3	87		
0.212	63		
0.15	39		
0.063	27		

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	73
Fines <0.063mm	27

Grading Analysis		
D100	mm	
D60	mm	0.203
D30	mm	0.0777
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: **J.P**

Date: 23/05/2025

UKAS TESTING

2519

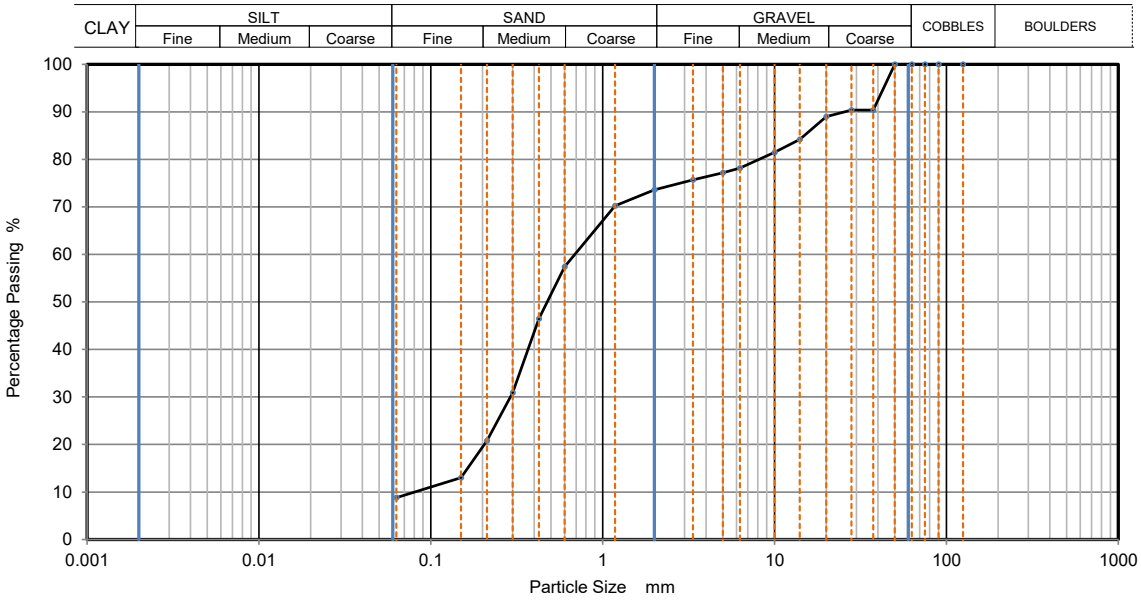
Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R3

PARTICLE SIZE DISTRIBUTION

				Job Ref	37198
				Borehole/Pit No.	WS10
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	-
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	4.00 m
Soil Description	Orangish brown slightly silty slightly clayey very gravelly SAND (gravel is fmc and sub-angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS EN ISO 17892 Part 4: 2016			Project started	28/04/2025
				Date tested	22/05/2025

These results only apply to the items tested



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	90		
28	90		
20	89		
14	84		
10	82		
6.3	78		
5	77		
3.35	76		
2	74		
1.18	70		
0.6	57		
0.425	47		
0.3	31		
0.212	21		
0.15	13		
0.063	9		

Sample Proportions	% dry mass
Very coarse	0
Gravel	26
Sand	65
Fines <0.063mm	9

Grading Analysis		
D100	mm	
D60	mm	0.689
D30	mm	0.291
D10	mm	0.0812
Uniformity Coefficient		8.5
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with ISO17892 Part 4 unless noted below

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: **J.P**

Date: 23/05/2025

UKAS TESTING

2519

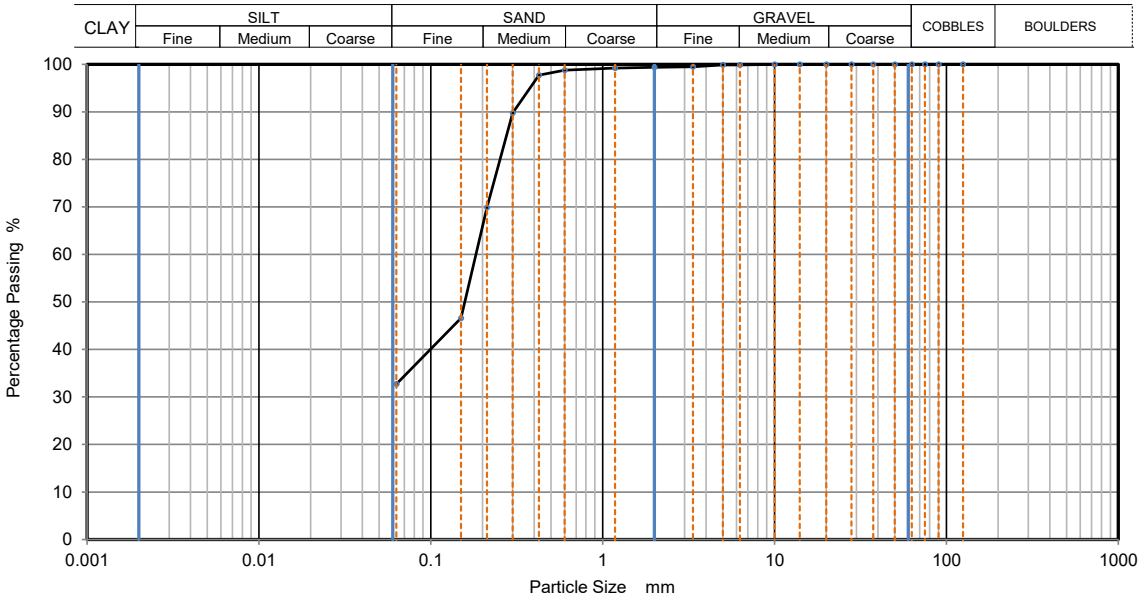
Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R3

PARTICLE SIZE DISTRIBUTION

Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Job Ref	37198
				Borehole/Pit No.	WS13
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Sample No.	-
				Depth Top	3.00 m
Soil Description	Greenish grtey and bluish grey silty clayey SAND with rare fine gravel			Depth Base	- m
				Sample Type	D
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS EN ISO 17892 Part 4: 2016			Project started	28/04/2025
				Date tested	22/05/2025

These results only apply to the items tested



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	90		
0.212	70		
0.15	47		
0.063	33		

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	66
Fines <0.063mm	33

Grading Analysis		
D100	mm	
D60	mm	0.183
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with ISO17892 Part 4 unless noted below

K4 Soils Laboratory

Unit 8, Olds Close, Watford, Herts, WD18 9RU

Email: james@k4soils.com

Tel: 01923 711288

Checked and Approved

Initials: **J.P**

Date: 23/05/2025

California Bearing Ratio (CBR)

Job Ref	37198				
Borehole/Pit No.	CBR01				
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.23 m
Soil Description	Orangish brown slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition: REMOULDED

Details: Recompacted with specified standard effort using 2.5kg rammer

Material retained on 20mm sieve removed: 5 %

Initial Specimen details

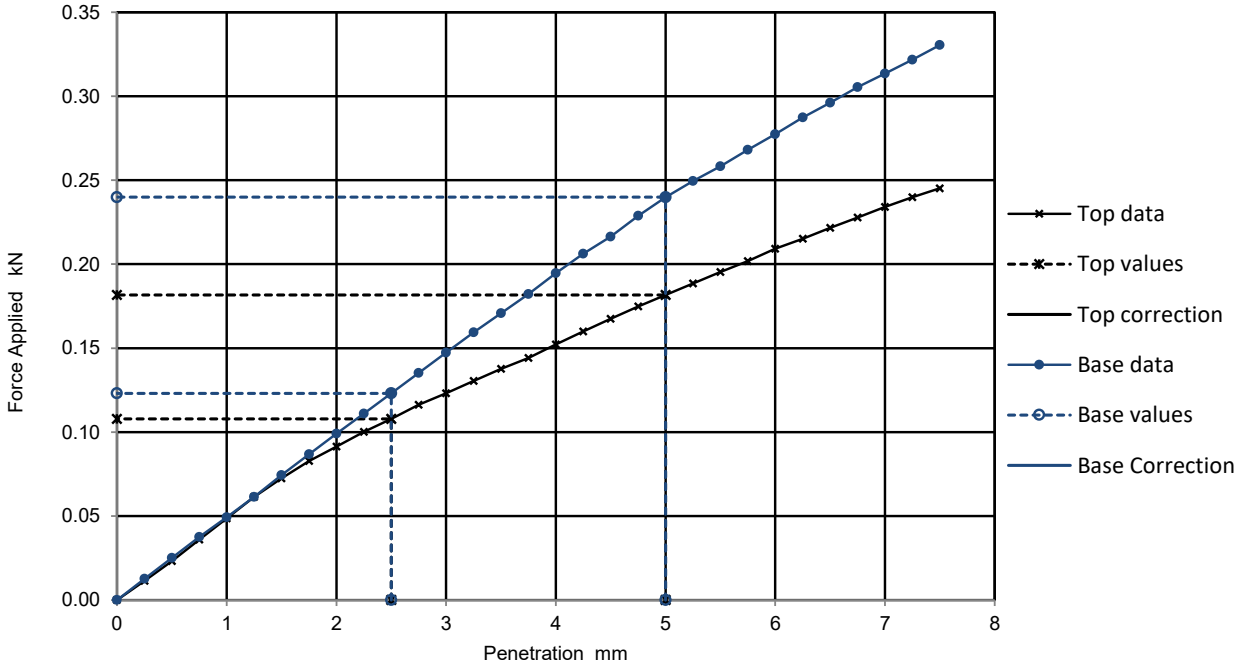
Bulk density	2.02	Mg/m3
Dry density	1.64	Mg/m3
Moisture content	23	%

Soaking details

Period of soaking	4	days
Time to surface	1	days
Amount of swell recorded	0.52	mm

Surcharge applied	4	kg
	2	kPa

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	0.82	0.91	0.91	N/A	23
BASE	No	0.93	1.2	1.2		22

Remarks

UKAS TESTING 2519

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials: J.P

Date: 05/06/2025

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

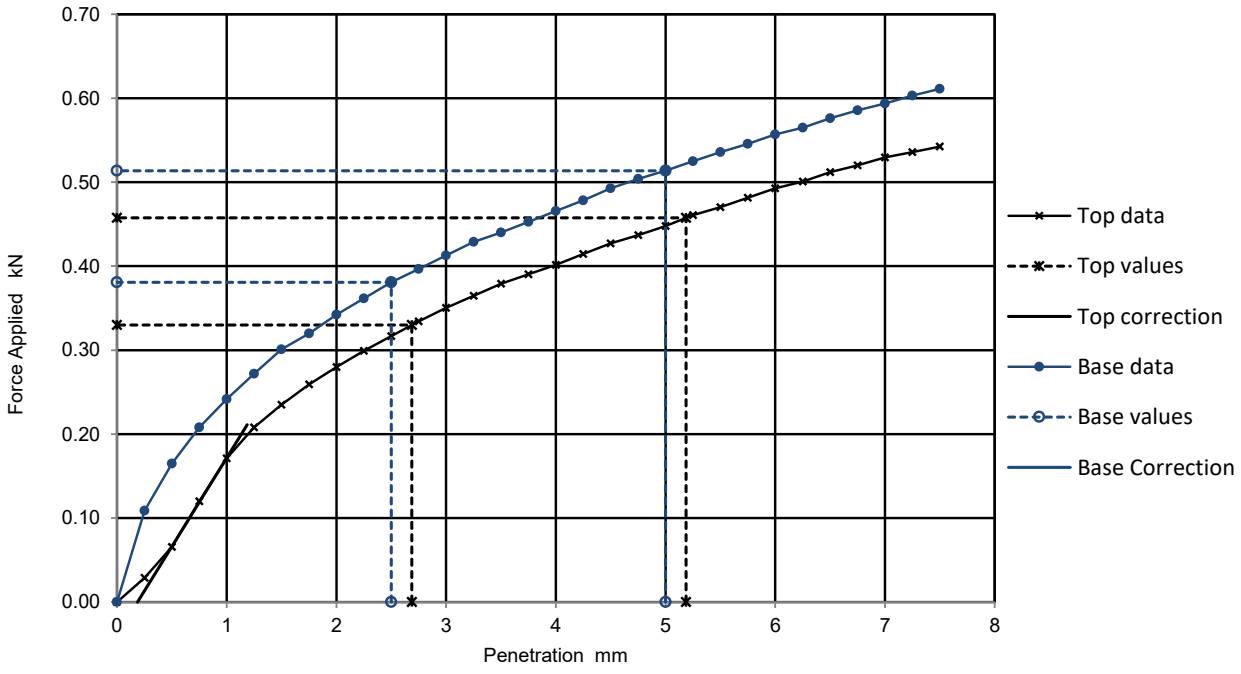
California Bearing Ratio (CBR)

				Job Ref	37198
				Borehole/Pit No.	CBR02
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.22 m
Soil Description	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition	REMOULDED			Soaking details		
Details	Recompacted with specified standard effort using 2.5kg rammer			Period of soaking	4	days
				Time to surface	1	days
				Amount of swell recorded	0.04	mm
Material retained on 20mm sieve removed		5	%			
Initial Specimen details	Bulk density	2.05	Mg/m3	Surcharge applied	4	kg
	Dry density	1.72	Mg/m3		2	kPa
	Moisture content	19	%			

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	Yes	2.5	2.3	2.5	2.7	20
BASE	No	2.9	2.6	2.9		19

Remarks

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

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Initials: **J.P**

Date: 05/06/2025

UKAS TESTING

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

MSF-5-R16

California Bearing Ratio (CBR)

Job Ref	37198				
Borehole/Pit No.	CBR03				
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.24 m
Soil Description	Brown, bluish grey and orangish brown mottled sandy silty CLAY with occasional fine rootlets			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition: REMOULDED

Details: Recompacted with specified standard effort using 2.5kg rammer

Material retained on 20mm sieve removed: 0 %

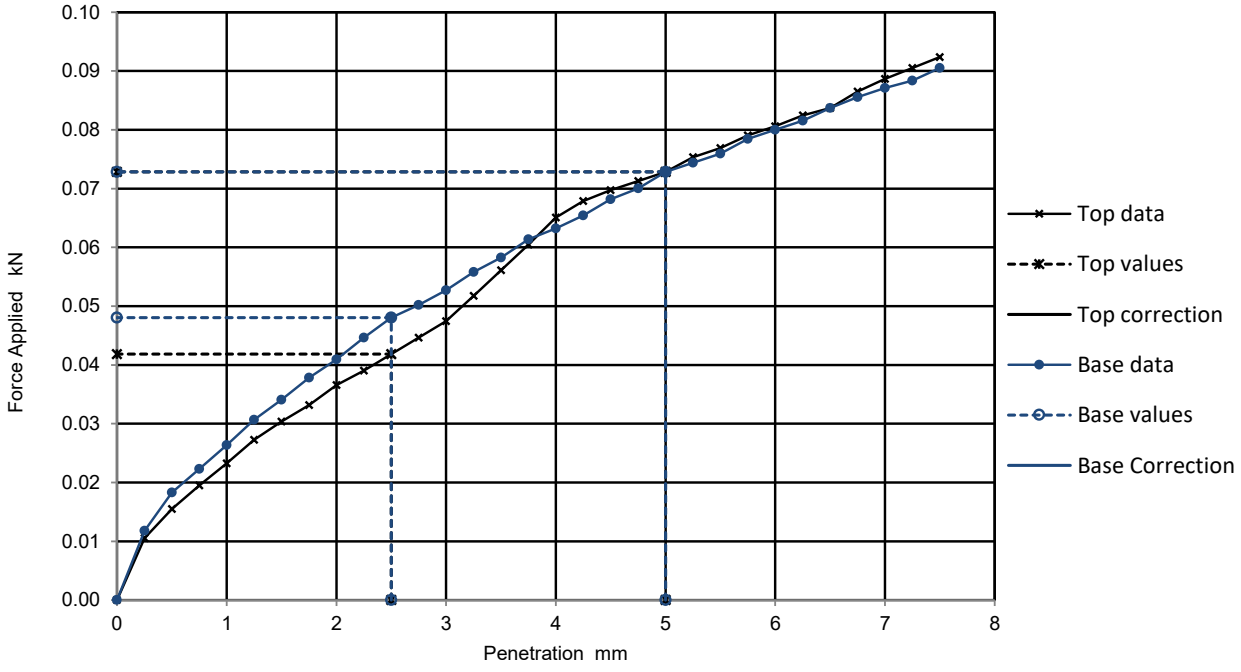
Initial Specimen details

Bulk density	1.72	Mg/m3
Dry density	1.12	Mg/m3
Moisture content	53	%

Soaking details

Period of soaking	5	days
Time to surface	1	days
Amount of swell recorded	-0.58	mm
Surcharge applied	8	kg
	5	kPa

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	0.32	0.36	0.36	0.36	53
BASE	No	0.36	0.36	0.36		56

Remarks

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Date: 05/06/2025

California Bearing Ratio (CBR)

				Job Ref	37198
				Borehole/Pit No.	CBR04
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.26 m
Soil Description	Brown, bluish grey and orangish brown mottled slightly gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition: REMOULDED

Details: Recompacted with specified standard effort using 2.5kg rammer

Material retained on 20mm sieve removed: 2 %

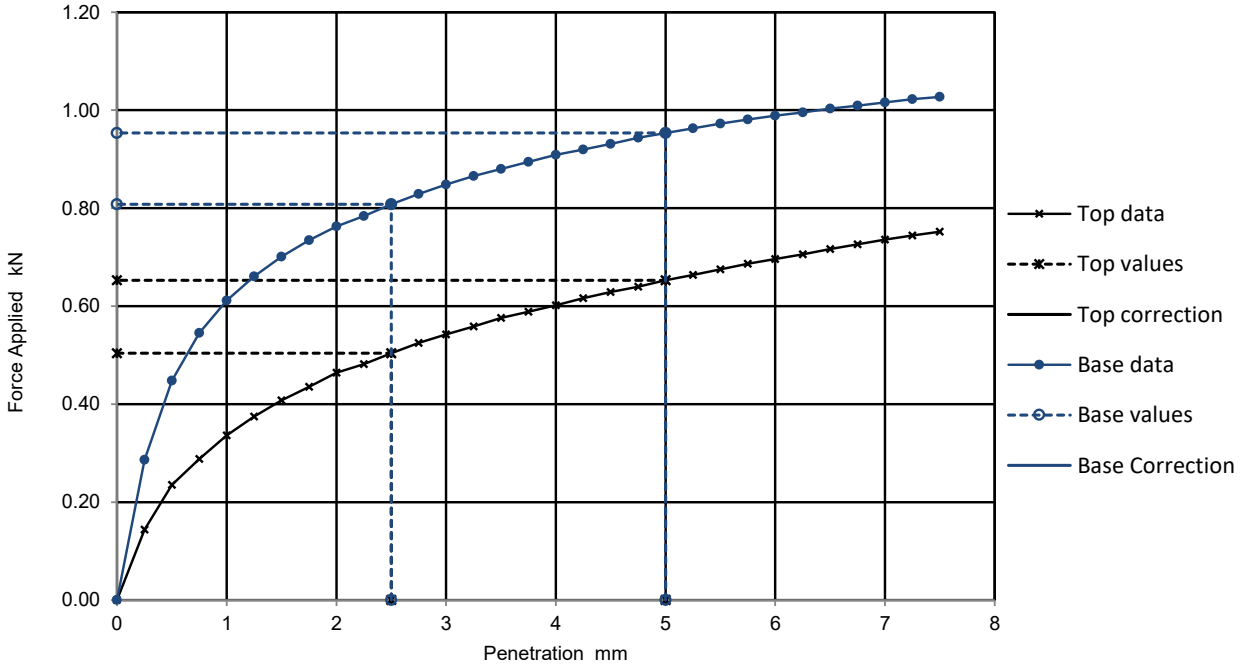
Initial Specimen details

Bulk density	2.02	Mg/m3
Dry density	1.67	Mg/m3
Moisture content	21	%

Soaking details

Period of soaking	4	days
Time to surface	1	days
Amount of swell recorded	0.28	mm
Surcharge applied	4	kg
	2	kPa

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	3.8	3.3	3.8	N/A	25
BASE	No	6.1	4.8	6.1		23

Remarks

UKAS TESTING 2519

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California Bearing Ratio (CBR)

Job Ref	37198				
Borehole/Pit No.	CBR05				
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.30 m
Soil Description	Brown and grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to angular)			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition: REMOULDED

Details: Recompacted with specified standard effort using 2.5kg rammer

Material retained on 20mm sieve removed: 1 %

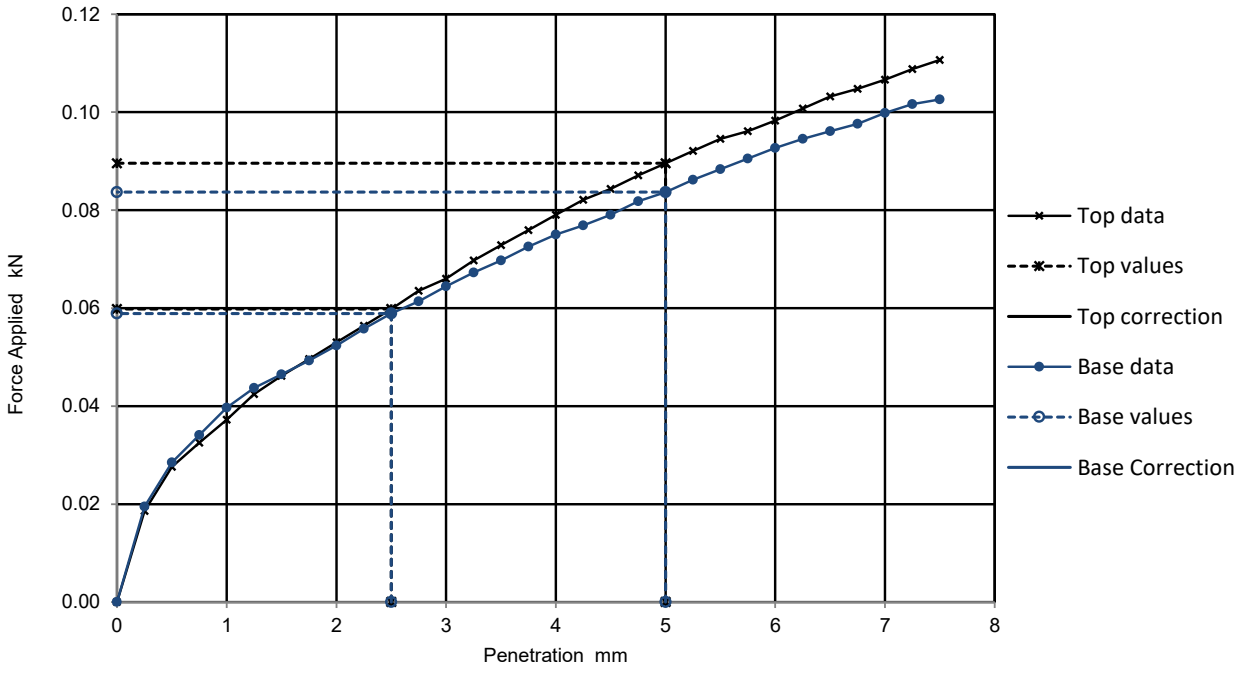
Initial Specimen details

Bulk density	1.81	Mg/m3
Dry density	1.33	Mg/m3
Moisture content	36	%

Soaking details

Period of soaking	5	days
Time to surface	1	days
Amount of swell recorded	-0.74	mm
Surcharge applied	6	kg
	4	kPa

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	0.45	0.45	0.45	0.45	39
BASE	No	0.45	0.42	0.45		38

Remarks

Test Report by K4 SOILS LABORATORY
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UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

California Bearing Ratio (CBR)

Job Ref	37198				
Borehole/Pit No.	CBR06				
Site Name	Longwater Road, Finchampstead, Wokingham, RG40 3TS			Sample No.	
Project No.	ICE0270	Client	IBEX Consulting Engineers Limited	Depth Top	0.35 m
Soil Description	Brown, orangish brown and bluish grey mottled slightly gravelly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	1.00 m
				Sample Type	B
				Samples received	25/04/2025
				Schedules received	27/04/2025
Test Method	BS1377 : Part 4 : 1990, clause 7			Project Started	28/04/2025
				Date Tested	28/05/2025

Specimen Preparation

Condition: REMOULDED

Details: Recompacted with specified standard effort using 2.5kg rammer

Material retained on 20mm sieve removed: 2 %

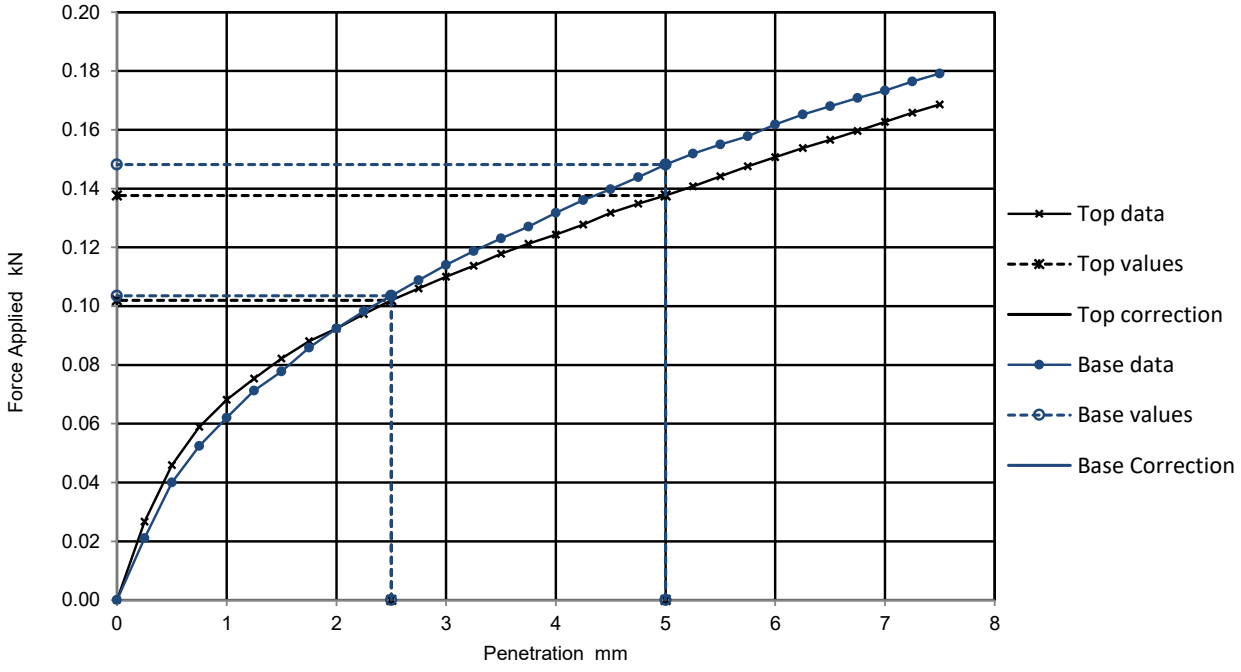
Initial Specimen details

Bulk density	1.93	Mg/m3
Dry density	1.54	Mg/m3
Moisture content	25	%

Soaking details

Period of soaking	4	days
Time to surface	1	days
Amount of swell recorded	-0.19	mm
Surcharge applied	4	kg
	2	kPa

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	0.77	0.69	0.77	0.78	27
BASE	No	0.78	0.74	0.78		29

Remarks

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Date: 05/06/2025

Appendix C

Geochemical Testing Results

IBEX CONSULTING ENGINEERS

ANALYTICAL TEST REPORT

Report Number	25-03972, issue number 3
Contract name:	Longwater Road, Finchampstead, RG403TS
Client reference:	ICE027
Clients name:	Ibex Consulting Engineers Limited
Clients address:	Ibex Consulting Engineers Limited Abbey House 25 Clarendon Road Surrey RH1 1QZ
Samples received:	28/04/2025
Analysis started:	29/04/2025
Analysis completed:	02/06/2025
Report issued:	02/06/2025
	3. Replaces Analytical Report number 25-03972; issue no.2

Key	U UKAS accredited test M MCERTS & UKAS accredited test $ Test carried out by an approved subcontractor I/S Insufficient sample to carry out test U/S Sample not suitable for testing NAD No Asbestos Detected
Approved by:	[redacted] Abbie Neasham-Bourn Senior Reporting Administrator

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

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

Re-Issue Summary

Client: Ibex Consulting Engineers Limited
Address: Abbey House, 25 Clarendon Road, Redhill, Surrey, RH1 1QZ

Date: **02-Jun-25**

Report No.: **25-03972**

Issue: **3**

This report replaces 25-03972, issue: 2, issued: 08 May 2025

Reason for Change
7. Other - Suite ammendment

Details of Changes to Job / Samples

Sample Ref	Field Name	Previous Data	New Data	Reason	Changed
46315	ISSUEREASN	7. Other - Suite	02/06/2025		

Details of Changes to Work / Results

Sample Refs:	46315	46316	46317	46321	46326
Tests* / Dets*:					
GCXGC in Solids					
Sulphide By DA in Solids	X	X	X	X	X
Asbestos Solid					
VPH in Soil					
Anions by Discrete					

Key
A - Additional Work added
D - Work Deleted
E - Result Edited*
R - Work Repeated*

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

Re-issued by: Abbie Neasham-Bourn
Senior Reporting Administrator

Approved by: Abbie Neasham-Bourn
Senior Reporting Administrator

SAMPLE INFORMATION

MCERTS (Soils):

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

Lab ref	Sample ID	Depth (m)	Sample description	Material removed	% Removed	% Moisture
46315	SA01	0.00 - 0.50	Brown Clay sandy loam with Gravel and Vegetation.	-	-	33.6
46316	SA05	0.00 - 0.40	Brown Clay sandy loam with Gravel and Vegetation.	-	-	19.7
46317	SA06	0.00 - 0.30	Brown Clay sandy loam with Gravel and Vegetation.	-	-	39.1
46318	WS01	0.00 - 1.50	Grey Clayey Sand with Gravel and Vegetation.	-	-	31.6
46319	WS06	0.00 - 2.50	-	-	-	-
46320	WS07	0.00 - 2.50	Brown Sand with Gravel and Vegetation.	-	-	15.9
46321	WS08	0.00 - 0.75	Brown Clay sandy loam with Gravel and Vegetation.	-	-	12.5
46322	WS08	0.00 - 1.50	Brown Sandy Loamy Clay with Gravel and Vegetation.	-	-	13.1
46323	WS10	0.00 - 3.00	Brown Sandy Clay with Gravel and Vegetation.	-	-	12.1
46324	WS11	0.00 - 4.00	Brown Sand with Gravel and Vegetation.	-	-	15.5
46325	WS12	0.00 - 2.00	Grey Sandy Clay with Gravel and Vegetation.	-	-	18.2
46326	WS13	0.00 - 0.20	Brown Loamy Sand with Gravel and Vegetation.	-	-	9.8
46327	WS13	0.00 - 1.00	Brown Sandy Clay with Gravel and Vegetation.	-	-	12.0
46328	WS04	0.00 - 1.00	Brown Clay with Gravel and Vegetation.	-	-	23.2

DEVIATING SAMPLE INFORMATION

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

Key

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

Lab ref	Sample ID	Depth (m)	Deviating	Tests (Reason for deviation)
46315	SA01	0.00 - 0.50	N	
46316	SA05	0.00 - 0.40	N	
46317	SA06	0.00 - 0.30	N	
46318	WS01	0.00 - 1.50	N	
46320	WS07	0.00 - 2.50	N	
46321	WS08	0.00 - 0.75	N	
46322	WS08	0.00 - 1.50	N	
46323	WS10	0.00 - 3.00	N	
46324	WS11	0.00 - 4.00	N	
46325	WS12	0.00 - 2.00	N	
46326	WS13	0.00 - 0.20	N	
46327	WS13	0.00 - 1.00	N	
46328	WS04	0.00 - 1.00	N	

SOILS

Lab Number					46315	46316	46317	46318	46320
Sample ID					SA01	SA05	SA06	WS01	WS07
Depth (m)					0.00 - 0.50	0.00 - 0.40	0.00 - 0.30	0.00 - 1.50	0.00 - 2.50
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
Asbestos									
Asbestos Identification	SUBCON	SU	0	-	NAD	NAD	NAD	n/t	n/t
Metals									
Water Soluble Magnesium	CE061	N	1	mg/l	n/t	n/t	n/t	3.36	< 1.00
Acid Soluble Sulphate (SO4)	CE062	M	100	mg/kg	1250	512	1130	n/t	n/t
Acid Soluble Sulphate (SO4)	CE062	M	0.01	%	n/t	n/t	n/t	0.07	0.03
Water Soluble Boron	CE063	N	0.5	mg/kg	0.78	< 0.50	0.53	n/t	n/t
Arsenic	CE264	U	1.8	mg/kg	32.8	17.4	124	n/t	n/t
Beryllium	CE264	M	0.2	mg/kg	< 0.2	< 0.2	0.5	n/t	n/t
Cadmium	CE264	M	1.6	mg/kg	< 1.6	< 1.6	2.0	n/t	n/t
Chromium	CE264	U	2	mg/kg	31.4	21.3	25.6	n/t	n/t
Copper	CE264	M	1.6	mg/kg	6.2	< 1.6	< 1.6	n/t	n/t
Lead	CE264	U	2.3	mg/kg	27.1	19.1	25.9	n/t	n/t
Mercury	CE264	U	0.7	mg/kg	< 0.7	< 0.7	< 0.7	n/t	n/t
Nickel	CE264	M	2.1	mg/kg	4.4	< 2.1	4.8	n/t	n/t
Selenium	CE264	U	3	mg/kg	< 3.0	< 3.0	< 3.0	n/t	n/t
Sulphur %	CE264	N	0.0032	%	n/t	n/t	n/t	0.215	0.0278
Vanadium	CE264	N	1.8	mg/kg	93.9	38.7	38.8	n/t	n/t
Zinc	CE264	M	4	mg/kg	25.1	18.1	13.9	n/t	n/t
Colourimetric									
Water Soluble Chloride	CE261	U	1.5	mg/l	n/t	n/t	n/t	6.30	12.5
Water Soluble Chloride	CE261	U	3	mg/kg	176	77.4	9.80	n/t	n/t
Nitrate as N	CE261	U	1	mg/l	n/t	n/t	n/t	1.50	< 1.00
Water Soluble Chromium VI	CE263	N	0.04	mg/kg	< 0.040	< 0.040	< 0.040	n/t	n/t
Water Soluble Sulphate	CE261	U	4	mg/kg	1250	< 4.00	142	197	128
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50	< 0.50	< 0.50	n/t	n/t
Total Cyanide	CE077	N	1	mg/kg	< 1.0	< 1.0	< 1.0	n/t	n/t
Total Sulphide	CE284	N	4	mg/kg	< 4	< 4	8	n/t	n/t
Combustion									
Moisture Content	CE001	N	0.1	%	33.6	19.7	39.1	31.6	15.9
Total Organic Carbon	CE197	M	0.1	%	4.01	3.05	5.55	n/t	n/t

SOILS

Lab Number					46315	46316	46317	46318	46320
Sample ID					SA01	SA05	SA06	WS01	WS07
Depth (m)					0.00 - 0.50	0.00 - 0.40	0.00 - 0.30	0.00 - 1.50	0.00 - 2.50
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
TPH Ali/Aro									
>C5-C44 Aliphatic (EH_2D_AL)	CE250	N	7	mg/kg	< 7.00	< 7.00	< 7.00	n/t	n/t
>C5-C44 Aromatic (EH_2D_AR)	CE250	N	7	mg/kg	18.0	< 7.00	< 7.00	n/t	n/t
>C5-C44 Total (HS_1D_MS+EH_2D_Total)	CE250	N	14	mg/kg	18.2	< 14.0	< 14.0	n/t	n/t
Organics									
Elemental Sulphur	CE034	M	10	mg/kg	< 10.0	< 10.0	< 10.0	n/t	n/t
Polyaromatic hydrocarbons									
Naphthalene	CE087	M	0.016	mg/kg	< 0.016	< 0.016	< 0.016	n/t	n/t
Acenaphthylene	CE087	M	0.015	mg/kg	< 0.015	< 0.015	< 0.015	n/t	n/t
Acenaphthene	CE087	M	0.013	mg/kg	< 0.013	< 0.013	< 0.013	n/t	n/t
Fluorene	CE087	U	0.013	mg/kg	< 0.013	< 0.013	< 0.013	n/t	n/t
Phenanthrene	CE087	M	0.014	mg/kg	< 0.014	< 0.014	< 0.014	n/t	n/t
Anthracene	CE087	U	0.017	mg/kg	< 0.017	< 0.017	< 0.017	n/t	n/t
Fluoranthene	CE087	M	0.017	mg/kg	< 0.017	0.036	< 0.017	n/t	n/t
Pyrene	CE087	M	0.016	mg/kg	< 0.016	0.033	< 0.016	n/t	n/t
Benzo(a)anthracene	CE087	U	0.012	mg/kg	< 0.012	0.034	< 0.012	n/t	n/t
Chrysene	CE087	M	0.028	mg/kg	< 0.028	< 0.028	< 0.028	n/t	n/t
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	< 0.020	0.026	< 0.020	n/t	n/t
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	< 0.025	< 0.025	< 0.025	n/t	n/t
Benzo(a)pyrene	CE087	U	0.019	mg/kg	< 0.019	0.020	< 0.019	n/t	n/t
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	< 0.019	0.021	< 0.019	n/t	n/t
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	< 0.017	< 0.017	< 0.017	n/t	n/t
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	< 0.019	< 0.019	< 0.019	n/t	n/t
Total PAH(16)	CE087	N	0.28	mg/kg	< 0.280	< 0.280	< 0.280	n/t	n/t
BTEX									
Benzene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	n/t	n/t
Toluene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	n/t	n/t
Ethylbenzene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	n/t	n/t
MTBE	CE267	N	0.002	mg/kg	< 0.002	< 0.002	< 0.002	n/t	n/t
Total BTEX	CE267	N	0.007	mg/kg	< 0.007	< 0.007	< 0.007	n/t	n/t
m,p-Xylene	CE267	U	0.002	mg/kg	< 0.002	< 0.002	< 0.002	n/t	n/t

SOILS

Lab Number					46315	46316	46317	46318	46320
Sample ID					SA01	SA05	SA06	WS01	WS07
Depth (m)					0.00 - 0.50	0.00 - 0.40	0.00 - 0.30	0.00 - 1.50	0.00 - 2.50
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
oXylenes	CE267	U	0.002	mg/kg	< 0.002	< 0.002	< 0.002	n/t	n/t
Total Petroleum Hydrocarbons									
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	n/t	n/t
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	n/t	n/t
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	n/t	n/t
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	< 1.0	< 1.0	< 1.0	n/t	n/t
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	< 0.5	< 0.5	n/t	n/t
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	< 0.7	< 0.7	< 0.7	n/t	n/t
>C16-C35 Aliphatic (EH_2D_AL)	CE250	N	3	mg/kg	< 3.0	< 3.0	< 3.0	n/t	n/t
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	< 4.0	< 4.0	< 4.0	n/t	n/t
>C35-C40 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	< 0.5	< 0.5	n/t	n/t
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	< 0.5	< 0.5	n/t	n/t
>C5-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	n/t	n/t
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	n/t	n/t
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	n/t	n/t
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	0.6	< 0.6	< 0.6	n/t	n/t
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	1.0	< 1.0	< 1.0	n/t	n/t
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	< 2.0	< 2.0	< 2.0	n/t	n/t
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	10.9	< 4.5	< 4.5	n/t	n/t
>C35-C40 Aromatic (EH_2D_AR)	CE250	N	1.5	mg/kg	2.9	< 1.5	< 1.5	n/t	n/t
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	4.2	< 2.0	< 2.0	n/t	n/t
>C10-C35 Aliphatic (EH_2D_AL)	CE250	N	3.8	mg/kg	< 3.8	< 3.8	< 3.8	n/t	n/t
>C10-C35 Aromatic (EH_2D_AR)	CE250	N	5.5	mg/kg	13.8	< 5.5	< 5.5	n/t	n/t
Wet Chem									
pH	CE004	M	0.1	pH units	7.2	5.8	4.8	6.0	5.2

SOILS

Lab Number					46321	46322	46323	46324	46325
Sample ID					WS08	WS08	WS10	WS11	WS12
Depth (m)					0.00 - 0.75	0.00 - 1.50	0.00 - 3.00	0.00 - 4.00	0.00 - 2.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
Asbestos									
Asbestos Identification	SUBCON	SU	0	-	NAD	n/t	n/t	n/t	n/t
Metals									
Water Soluble Magnesium	CE061	N	1	mg/l	n/t	< 1.00	< 1.00	< 1.00	5.60
Acid Soluble Sulphate (SO4)	CE062	M	100	mg/kg	153	n/t	n/t	n/t	n/t
Acid Soluble Sulphate (SO4)	CE062	M	0.01	%	n/t	0.02	0.02	0.01	0.08
Water Soluble Boron	CE063	N	0.5	mg/kg	< 0.50	n/t	n/t	n/t	n/t
Arsenic	CE264	U	1.8	mg/kg	10.6	n/t	n/t	n/t	n/t
Beryllium	CE264	M	0.2	mg/kg	< 0.2	n/t	n/t	n/t	n/t
Cadmium	CE264	M	1.6	mg/kg	< 1.6	n/t	n/t	n/t	n/t
Chromium	CE264	U	2	mg/kg	16.8	n/t	n/t	n/t	n/t
Copper	CE264	M	1.6	mg/kg	< 1.6	n/t	n/t	n/t	n/t
Lead	CE264	U	2.3	mg/kg	9.0	n/t	n/t	n/t	n/t
Mercury	CE264	U	0.7	mg/kg	< 0.7	n/t	n/t	n/t	n/t
Nickel	CE264	M	2.1	mg/kg	< 2.1	n/t	n/t	n/t	n/t
Selenium	CE264	U	3	mg/kg	< 3.0	n/t	n/t	n/t	n/t
Sulphur %	CE264	N	0.0032	%	n/t	< 0.0032	< 0.0032	< 0.0032	0.0111
Vanadium	CE264	N	1.8	mg/kg	34.3	n/t	n/t	n/t	n/t
Zinc	CE264	M	4	mg/kg	17.3	n/t	n/t	n/t	n/t
Colourimetric									
Water Soluble Chloride	CE261	U	1.5	mg/l	n/t	12.1	4.80	16.3	3.80
Water Soluble Chloride	CE261	U	3	mg/kg	26.0	n/t	n/t	n/t	n/t
Nitrate as N	CE261	U	1	mg/l	n/t	< 1.00	< 1.00	< 1.00	< 1.00
Water Soluble Chromium VI	CE263	N	0.04	mg/kg	< 0.040	n/t	n/t	n/t	n/t
Water Soluble Sulphate	CE261	U	4	mg/kg	14.8	102	32.6	56.2	16.0
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50	n/t	n/t	n/t	n/t
Total Cyanide	CE077	N	1	mg/kg	< 1.0	n/t	n/t	n/t	n/t
Total Sulphide	CE284	N	4	mg/kg	10	n/t	n/t	n/t	n/t
Combustion									
Moisture Content	CE001	N	0.1	%	12.5	13.1	12.1	15.5	18.2
Total Organic Carbon	CE197	M	0.1	%	0.95	n/t	n/t	n/t	n/t

SOILS

Lab Number					46321	46322	46323	46324	46325
Sample ID					WS08	WS08	WS10	WS11	WS12
Depth (m)					0.00 - 0.75	0.00 - 1.50	0.00 - 3.00	0.00 - 4.00	0.00 - 2.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
TPH Ali/Aro									
>C5-C44 Aliphatic (EH_2D_AL)	CE250	N	7	mg/kg	< 7.00	n/t	n/t	n/t	n/t
>C5-C44 Aromatic (EH_2D_AR)	CE250	N	7	mg/kg	< 7.00	n/t	n/t	n/t	n/t
>C5-C44 Total (HS_1D_MS+EH_2D_Total)	CE250	N	14	mg/kg	< 14.0	n/t	n/t	n/t	n/t
Organics									
Elemental Sulphur	CE034	M	10	mg/kg	< 10.0	n/t	n/t	n/t	n/t
Polyaromatic hydrocarbons									
Naphthalene	CE087	M	0.016	mg/kg	< 0.016	n/t	n/t	n/t	n/t
Acenaphthylene	CE087	M	0.015	mg/kg	< 0.015	n/t	n/t	n/t	n/t
Acenaphthene	CE087	M	0.013	mg/kg	< 0.013	n/t	n/t	n/t	n/t
Fluorene	CE087	U	0.013	mg/kg	< 0.013	n/t	n/t	n/t	n/t
Phenanthrene	CE087	M	0.014	mg/kg	< 0.014	n/t	n/t	n/t	n/t
Anthracene	CE087	U	0.017	mg/kg	< 0.017	n/t	n/t	n/t	n/t
Fluoranthene	CE087	M	0.017	mg/kg	< 0.017	n/t	n/t	n/t	n/t
Pyrene	CE087	M	0.016	mg/kg	< 0.016	n/t	n/t	n/t	n/t
Benzo(a)anthracene	CE087	U	0.012	mg/kg	< 0.012	n/t	n/t	n/t	n/t
Chrysene	CE087	M	0.028	mg/kg	< 0.028	n/t	n/t	n/t	n/t
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	< 0.020	n/t	n/t	n/t	n/t
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	< 0.025	n/t	n/t	n/t	n/t
Benzo(a)pyrene	CE087	U	0.019	mg/kg	< 0.019	n/t	n/t	n/t	n/t
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	< 0.019	n/t	n/t	n/t	n/t
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	< 0.017	n/t	n/t	n/t	n/t
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	< 0.019	n/t	n/t	n/t	n/t
Total PAH(16)	CE087	N	0.28	mg/kg	< 0.280	n/t	n/t	n/t	n/t
BTEX									
Benzene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t	n/t	n/t
Toluene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t	n/t	n/t
Ethylbenzene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t	n/t	n/t
MTBE	CE267	N	0.002	mg/kg	< 0.002	n/t	n/t	n/t	n/t
Total BTEX	CE267	N	0.007	mg/kg	< 0.007	n/t	n/t	n/t	n/t
m,p-Xylene	CE267	U	0.002	mg/kg	< 0.002	n/t	n/t	n/t	n/t

SOILS

Lab Number					46321	46322	46323	46324	46325
Sample ID					WS08	WS08	WS10	WS11	WS12
Depth (m)					0.00 - 0.75	0.00 - 1.50	0.00 - 3.00	0.00 - 4.00	0.00 - 2.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**					
oXylenes	CE267	U	0.002	mg/kg	< 0.002	n/t	n/t	n/t	n/t
Total Petroleum Hydrocarbons									
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t	n/t	n/t
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t	n/t	n/t
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t	n/t	n/t
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	< 1.0	n/t	n/t	n/t	n/t
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t	n/t	n/t
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	< 0.7	n/t	n/t	n/t	n/t
>C16-C35 Aliphatic (EH_2D_AL)	CE250	N	3	mg/kg	< 3.0	n/t	n/t	n/t	n/t
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	< 4.0	n/t	n/t	n/t	n/t
>C35-C40 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t	n/t	n/t
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t	n/t	n/t
>C5-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t	n/t	n/t
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t	n/t	n/t
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t	n/t	n/t
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	< 0.6	n/t	n/t	n/t	n/t
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	< 1.0	n/t	n/t	n/t	n/t
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	< 2.0	n/t	n/t	n/t	n/t
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	< 4.5	n/t	n/t	n/t	n/t
>C35-C40 Aromatic (EH_2D_AR)	CE250	N	1.5	mg/kg	< 1.5	n/t	n/t	n/t	n/t
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	< 2.0	n/t	n/t	n/t	n/t
>C10-C35 Aliphatic (EH_2D_AL)	CE250	N	3.8	mg/kg	< 3.8	n/t	n/t	n/t	n/t
>C10-C35 Aromatic (EH_2D_AR)	CE250	N	5.5	mg/kg	< 5.5	n/t	n/t	n/t	n/t
Wet Chem									
pH	CE004	M	0.1	pH units	6.8	6.1	6.1	5.8	6.1

SOILS

Lab Number					46326	46327	46328
Sample ID					WS13	WS13	WS04
Depth (m)					0.00 - 0.20	0.00 - 1.00	0.00 - 1.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**			
Asbestos							
Asbestos Identification	SUBCON	SU	0	-	NAD	n/t	n/t
Metals							
Water Soluble Magnesium	CE061	N	1	mg/l	n/t	8.71	< 1.00
Acid Soluble Sulphate (SO4)	CE062	M	100	mg/kg	282	n/t	n/t
Acid Soluble Sulphate (SO4)	CE062	M	0.01	%	n/t	0.02	0.02
Water Soluble Boron	CE063	N	0.5	mg/kg	< 0.50	n/t	n/t
Arsenic	CE264	U	1.8	mg/kg	10.0	n/t	n/t
Beryllium	CE264	M	0.2	mg/kg	< 0.2	n/t	n/t
Cadmium	CE264	M	1.6	mg/kg	< 1.6	n/t	n/t
Chromium	CE264	U	2	mg/kg	22.8	n/t	n/t
Copper	CE264	M	1.6	mg/kg	< 1.6	n/t	n/t
Lead	CE264	U	2.3	mg/kg	13.2	n/t	n/t
Mercury	CE264	U	0.7	mg/kg	< 0.7	n/t	n/t
Nickel	CE264	M	2.1	mg/kg	3.8	n/t	n/t
Selenium	CE264	U	3	mg/kg	< 3.0	n/t	n/t
Sulphur %	CE264	N	0.0032	%	n/t	0.0134	0.0098
Vanadium	CE264	N	1.8	mg/kg	42.8	n/t	n/t
Zinc	CE264	M	4	mg/kg	43.7	n/t	n/t
Colourimetric							
Water Soluble Chloride	CE261	U	1.5	mg/l	n/t	3.70	41.6
Water Soluble Chloride	CE261	U	3	mg/kg	10.4	n/t	n/t
Nitrate as N	CE261	U	1	mg/l	n/t	< 1.00	< 1.00
Water Soluble Chromium VI	CE263	N	0.04	mg/kg	< 0.040	n/t	n/t
Water Soluble Sulphate	CE261	U	4	mg/kg	< 4.00	14.8	242
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50	n/t	n/t
Total Cyanide	CE077	N	1	mg/kg	< 1.0	n/t	n/t
Total Sulphide	CE284	N	4	mg/kg	9	n/t	n/t
Combustion							
Moisture Content	CE001	N	0.1	%	9.8	12.0	23.2
Total Organic Carbon	CE197	M	0.1	%	1.19	n/t	n/t

SOILS

Lab Number					46326	46327	46328
Sample ID					WS13	WS13	WS04
Depth (m)					0.00 - 0.20	0.00 - 1.00	0.00 - 1.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**			
TPH Ali/Aro							
>C5-C44 Aliphatic (EH_2D_AL)	CE250	N	7	mg/kg	< 7.00	n/t	n/t
>C5-C44 Aromatic (EH_2D_AR)	CE250	N	7	mg/kg	< 7.00	n/t	n/t
>C5-C44 Total (HS_1D_MS+EH_2D_Total)	CE250	N	14	mg/kg	< 14.0	n/t	n/t
Organics							
Elemental Sulphur	CE034	M	10	mg/kg	< 10.0	n/t	n/t
Polyaromatic hydrocarbons							
Naphthalene	CE087	M	0.016	mg/kg	< 0.016	n/t	n/t
Acenaphthylene	CE087	M	0.015	mg/kg	< 0.015	n/t	n/t
Acenaphthene	CE087	M	0.013	mg/kg	< 0.013	n/t	n/t
Fluorene	CE087	U	0.013	mg/kg	< 0.013	n/t	n/t
Phenanthrene	CE087	M	0.014	mg/kg	< 0.014	n/t	n/t
Anthracene	CE087	U	0.017	mg/kg	< 0.017	n/t	n/t
Fluoranthene	CE087	M	0.017	mg/kg	0.019	n/t	n/t
Pyrene	CE087	M	0.016	mg/kg	0.016	n/t	n/t
Benzo(a)anthracene	CE087	U	0.012	mg/kg	0.024	n/t	n/t
Chrysene	CE087	M	0.028	mg/kg	< 0.028	n/t	n/t
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	< 0.020	n/t	n/t
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	< 0.025	n/t	n/t
Benzo(a)pyrene	CE087	U	0.019	mg/kg	< 0.019	n/t	n/t
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	< 0.019	n/t	n/t
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	< 0.017	n/t	n/t
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	< 0.019	n/t	n/t
Total PAH(16)	CE087	N	0.28	mg/kg	< 0.280	n/t	n/t
BTEX							
Benzene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t
Toluene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t
Ethylbenzene	CE267	U	0.001	mg/kg	< 0.001	n/t	n/t
MTBE	CE267	N	0.002	mg/kg	< 0.002	n/t	n/t
Total BTEX	CE267	N	0.007	mg/kg	< 0.007	n/t	n/t
m,p-Xylene	CE267	U	0.002	mg/kg	< 0.002	n/t	n/t

SOILS

Lab Number					46326	46327	46328
Sample ID					WS13	WS13	WS04
Depth (m)					0.00 - 0.20	0.00 - 1.00	0.00 - 1.00
Sampling Date					24/04/2025	24/04/2025	24/04/2025
Sampling Time					12:00	12:00	12:00
Test	**Method**	**Accred**	**LoD**	**Units**			
oXylenes	CE267	U	0.002	mg/kg	< 0.002	n/t	n/t
Total Petroleum Hydrocarbons							
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	n/t	n/t
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	< 1.0	n/t	n/t
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	< 0.7	n/t	n/t
>C16-C35 Aliphatic (EH_2D_AL)	CE250	N	3	mg/kg	< 3.0	n/t	n/t
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	< 4.0	n/t	n/t
>C35-C40 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	< 0.5	n/t	n/t
>C5-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	n/t	n/t
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	< 0.6	n/t	n/t
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	< 1.0	n/t	n/t
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	< 2.0	n/t	n/t
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	< 4.5	n/t	n/t
>C35-C40 Aromatic (EH_2D_AR)	CE250	N	1.5	mg/kg	< 1.5	n/t	n/t
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	< 2.0	n/t	n/t
>C10-C35 Aliphatic (EH_2D_AL)	CE250	N	3.8	mg/kg	< 3.8	n/t	n/t
>C10-C35 Aromatic (EH_2D_AR)	CE250	N	5.5	mg/kg	< 5.5	n/t	n/t
Wet Chem							
pH	CE004	M	0.1	pH units	5.9	5.8	5.6

METHOD DETAILS

METHOD	TESTNAME	METHOD SUMMARY	ANALYSIS BASIS
CE267	VPH in Soil	HS-GCFID	As submitted sample
CE250	GCXGC in Solids	DCM Extraction and GCxGC-FID	As submitted sample
SUBCON	Asbestos Solid	HSG248	Air Dried Sample
CE061	W. Sol Metals	ICPOES	Air dried sample
CE062	Acid Soluble Sulphate in Solids	HCl Extract and ICPOES	Air dried sample
CE063	Water soluble boron	ICPOES	Air dried sample
CE264	Metals by ICP in Soil	ICPOES	Air dried sample
CE267	BTEX in solids	Analysis by HSGCFID	As submitted sample
CE261	Anions by Discrete Analyser in Solids	Gallery	Air dried sample
CE263	ChromiumVI by Discrete Analyser in Solid	Gallery	Air dried sample
CE087	PAH in Soil	DCM Extraction and GCMS	As submitted sample
CE034	Elemental Sulphur	HPLC UV	Air dried sample
CE078	Phenols in Solids	Continuous Flow Analyser	As submitted sample
CE077	Cyanides in Solids	Continuous Flow Analyser	As submitted sample
CE284	Sulphide By DA in Solids	Gallery Discrete Analyser	Air dried sample
CE197	Primacs in Solids	Primacs	Air dried sample

REPORT INFORMATION

Report No.:25-03972, issue number 3

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

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

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

The results relate only to the sample received.

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Moisture Content Calculated on a Wet Weight basis

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

Sampling was undertaken by Chemtech Environmental Limited and is outside the UKAS accreditation scope.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

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

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying

For soils and solids, analytical results are inclusive of stones, where applicable.

Sample Retention and Disposal

All soil samples will be retained for a period of 4 weeks from the point of receipt

All water samples will be retained for a period of 2 weeks from the point of Reporting

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

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

Appendix D

HazWasteOnline™ Waste Classification Report

IBEX CONSULTING ENGINEERS

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:

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

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

VNM75-CO11Q-13HS9

Report is invalid if pages are removed.

Job name

ICE0270 Longwater Road, Finchampstead, Wokingham, RG40 3TS

Description/Comments

Project

ICE0270

Site

Longwater Road, Finchampstead, Wokingham, RG40 3TS

Classified by

Name:
Levent Dogan
Date:
04 Jun 2025 13:31 GMT
Telephone:

Company:
Ibex Consulting Engineers
Abbey House, 25 Clarendon Road
Redhill
RH1 1QZ

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

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Longwater Road, Finchampstead, Wokingham, RG40 3TS **Post Code** RG40 3TS

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Development for residential properties

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

Waste to be created from excavations for foundations and services

Description of the waste

Made Ground comprising gravelly sandy silty clay/clayey sand

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	SA01-0.00-0.50-24/04/2025--46315		Non Hazardous		3
2	SA05-0.00-0.40-24/04/2025--46316		Non Hazardous		6
3	SA06-0.00-0.30-24/04/2025--46317		Non Hazardous		9
4	WS01-0.00-1.50-24/04/2025--46318		Non Hazardous		12
5	WS06-0.00-2.50-24/04/2025--46319		Unknown. Chemistry data not provided.		13
6	WS07-0.00-2.50-24/04/2025--46320		Non Hazardous		14
7	WS08-0.00-0.75-24/04/2025--46321		Non Hazardous		15
8	WS08-0.00-1.50-24/04/2025--46322		Non Hazardous		18
9	WS10-0.00-3.00-24/04/2025--46323		Non Hazardous		19
10	WS11-0.00-4.00-24/04/2025--46324		Non Hazardous		20
11	WS12-0.00-2.00-24/04/2025--46325		Non Hazardous		21
12	WS13-0.00-0.20-24/04/2025--46326		Non Hazardous		22
13	WS13-0.00-1.00-24/04/2025--46327		Non Hazardous		25
14	WS04-0.00-1.00-24/04/2025--46328		Non Hazardous		26

Related documents

#	Name	Description
1	HWOL_25-03972-20250604.HWOL	Chemtech Environmental .hwol file used to populate the Job
2	HWOL_22-44766_20221125[2]	waste stream template used to create this Job

Report

Created by: Levent Dogan

Created date: 04 Jun 2025 13:31 GMT

Classification of sample: SA01-0.00-0.50-24/04/2025--46315

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

Sample details

Sample name:
SA01-0.00-0.50-24/04/2025--46315
Moisture content:
33.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 33.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	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				<0.04 mg/kg	2.27	<0.0908 mg/kg	<0.00000908 %		<**LOD**
2	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.78 mg/kg	23.173	12.002 mg/kg	0.0012 %	✓	
3	benzene	601-020-00-8	200-753-7	71-43-2		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
4	toluene	601-021-00-3	203-625-9	108-88-3		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
5	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
6	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<2 µg/kg		<0.002 mg/kg	<0.0000002 %		<**LOD**
7	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<4 µg/kg		<0.004 mg/kg	<0.0000004 %		<**LOD**
8	sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<10 mg/kg	3.211	<32.113 mg/kg	<0.00321 %		<**LOD**
9	pH			PH		7.2 pH		7.2 pH	7.2 pH		
10	arsenic { arsenic }	033-001-00-X	231-148-6	7440-38-2		32.8 mg/kg		21.779 mg/kg	0.00218 %	✓	
11	beryllium { beryllium chloride }	004-002-00-2	232-116-4	7787-47-5		<0.2 mg/kg	8.868	<1.774 mg/kg	<0.000177 %		<**LOD**
12	cadmium (pyrophoric)	048-011-00-X	231-152-8	7440-43-9		<1.6 mg/kg		<1.6 mg/kg	<0.00016 %		<**LOD**
13	copper { copper(II) chloride dihydrate }		231-210-2	10125-13-0		6.2 mg/kg	2.683	11.044 mg/kg	0.0011 %	✓	
14	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.7 mg/kg		<0.7 mg/kg	<0.00007 %		<**LOD**
15	nickel { nickel dichromate }	028-047-00-2	239-646-5	15586-38-6		4.4 mg/kg	4.68	13.673 mg/kg	0.00137 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
16		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	27.1 mg/kg		17.994 mg/kg	0.0018 %	✓	
17		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<3 mg/kg	1.405	<4.215 mg/kg	<0.000422 %		<LOD
18		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		93.9 mg/kg	1.785	111.306 mg/kg	0.0111 %	✓	
19		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		25.1 mg/kg	4.398	73.298 mg/kg	0.00733 %	✓	
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
22		acenaphthene		201-469-6	83-32-9		<0.013 mg/kg		<0.013 mg/kg	<0.0000013 %		<LOD
23		fluorene		201-695-5	86-73-7		<0.013 mg/kg		<0.013 mg/kg	<0.0000013 %		<LOD
24		phenanthrene		201-581-5	85-01-8		<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25		anthracene		204-371-1	120-12-7		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
26		fluoranthene		205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
27		pyrene		204-927-3	129-00-0		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.028 mg/kg		<0.028 mg/kg	<0.0000028 %		<LOD
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<LOD
31		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<LOD
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
33		benzo[ghi]perylene		205-883-8	191-24-2		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<LOD
34		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
35		benzo[bk]fluoranthene		[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9		<0.045 mg/kg		<0.045 mg/kg	<0.0000045 %		<LOD
36		monohydric phenols			P1186		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
37		chromium { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		31.4 mg/kg	1.923	40.096 mg/kg	0.00401 %	✓	
38		TPH (C6 to C40) petroleum group			TPH		16.7 mg/kg		11.089 mg/kg	0.00111 %	✓	
									Total:	0.0312 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide (compound conc.: 0.00401%)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00111%)

Classification of sample: SA05-0.00-0.40-24/04/2025--46316

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

Sample details

Sample name:
SA05-0.00-0.40-24/04/2025--46316
Moisture content:
19.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 19.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	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				<0.04 mg/kg	2.27	<0.0908 mg/kg	<0.00000908 %		<LOD
2	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.5 mg/kg	23.173	<11.586 mg/kg	<0.00116 %		<LOD
3	benzene	601-020-00-8	200-753-7	71-43-2		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
4	toluene	601-021-00-3	203-625-9	108-88-3		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
5	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
6	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<2 µg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
7	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<4 µg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
8	sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<10 mg/kg	3.211	<32.113 mg/kg	<0.00321 %		<LOD
9	pH			PH		5.8 pH		5.8 pH	5.8 pH		
10	arsenic { arsenic }	033-001-00-X	231-148-6	7440-38-2		17.4 mg/kg		13.972 mg/kg	0.0014 %	✓	
11	beryllium { beryllium chloride }	004-002-00-2	232-116-4	7787-47-5		<0.2 mg/kg	8.868	<1.774 mg/kg	<0.000177 %		<LOD
12	cadmium (pyrophoric)	048-011-00-X	231-152-8	7440-43-9		<1.6 mg/kg		<1.6 mg/kg	<0.00016 %		<LOD
13	copper { copper(II) chloride dihydrate }		231-210-2	10125-13-0		<1.6 mg/kg	2.683	<4.292 mg/kg	<0.000429 %		<LOD
14	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.7 mg/kg		<0.7 mg/kg	<0.00007 %		<LOD
15	nickel { nickel dichromate }	028-047-00-2	239-646-5	15586-38-6		<2.1 mg/kg	4.68	<9.828 mg/kg	<0.000983 %		<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		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	19.1	mg/kg		15.337	mg/kg	0.00153 %	✓	
		082-001-00-6											
17		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<3	mg/kg	1.405	<4.215	mg/kg	<0.000422 %		<LOD
		034-002-00-8											
18		vanadium { divanadium pentaoxide; vanadium pentoxide }				38.7	mg/kg	1.785	55.477	mg/kg	0.00555 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
19		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				18.1	mg/kg	4.398	63.921	mg/kg	0.00639 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
20		naphthalene				<0.016	mg/kg		<0.016	mg/kg	<0.0000016 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.015	mg/kg		<0.015	mg/kg	<0.0000015 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.014	mg/kg		<0.014	mg/kg	<0.0000014 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.036	mg/kg		0.0289	mg/kg	0.00000289 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.033	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.034	mg/kg		0.0273	mg/kg	0.00000273 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.028	mg/kg		<0.028	mg/kg	<0.0000028 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[a]pyrene; benzo[def]chrysene				0.02	mg/kg		0.0161	mg/kg	0.00000161 %	✓	
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				0.021	mg/kg		0.0169	mg/kg	0.00000169 %	✓	
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
			205-883-8	191-24-2									
34		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
35		benzo[bk]fluoranthene				0.026	mg/kg		0.0209	mg/kg	0.00000209 %	✓	
			[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9									
36		monohydric phenols				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
				P1186									
37		chromium { chromium(VI) oxide }				21.3	mg/kg	1.923	32.893	mg/kg	0.00329 %	✓	
		024-001-00-0	215-607-8	1333-82-0									
38		TPH (C6 to C40) petroleum group				<11.5	mg/kg		<11.5	mg/kg	<0.00115 %		<LOD
				TPH									
										Total:	0.0182 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide (compound conc.: 0.00329%)

Classification of sample: SA06-0.00-0.30-24/04/2025--46317

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

Sample details

Sample name:
SA06-0.00-0.30-24/04/2025--46317
Moisture content:
39.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 39.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	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				<0.04 mg/kg	2.27	<0.0908 mg/kg	<0.00000908 %		<**LOD**
2	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		0.53 mg/kg	23.173	7.48 mg/kg	0.000748 %	✓	
3	benzene	601-020-00-8	200-753-7	71-43-2		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
4	toluene	601-021-00-3	203-625-9	108-88-3		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
5	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
6	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<2 µg/kg		<0.002 mg/kg	<0.0000002 %		<**LOD**
7	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<4 µg/kg		<0.004 mg/kg	<0.0000004 %		<**LOD**
8	sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<10 mg/kg	3.211	<32.113 mg/kg	<0.00321 %		<**LOD**
9	pH			PH		4.8 pH		4.8 pH	4.8 pH		
10	arsenic { arsenic }	033-001-00-X	231-148-6	7440-38-2		124 mg/kg		75.516 mg/kg	0.00755 %	✓	
11	beryllium { beryllium chloride }	004-002-00-2	232-116-4	7787-47-5		0.5 mg/kg	8.868	2.7 mg/kg	0.00027 %	✓	
12	cadmium (pyrophoric)	048-011-00-X	231-152-8	7440-43-9		2 mg/kg		1.218 mg/kg	0.000122 %	✓	
13	copper { copper(II) chloride dihydrate }		231-210-2	10125-13-0		<1.6 mg/kg	2.683	<4.292 mg/kg	<0.000429 %		<**LOD**
14	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.7 mg/kg		<0.7 mg/kg	<0.00007 %		<**LOD**
15	nickel { nickel dichromate }	028-047-00-2	239-646-5	15586-38-6		4.8 mg/kg	4.68	13.68 mg/kg	0.00137 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
16		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	25.9 mg/kg		15.773 mg/kg	0.00158 %	✓	
17		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<3 mg/kg	1.405	<4.215 mg/kg	<0.000422 %		<**LOD**
18		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		38.8 mg/kg	1.785	42.182 mg/kg	0.00422 %	✓	
19		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		13.9 mg/kg	4.398	37.229 mg/kg	0.00372 %	✓	
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<**LOD**
21		acenaphthylene		205-917-1	208-96-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<**LOD**
22		acenaphthene		201-469-6	83-32-9		<0.013 mg/kg		<0.013 mg/kg	<0.0000013 %		<**LOD**
23		fluorene		201-695-5	86-73-7		<0.013 mg/kg		<0.013 mg/kg	<0.0000013 %		<**LOD**
24		phenanthrene		201-581-5	85-01-8		<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<**LOD**
25		anthracene		204-371-1	120-12-7		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<**LOD**
26		fluoranthene		205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<**LOD**
27		pyrene		204-927-3	129-00-0		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<**LOD**
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<**LOD**
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.028 mg/kg		<0.028 mg/kg	<0.0000028 %		<**LOD**
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<**LOD**
31		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<**LOD**
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<**LOD**
33		benzo[ghi]perylene		205-883-8	191-24-2		<0.019 mg/kg		<0.019 mg/kg	<0.0000019 %		<**LOD**
34		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<**LOD**
35		benzo[bk]fluoranthene		[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9		<0.045 mg/kg		<0.045 mg/kg	<0.0000045 %		<**LOD**
36		monohydric phenols			P1186		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<**LOD**
37		chromium { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		25.6 mg/kg	1.923	29.982 mg/kg	0.003 %	✓	
38		TPH (C6 to C40) petroleum group			TPH		<11.5 mg/kg		<11.5 mg/kg	<0.00115 %		<**LOD**
									Total:	0.0226 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide (compound conc.: 0.003%)

HP 3(ii): Flammable "flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Pyr. Sol. 1; H250 "Catches fire spontaneously if exposed to air."

Because of determinand:

cadmium (pyrophoric) (conc.: 0.00012%)

Classification of sample: WS01-0.00-1.50-24/04/2025--46318

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

Sample details

Sample name:
WS01-0.00-1.50-24/04/2025--46318
Moisture content:
31.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 31.6% Wet Weight 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		sulfur { sulphur dichloride }				2150	mg/kg	3.211	4722.568	mg/kg	0.472 %	✓	
		016-013-00-X	234-129-0	10545-99-0									
2		pH				6	pH		6	pH	6pH		
				PH									
										Total:	0.472 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Classification of sample: WS06-0.00-2.50-24/04/2025--46319

Unknown. Chemistry data not provided.
Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:
WS06-0.00-2.50-24/04/2025--46319

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% Wet Weight 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							
								Total:	0%		

Key

	User supplied data

Classification of sample: WS07-0.00-2.50-24/04/2025--46320

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

Sample details

Sample name:
WS07-0.00-2.50-24/04/2025--46320
Moisture content:
15.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15.9% Wet Weight 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		sulfur { sulphur dichloride }				278	mg/kg	3.211	750.8	mg/kg	0.0751 %	✓	
		016-013-00-X	234-129-0	10545-99-0									
2		pH				5.2	pH		5.2	pH	5.2 pH		
				PH									
										Total:	0.0751 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Classification of sample: WS08-0.00-0.75-24/04/2025--46321

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

Sample details

Sample name:
WS08-0.00-0.75-24/04/2025--46321
Moisture content:
12.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	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				<0.04 mg/kg	2.27	<0.0908 mg/kg	<0.00000908 %		<LOD
2	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.5 mg/kg	23.173	<11.586 mg/kg	<0.00116 %		<LOD
3	benzene	601-020-00-8	200-753-7	71-43-2		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
4	toluene	601-021-00-3	203-625-9	108-88-3		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
5	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
6	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<2 µg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
7	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<4 µg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
8	sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<10 mg/kg	3.211	<32.113 mg/kg	<0.00321 %		<LOD
9	pH			PH		6.8 pH		6.8 pH	6.8 pH		
10	arsenic { arsenic }	033-001-00-X	231-148-6	7440-38-2		10.6 mg/kg		9.275 mg/kg	0.000928 %	✓	
11	beryllium { beryllium chloride }	004-002-00-2	232-116-4	7787-47-5		<0.2 mg/kg	8.868	<1.774 mg/kg	<0.000177 %		<LOD
12	cadmium (pyrophoric)	048-011-00-X	231-152-8	7440-43-9		<1.6 mg/kg		<1.6 mg/kg	<0.00016 %		<LOD
13	copper { copper(II) chloride dihydrate }		231-210-2	10125-13-0		<1.6 mg/kg	2.683	<4.292 mg/kg	<0.000429 %		<LOD
14	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.7 mg/kg		<0.7 mg/kg	<0.00007 %		<LOD
15	nickel { nickel dichromate }	028-047-00-2	239-646-5	15586-38-6		<2.1 mg/kg	4.68	<9.828 mg/kg	<0.000983 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	9	mg/kg		7.875	mg/kg	0.000788 %	✓	
17		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<3	mg/kg	1.405	<4.215	mg/kg	<0.000422 %		<LOD
18		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		34.3	mg/kg	1.785	53.578	mg/kg	0.00536 %	✓	
19		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		17.3	mg/kg	4.398	66.574	mg/kg	0.00666 %	✓	
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.016	mg/kg		<0.016	mg/kg	<0.0000016 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.015	mg/kg		<0.015	mg/kg	<0.0000015 %		<LOD
22		acenaphthene		201-469-6	83-32-9		<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
23		fluorene		201-695-5	86-73-7		<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
24		phenanthrene		201-581-5	85-01-8		<0.014	mg/kg		<0.014	mg/kg	<0.0000014 %		<LOD
25		anthracene		204-371-1	120-12-7		<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
26		fluoranthene		205-912-4	206-44-0		<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
27		pyrene		204-927-3	129-00-0		<0.016	mg/kg		<0.016	mg/kg	<0.0000016 %		<LOD
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.012	mg/kg		<0.012	mg/kg	<0.0000012 %		<LOD
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.028	mg/kg		<0.028	mg/kg	<0.0000028 %		<LOD
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
31		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
33		benzo[ghi]perylene		205-883-8	191-24-2		<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
34		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
35		benzo[bk]fluoranthene		[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9		<0.045	mg/kg		<0.045	mg/kg	<0.0000045 %		<LOD
36		monohydric phenols			P1186		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
37		chromium { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		16.8	mg/kg	1.923	28.27	mg/kg	0.00283 %	✓	
38		TPH (C6 to C40) petroleum group			TPH		<11.5	mg/kg		<11.5	mg/kg	<0.00115 %		<LOD
											Total:	0.0166 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide (compound conc.: 0.00283%)

Classification of sample: WS08-0.00-1.50-24/04/2025--46322

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

Sample details

Sample name:
WS08-0.00-1.50-24/04/2025--46322
Moisture content:
13.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13.1% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<32 mg/kg	3.211	<102.762 mg/kg	<0.0103 %		<**LOD**
2		pH			PH		6.1 pH		6.1 pH	6.1 pH		
										Total:	0%	

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection

Classification of sample: WS10-0.00-3.00-24/04/2025--46323

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

Sample details

Sample name:
WS10-0.00-3.00-24/04/2025--46323

Moisture content:
12.1%
(wet weight correction)

LoW Code:

Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)

Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.1% Wet Weight 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		sulfur { sulphur dichloride }				<32	mg/kg	3.211	<102.762	mg/kg	<0.0103 %		**<LOD**
		016-013-00-X	234-129-0	10545-99-0									
2		pH				6.1	pH		6.1	pH	6.1 pH		
				PH									
										Total:	0%		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection

Classification of sample: WS11-0.00-4.00-24/04/2025--46324

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

Sample details

Sample name:
WS11-0.00-4.00-24/04/2025--46324
Moisture content:
15.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15.5% Wet Weight 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		sulfur { sulphur dichloride }				<32	mg/kg	3.211	<102.762	mg/kg	<0.0103 %		<**LOD**
		016-013-00-X	234-129-0	10545-99-0									
2		pH				5.8	pH		5.8	pH	5.8 pH		
				PH									
										Total:	0%		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection

Classification of sample: WS12-0.00-2.00-24/04/2025--46325

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

Sample details

Sample name:
WS12-0.00-2.00-24/04/2025--46325
Moisture content:
18.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.2% Wet Weight 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		sulfur { sulphur dichloride }				111	mg/kg	3.211	291.582	mg/kg	0.0292 %	✓	
		016-013-00-X	234-129-0	10545-99-0									
2		pH				6.1	pH		6.1	pH	6.1 pH		
				PH									
										Total:	0.0292 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Classification of sample: WS13-0.00-0.20-24/04/2025--46326

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

Sample details

Sample name:
WS13-0.00-0.20-24/04/2025--46326
Moisture content:
9.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	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				<0.04 mg/kg	2.27	<0.0908 mg/kg	<0.00000908 %		<**LOD**
2	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<0.5 mg/kg	23.173	<11.586 mg/kg	<0.00116 %		<**LOD**
3	benzene	601-020-00-8	200-753-7	71-43-2		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
4	toluene	601-021-00-3	203-625-9	108-88-3		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
5	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1 µg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
6	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<2 µg/kg		<0.002 mg/kg	<0.0000002 %		<**LOD**
7	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<4 µg/kg		<0.004 mg/kg	<0.0000004 %		<**LOD**
8	sulfur { sulphur dichloride }	016-013-00-X	234-129-0	10545-99-0		<10 mg/kg	3.211	<32.113 mg/kg	<0.00321 %		<**LOD**
9	pH			PH		5.9 pH		5.9 pH	5.9 pH		
10	arsenic { arsenic }	033-001-00-X	231-148-6	7440-38-2		10 mg/kg		9.02 mg/kg	0.000902 %	✓	
11	beryllium { beryllium chloride }	004-002-00-2	232-116-4	7787-47-5		<0.2 mg/kg	8.868	<1.774 mg/kg	<0.000177 %		<**LOD**
12	cadmium (pyrophoric)	048-011-00-X	231-152-8	7440-43-9		<1.6 mg/kg		<1.6 mg/kg	<0.00016 %		<**LOD**
13	copper { copper(II) chloride dihydrate }		231-210-2	10125-13-0		<1.6 mg/kg	2.683	<4.292 mg/kg	<0.000429 %		<**LOD**
14	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.7 mg/kg		<0.7 mg/kg	<0.00007 %		<**LOD**
15	nickel { nickel dichromate }	028-047-00-2	239-646-5	15586-38-6		3.8 mg/kg	4.68	16.041 mg/kg	0.0016 %	✓	

#		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		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	13.2	mg/kg		11.906	mg/kg	0.00119 %	✓	
		082-001-00-6											
17		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<3	mg/kg	1.405	<4.215	mg/kg	<0.000422 %		<LOD
		034-002-00-8											
18		vanadium { divanadium pentaoxide; vanadium pentoxide }				42.8	mg/kg	1.785	68.918	mg/kg	0.00689 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
19		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				43.7	mg/kg	4.398	173.355	mg/kg	0.0173 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
20		naphthalene				<0.016	mg/kg		<0.016	mg/kg	<0.0000016 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.015	mg/kg		<0.015	mg/kg	<0.0000015 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.013	mg/kg		<0.013	mg/kg	<0.0000013 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.014	mg/kg		<0.014	mg/kg	<0.0000014 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.019	mg/kg		0.0171	mg/kg	0.00000171 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.016	mg/kg		0.0144	mg/kg	0.00000144 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.024	mg/kg		0.0216	mg/kg	0.00000216 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.028	mg/kg		<0.028	mg/kg	<0.0000028 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[a]pyrene; benzo[def]chrysene				<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
31		indeno[123-cd]pyrene				<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
			205-893-2	193-39-5									
32		dibenz[a,h]anthracene				<0.017	mg/kg		<0.017	mg/kg	<0.0000017 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
33		benzo[ghi]perylene				<0.019	mg/kg		<0.019	mg/kg	<0.0000019 %		<LOD
			205-883-8	191-24-2									
34		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
35		benzo[bk]fluoranthene				<0.045	mg/kg		<0.045	mg/kg	<0.0000045 %		<LOD
			[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9									
36		monohydric phenols				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
				P1186									
37		chromium { chromium(VI) oxide }				22.8	mg/kg	1.923	39.55	mg/kg	0.00395 %	✓	
		024-001-00-0	215-607-8	1333-82-0									
38		TPH (C6 to C40) petroleum group				<11.5	mg/kg		<11.5	mg/kg	<0.00115 %		<LOD
				TPH									
										Total:	0.0319 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 100 mg/kg (0.01%) because: too low concentration

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide (compound conc.: 0.00395%)

Classification of sample: WS13-0.00-1.00-24/04/2025--46327

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

Sample details

Sample name:
WS13-0.00-1.00-24/04/2025--46327
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight 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		sulfur { sulphur dichloride }				134	mg/kg	3.211	378.679	mg/kg	0.0379 %	✓	
		016-013-00-X	234-129-0	10545-99-0									
2		pH				5.8	pH		5.8	pH	5.8 pH		
				PH									
										Total:	0.0379 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Classification of sample: WS04-0.00-1.00-24/04/2025--46328

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

Sample details

Sample name:
WS04-0.00-1.00-24/04/2025--46328
Moisture content:
23.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 23.2% Wet Weight 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		sulfur { sulphur dichloride }				98	mg/kg	3.211	241.697	mg/kg	0.0242 %	✓	
		016-013-00-X	234-129-0	10545-99-0									
2		pH				5.6	pH		5.6	pH	5.6 pH		
				PH									
										Total:	0.0242 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Appendix A: Classifier defined and non GB MCL determinands

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

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

pH (CAS Number: PH)

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

arsenic (EC Number: 231-148-6, CAS Number: 7440-38-2)

GB MCL index number: 033-001-00-X
Description/Comments: Worst Case: IARC considers arsenic Group 1; Carcinogenic to humans
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

copper(II) chloride dihydrate (EC Number: 231-210-2, CAS Number: 10125-13-0)

Description/Comments: C&L for copper (II) chloride (anhydrous) CAS 7447-39-4
Data source:
Data source date: 03 Nov 2016
Hazard Statements: Skin Irrit. 2; H315 , Acute Tox. 4; H302 , Eye Dam. 1; H318 , Acute Tox. 4; H312 , STOT SE 3; H335 , Eye Irrit. 2; H319 , Acute Tox. 3; H301 , Acute Tox. 4; H332 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

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

- **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

- **benzo[bk]fluoranthene** (EC Number: [1] 205-911-9 [2] 205-916-6, CAS Number: [1] 205-99-2 [2] 207-08-9)

Description/Comments: Combined data from harmonised entries in CLP for benzo[b] and benzo[k]fluoranthene; C&L Inventory Database
Data source: https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 02 Mar 2017
Hazard Statements: Carc. 1B; H350 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Muta. 2; H341 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , Acute Tox. 3; H301 , STOT RE 2; H373 , Skin Corr. 1B; H314 , Skin Corr. 1B; H314 >= 3 % , Skin Irrit. 2; H315 1 <= conc. < 3 % , Eye Irrit. 2; H319 1 <= conc. < 3 % , Aquatic Chronic 2; H411

- **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

Appendix B: Rationale for selection of metal species

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

Chromium

boron {boron tribromide}
Boron
sulfur {sulphur dichloride}
Sulphur
arsenic {arsenic}
arsenic
beryllium {beryllium chloride}
beryllium
copper {copper(II) chloride dihydrate}
copper
mercury {mercury}
mercury
nickel {nickel dichromate}
Nickel
lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}
Lead
selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}
selenium
vanadium {divanadium pentaoxide; vanadium pentoxide}
vanadium
zinc {zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]}
zinc
cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}
cyanide
chromium {chromium(VI) oxide}
Worst case

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2025.152.6652.12099 (01 Jun 2025)
HazWasteOnline Database: 2025.152.6652.12099 (01 Jun 2025)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
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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
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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