



**GA2 School Site
Great Ashby
Stevenage
SG4 7EA**

Ground Investigation

Picture Estates Ltd

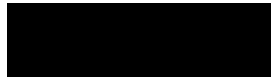
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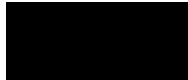


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This report is intended as a Ground Investigation Report (GIR) as defined in BS EN1997-2, unless specifically noted otherwise. The report is not a Geotechnical Design Report (GDR) as defined in EN1997-2 and recommendations made within this report are for guidance only.

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Executive summary

This executive summary contains an overview of the key findings and conclusions. No reliance should be placed on any part of the executive summary until the whole of the report has been read. Other sections of the report may contain information that puts into context the findings that are summarised in the executive summary.

Brief

This report describes the findings of a site investigation carried out by Geotechnical and Environmental Associates Limited (GEA) on the instructions of Picture Estates Ltd, with respect to the redevelopment of the site through the construction of a new school and playing fields. The purpose of the investigation has been to research the history of the site with respect to possible contaminative uses, to determine the ground conditions, to provide an indication of the presence of contamination and to provide information to assist with the design of new shallow spread foundations. The site forms part of a wider proposed development site, for which GEA have previously prepared a desk study and ground investigation report (report reference J22372, dated 19th May 2022) and the previous findings are referred to where appropriate.

Ground conditions

The investigation has generally confirmed the expected ground conditions in that, beneath a nominal thickness of made ground, the Lowestoft Formation was encountered, over the Lewes Nodular Chalk Formation and Seaford Chalk Formation.

The made ground comprised dark brown to brownish-grey silty sandy clay with gravel and roots and rootlets, and extended to depths of between 0.20 m and 0.30 m. The stratum was noted as being desiccated during the site works.

The Lowestoft Formation generally comprised firm to stiff and locally very stiff brown, orange-brown and reddish-brown slightly sandy to sandy clay with variable fine to coarse subangular to subrounded gravel content, extending to the full depth of Borehole Nos 101, 102 and 103 and to depths of 4.70 m, 2.00 m and 5.10 m in Borehole Nos 4, 104 and 105 respectively. Carbonised rootlets were noted in Borehole No 101 at depths of between 1.10 m and 5.45 m, in Borehole No 102 at depths of between 1.00 m and 3.90 m and in Borehole No 3 at depths of between 1.10 m and 1.20 m. The top of the Lewes Nodular Chalk Formation and Seaford Chalk Formation was generally found to be below a depth of 4.70 m, but was encountered at a depth of 2.00 m in Borehole No 104, located in the northeast of the site. The chalk was generally recovered as structureless off-white silty clay with occasional fragments of low density and occasionally medium density chalk.

Groundwater was not encountered during drilling and the single standpipe installed was found to be dry during one monitoring visit carried out two weeks after installation.

Contamination testing has indicated the samples tested to be free from elevated concentrations of contaminants.

Recommendations

Moderate width strip or pad foundations bearing on the firm sandy clay of the Lowestoft Formation should be placed at a minimum depth of 1.5 m, allowing for restricted new planting in accordance with Table 4 of NBHC Standards Chapter 4.2 (2023). If trees are excluded within the zone of influence shown in Table 4 of the NHBC guidance, the minimum depth can be reduced to 1.00 m subject also to the further advice on new tree and shrub planting as detailed in the NHBC guidelines. The foundations may be designed to apply a net allowable bearing pressure of 125 kN/m².

A requirement for remedial measures with respect to soil contamination is not envisaged.



Part 1: Investigation Report

This section of the report details the objectives of the investigation, the work that has been carried out to meet these objectives and the results of the investigation. Interpretation of the findings is presented in Part 2.

1.0 Introduction

Geotechnical and Environmental Associates Limited (GEA) has been commissioned by Picture Estates Limited to carry out a ground investigation at the GA2 School Site, Great Ashby, Stevenage, Hertfordshire SG4 7EA.

The site forms part of a wider proposed development site, for which GEA have previously prepared a desk study and ground investigation report (report reference J22372, dated 19th May 2022) and the previous findings are referred to where appropriate.

1.1 Proposed Development

It is understood that it is proposed to construct a new school building on part of the site, with school playing fields across the remainder. The details of the proposed construction are not known.

This report is specific to the proposed development and the advice herein should be reviewed once the development proposals are finalised.

The plan opposite shows the approximate proposed layout of the development.

1.2 Purpose of Work

The principal technical objectives of the work carried out were as follows:

-  to determine the ground conditions and their engineering properties;
-  to use the above information to provide recommendations for shallow foundations;
-  to provide an indication of the degree of soil contamination present; and
-  to assess the risk that any such contamination may pose to the proposed development, its users or the wider environment.



1.3 Scope of Work

In order to meet the above objectives, an intrusive ground investigation was carried out which comprised, in summary, the following activities:

-  a series of five percussive sampler boreholes advanced to a depth of 5.45 m;
-  standard penetration tests (SPTs) carried out at regular intervals within the boreholes to provide quantitative data on the strength of the soils;
-  testing of selected soil samples for contamination and geotechnical purposes; and
-  provision of a report presenting and interpreting the above data, together with our advice and recommendations with respect to the proposed development.



This report includes a contaminated land assessment which has been undertaken by a suitably qualified and competent professional in accordance with the methodology presented by the Environment Agency in their Land contamination risk assessment (LCRM)¹ Updated 12 June 2025. This involves identifying, making decisions on, and taking appropriate action to deal with, land contamination in a way that is consistent with government policies and legislation within the United Kingdom. Risk management is divided into three stages; Risk Assessment, Options Appraisal and Remediation, and each stage comprises three tiers. The Risk Assessment stage includes preliminary risk assessment (PRA), generic quantitative risk assessment (GQRA) and detailed quantitative risk assessment (DQRA) and this report includes the PRA and GQRA.

The exploratory methods adopted in this investigation have been selected on the basis of the constraints of the site including but not limited to access and space limitations, together with any budgetary or timing constraints. Where it has not been possible to reasonably use an EC7 compliant investigation technique a practical alternative has been adopted to obtain indicative soil parameters and any interpretation is based upon engineering experience, local precedent where applicable and relevant published information.

2.0 The Site

2.1 Site Description

The site is located to the northeast of Stevenage, approximately 4.80 km northeast of Stevenage Railway Station and 1.85 km south of the village of Weston. It forms part of a wider area of farmland with no direct road links or significant bounding features. The site may be additionally located by National Grid Reference TL 26261 28095.

A walkover of the site was carried out by a geotechnical engineer from GEA at the time of the fieldwork. The site is roughly rectangular in shape and measures approximately 200 m southwest-northeast by 130 m northwest-southeast. It is completely vacant with crops growing within the field. There are numerous mature deciduous trees along the southeastern boundary of the site. The site slopes gently towards the southwest.

2.2 Summary of Desk Study Findings

A summary of the pertinent previous findings is included below.

The earliest map studied, dated 1884, shows the site to have been undeveloped, comprising an area of open fields with a similar configuration to that of the existing fields, with Dell Spring shown in its existing position to the west of the site. The existing roads to the northeast and northwest are also shown on the map and New Spring is labelled to the south of the site. Tile Kiln Farm and Dane End Farm are detailed in their existing positions, to the west and east of the site respectively.

A chalk pit is labelled to the south of the site on the next map studied, dated 1899. On the map dated 1924, the area of woodland near the chalk pit is shown to have increased in size and is labelled as Nine Acre Spring.

¹ <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>



No landfill sites are recorded within 1 km of the site. Additionally, no waste management or waste transfer sites are located within 500 m of the site and no areas of infilled land are located within 250 m of the site. No pollution incidents to controlled waters have been recorded within 1 km of the site.

Relatively small areas of the site along the southern boundary are shown by the Environment Agency to be at low to high risk from flooding from surface water, however the site is not considered to be at risk of flooding from rivers or the sea.

The site is located in the vicinity of numerous areas of Ancient Woodland and lies within an area of adopted greenbelt. It also lies within a nitrate vulnerable zone for both groundwater and surface water.

Reference to records compiled by the Health Protection Agency (formerly the National Radiological Protection Board) indicates that the site falls within an area where less than 1% of homes are affected by radon emissions and therefore radon protective measures will not be necessary.

The British Geological Survey (BGS) map of the area indicates that the site is underlain by the Lowestoft Formation over the Lewes Nodular Chalk Formation and Seaford Chalk Formation.

A search of the BGS Geo Index Onshore archive has revealed the records of two boreholes carried out to the southeast of the site. The boreholes encountered superficial deposits, extending to depths of 0.91 m and 1.37 m, below which chalk was encountered and was found to extend to the full depth of the investigation of 9.14 m. The superficial deposits are described as “topsoil and subsoil with flintstone, sand and chalk content” and in one of the boreholes the chalk was described as “hard chalk” while in the other borehole it is described as comprising three layers, an initial layer of “soft chalk”, extending to a depth of 3.05 m, below which “soft chalk with hard pieces” was described, extending to a depth of 5.79 m, which was underlain by “hard chalk”.

2.3 Previous Investigation Findings

As part of the previous investigation of the wider site, a single borehole (Borehole No 4) was advanced within the boundaries of the subject site of this report. The borehole encountered an initial horizon of topsoil, comprising brown silty sandy clay with gravel and rootlets, which extended to a depth of 0.25 m. Below this depth, the Lowestoft Formation was encountered, which comprised an initial horizon of firm becoming stiff brown slightly silty sandy clay with occasional fine to coarse subangular to subrounded gravel, extending to a depth of 1.00 m, over a horizon of stiff orange-brown and reddish brown slightly sandy clay with fine to coarse subangular to subrounded gravel, which extended to a depth of 4.70 m. Below this depth, Chalk was encountered which was recovered as structureless off-white occasionally mottled reddish-brown silty clay and was interpreted as Grade 1 chalk. This layer extended to the full depth of the borehole, of 5.45 m.

A sample of the topsoil from Borehole No 1 at a depth of 0.10 m was submitted for a suite of contamination testing designed to identify common industrial contaminants. The results of the testing indicated the sample to be free of elevated concentrations of contamination and asbestos fibres.

2.6 Preliminary Risk Assessment

Part IIA of the Environmental Protection Act 1990, which was inserted into that Act by Section 57 of the Environment Act 1995, provides the main regulatory regime for the identification and remediation of contaminated land. The determination of contaminated sites is based on a “suitable for use” approach which involves managing the risks posed by contaminated land by making risk-based decisions. This risk assessment is carried out on the basis of a source-pathway-receptor approach.

2.6.1 Source

The site is not considered to have had a potentially contaminative history as it has apparently remained undeveloped throughout its known history.

2.6.2 Receptor

The proposed redevelopment of the site for residential purposes will result in the end users representing relatively high sensitivity receptors. As the site is underlain by both Secondary and Principal Aquifer, adjacent sites and groundwater are considered to be a moderately sensitive receptors. Buried services are likely to come into contact with any contaminants present within the soils through which they pass and site workers are potential receptors during construction or maintenance works.



2.6.3 Pathway

The variable nature of the superficial deposits and the high permeability of the Chalk would allow the migration of contaminated groundwater through the shallow soils to surrounding sites as well as the percolation of contaminated water into the principle aquifer at depth within the Chalk. Within the site, end users will be isolated from direct contact with any contaminants present within the made ground by the presence of the new buildings and areas of hardstanding. Therefore, only in areas of communal landscaping or private gardens, would end users come into direct contact with any contamination within the soil. Buried services may be exposed to any contaminants present within the soil through direct contact and site workers will come into contact with the soils during construction works. There is thus considered to be a low to moderate potential for a contaminant pathway to be present between any potential contaminant source and a target for the particular contaminant.

2.6.4 Preliminary Risk Appraisal

On the basis of the above it is considered that there is a VERY LOW risk of there being a significant contaminant linkage at this site which would result in a requirement for major remediation work.

3.0 Exploratory Work

In order to meet the objectives described in Section 1.2, five boreholes were advanced to a depth of 5.45 m (-20.1 m OD) using an opendrive percussive sampling rig.

A single groundwater monitoring standpipe has been installed to a depth of 5.00 m to facilitate groundwater monitoring, which has been carried out on a single occasion to date, approximately two weeks after installation.

During boring, disturbed samples were obtained from the boreholes for subsequent laboratory examination and testing. Standard Penetration Tests (SPTs) were carried out at regular intervals to provide additional quantitative data on the strength of soils encountered. A selection of the samples recovered from the boreholes was submitted to a soil mechanics laboratory for a programme of geotechnical testing and an analytical laboratory for a programme of contamination testing.

All of the above work was carried out under the supervision of a geotechnical engineer from GEA.

3.1 Sampling Strategy

The borehole locations were agreed with the client prior to the investigation, and were positioned as close to the specified locations as possible whilst avoiding buried services.

Three samples of the made ground have been tested for the presence of contamination. The analytical suite of testing was selected to identify a range of typical industrial contaminants for the purposes of general coverage. The analytical suite for the soil included a range of metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAH), total cyanide and monohydric phenols. Selected samples were also screened for the presence of asbestos.

The analyses were carried out at an MCERTs accredited laboratory with the majority of the testing suite accredited to MCERTS standards. A summary of the MCERTs accreditation and test methods are included with the attached results and further details are available upon request.



4.0 Ground Conditions

Within this section the findings of Borehole No 4, carried out as part of the previous investigation of the wider development site, have been included within the data set in the interest of completeness.

The investigation has generally confirmed the expected ground conditions in that, beneath a nominal thickness of made ground, the Lowestoft Formation was encountered, over the Lewes Nodular Chalk Formation and Seaford Chalk Formation.

4.1 Made Ground

The made ground comprised dark brown to brownish-grey silty sandy clay with gravel and roots and rootlets, and extended to depths of between 0.20 m and 0.30 m. The stratum was noted as being desiccated during the site works.

Apart from the presence of fragments of extraneous material noted above, no visual or olfactory evidence of contamination was observed during the fieldwork. A total of four samples of the made ground have however been analysed for a range of contaminants as a precautionary measure and the results are detailed within Section 4.5.

4.2 Lowestoft Formation

The the Lowestoft Formation generally comprised firm to stiff and locally very stiff brown, orange-brown and reddish-brown slightly sandy to sandy clay with variable fine to coarse subangular to subrounded gravel content, extending to the full depth of Borehole Nos 101, 102 and 103 and to depths of 4.70 m, 2.00 m and 5.10 m in Borehole Nos 4, 104 and 105 respectively.

Carbonised rootlets were noted to be present in Borehole No 101 at depths of between 1.10 m and 5.45 m, in Borehole No 102 at depths of between 1.00 m and 3.90 m and in Borehole No 103 at depths of between 1.10 m and 1.20 m.

The results of the results of plasticity index tests indicate the clay to be of low to moderate volume change potential.

4.3 Lewes Nodular Chalk Formation and Seaford Chalk Formation

The top of the Lewes Nodular Chalk Formation and Seaford Chalk Formation was generally found to be below a depth of 4.70 m, but was encountered at a depth of 2.00 m in Borehole No 104, located in the northeast of the site. Additionally the chalk was not encountered in the south of the site. It was generally recovered as structureless off-white silty clay with occasional fragments of low density and occasionally medium density chalk.

On the basis of the inspection of recovered samples, the chalk has been classified in accordance with CIRIA Report C574 (2002), Engineering in Chalk, with the chalk generally comprising structureless chalk composed of angular fine to coarse sand and gravel sized clasts of chalk in a comminuted chalk matrix. The gravel was of low and occasionally medium density. The chalk was initially assessed as Grade Dm in the boreholes, although the sampling will have resulted in disturbance of the material and the recovered samples will not be indicative of the in-situ condition.

A weaker upper weathered zone of the chalk was noted in Borehole No 104 and the condition of the chalk appeared to improve with depth.

4.4 Groundwater

Groundwater was not encountered during drilling and the single standpipe installed has been found to be dry during one monitoring visit carried out two weeks after installation.

4.5 Soil Contamination

The table below sets out the values measured within the four samples analysed; all concentrations are in mg/kg unless otherwise stated.

Determinant	BH4 0.10 m	BH105 0.10 m	BH104 0.10 m	BH101 0.10 m
pH	7.7	9.1	8.4	8.3
Arsenic	27	15	15	15
Cadmium	<0.2	0.3	0.2	0.3
Chromium	29	33	28	26
Lead	31	160	29	49
Mercury	< 0.3	<0.3	<0.3	<0.3
Selenium	< 1.0	1.2	1.3	1.2



Determinant	BH4 0.10 m	BH105 0.10 m	BH104 0.10 m	BH101 0.10 m
Copper	19	32	18	20
Nickel	32	18	20	18
Zinc	78	140	61	60
Total Cyanide	<1.0	<1.0	<1.0	<1.0
Total Phenols	<1.0	<1.0	<1.0	<1.0
Sulphide	1.3	3	<1.0	<1.0
Benzo(a)pyrene	<0.05	1.4	<0.05	<0.05
Naphthalene	0.07	<0.05	<0.05	<0.05
TPH	<10	93	<10	<10
Total Organic Carbon %	2.3	2	1.2	1.4

Note: Figure in bold indicates concentration in excess of risk-based soil guideline values, as discussed in Part 2 of this report

In addition, all of the samples were screened for the presence of asbestos and none was detected.

4.5.1 Generic Quantitative Risk Assessment

The use of a risk-based approach has been adopted to provide an initial screening of the test results to assess the need for subsequent site-specific risk assessments. Contaminants of concern are those that have values in excess of generic human health risk-based guideline values, which are either the CLEA² Soil Guideline Values where available, the Suitable 4 Use Values³ (S4UL) produced by LQM/CIEH calculated using the CLEA UK Version 1.07⁴ software, or the DEFRA Category 4 Screening values⁵, assuming a residential end use without plant uptake. The key generic assumptions for this end use are as follows:

- Ⓒ that groundwater will not be a critical risk receptor;
- Ⓒ that the critical receptor for human health will be young female children aged less than six years old;

- Ⓒ that the exposure duration will be six years;
- Ⓒ that the critical exposure pathways will be indoor dust ingestion, skin contact with indoor dust, and inhalation of indoor and outdoor dust and vapours; and
- Ⓒ that the building type equates to a two-storey small terraced house.

It is considered that these assumptions are acceptable for this generic assessment of this site, albeit conservative as the site will be a school resulting in much exposure time than a residential end use. The tables of generic screening values derived by GEA and an explanation of how each value has been derived are included in the Appendix.

Where contaminant concentrations are measured at concentrations below the generic screening value it is considered that they pose an acceptable level of risk and thus further consideration of these contaminant concentrations is not required. However, where concentrations are measured in excess of these generic screening values there is considered to be a potential that they could pose an unacceptable risk and thus further action will be required which could include;

- Ⓒ additional testing to zone the extent of the contaminated material and thus reduce the uncertainty with regard to its potential risk;
- Ⓒ site specific risk assessment to refine the assessment criteria and allow an assessment to be made as to whether the concentration present would pose an unacceptable risk at this site; or
- Ⓒ soil remediation or risk management to mitigate the risk posed by the contaminant to a degree that it poses an acceptable risk.

The results of the chemical analyses have indicated the samples of made ground to be free from elevated concentrations of contaminants and asbestos fibres. The significance of these results is considered further in Part 2 of the report.

² Updated Technical Background to the CLEA Model (Science Report SC050021/SR3) Jan 2009 and Soil Guideline Value reports for specific contaminants; all DEFRA and Environment Agency.

³ The LQM/CIEH S4ULs for Human Health Risk Assessment S4UL3065 November 2014

⁴ Contaminated Land Exposure Assessment (CL|EA) Software Version 1.071 Environment Agency 2015

⁵ CL:AIRE (2013) *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination* Final Project Report SP1010 and DEFRA (2014) *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination* Policy Companion Document SP1010



Part 2: Design Basis Report

This section of the report provides an interpretation of the findings detailed in Part 1, in the form of a ground model, and then provides advice and recommendations with respect to the proposed development.

5.0 Ground Model

It is proposed to construct a new Scheel building in the south of the site, with school playing fields proposed across the remainder of the site. The loads are not known but are anticipated to be light to moderate and therefore spread foundations are considered likely to be appropriate.

The site is not considered to have had a potentially contaminative history, as it has never been developed, and on the basis of the fieldwork, the ground conditions can be characterised as follows:

-  below a nominal thickness of made ground, the Lowestoft Formation is present, over the Lewes Nodular Chalk Formation and Seaford Chalk Formation;
-  the made ground comprises dark brown to brownish-grey silty sandy clay with gravel and roots and rootlets, and extending to depths of between 0.20 m and 0.30 m;
-  the Lowestoft Formation generally comprises firm to stiff and locally very stiff brown, orange-brown and reddish-brown slightly sandy to sandy clay with variable fine to coarse subangular to subrounded gravel content, extending to depths of between 2.00 m and 5.45 m;
-  the depth to the chalk varies significantly in parts of the site;
-  the Lewes Nodular Chalk and Seaford Chalk Formations were recovered as structureless off-white silty clay with occasional fragments of low density to medium density chalk gravel (Grade Dm);
-  the condition of the chalk appears to improve with depth;
-  groundwater is not present at shallow depths beneath the site; and
-  contamination testing has revealed the made ground to be free from elevated concentrations of contaminants.

6.0 Advice & Recommendations

In view of the anticipated light to moderate load, and the ground conditions encountered, the use of shallow spread foundations will be suitable for the development.

6.1 Spread Foundations

Moderate width strip or pad foundations bearing on the firm to stiff sandy clay of the Lowestoft Formation should be placed at a minimum depth of 1.50 m, allowing for restricted new planting in accordance with Table 4 of NBHC Standards Chapter 4.2 (2023). If trees are excluded within the zone of influence shown in Table 4 of the NHBC guidance, the minimum depth can be reduced to 1.00 m subject also to the further advice on new tree and shrub planting as detailed in the NHBC guidelines. The foundations may be designed to apply a net allowable bearing pressure of 125 kN/m². This value incorporates an adequate factor of safety against bearing capacity failure and should ensure that settlement remains within normal tolerable limits. The recommended bearing pressure takes account of the variable nature of the soils and any foundations should be nominally reinforced where they span clay and granular material to protect against differential settlement.

Foundations will need to be deepened in the vicinity of existing and proposed trees and National House Building Council (NHBC) guidelines should be followed in this respect. High shrinkability clays should be assumed. Where trees are to be removed the required founding depth should be determined on the basis of the existing tree height if it is less than 50% of the mature height and on the basis of full mature height if the current height is more than 50% of the mature height. Where a tree is to be retained the final mature height should be adopted. Notwithstanding NHBC guidelines, all foundations should extend beyond the zone of desiccation. In this respect it would be prudent to have all foundation excavations inspected by a suitably experienced engineer. Due allowance should be made for future growth of the trees.

The requirement for compressible material alongside foundations should be determined by reference to the NHBC guidelines. If trees are to be planted in close proximity to the new buildings founding depths should be deepened in accordance with NHBC guidelines and using the mature height of the tree. High shrinkability clay should be assumed.



6.2 Shallow Excavations

On the basis of the borehole findings it is considered that it will be generally feasible to form relatively shallow excavations terminating within the Lowestoft Formation or the Chalk without the requirement for lateral support, although localised instabilities may occur where more granular material or groundwater is encountered.

Significant inflows of groundwater into shallow excavations are not generally anticipated, although seepages may be encountered from perched water tables within the made ground, although such inflows should be suitably controlled by sump pumping.

If deeper excavations are considered or if excavations are to remain open for prolonged periods it is recommended that provision be made for battered side slopes or lateral support. Where personnel are required to enter excavations, a risk assessment should be carried out and temporary lateral support or battering of the excavation sides considered in order to comply with normal safety requirements.

6.3 Ground Floor Slab

Within the zone of influence of existing trees to be retained or removed, due to the presence of cohesive soil at formation level with potentially high volume change potential, it is recommended that the floor slabs for the new building is constructed over a suitable void, void former or layer of compressible material. Outside of the zone of influence of trees, it should be possible to adopt a lightly loaded ground bearing floor slab.

6.4 Effect of Sulphates

Chemical analyses have revealed relatively low concentrations of soluble sulphate and near-neutral pH in accordance with Class DS-1 conditions of Table C2 of BRE Special Digest 1:SD Third Edition (2005). The measured pH values of the samples show that an ACEC class of AC-1 would be appropriate for the site. This assumes a mobile water condition at the site. The guidelines contained in the digest should be followed in the design of foundation concrete.

6.5 Contamination Risk Assessment

The site is not considered to have had a potentially contaminative history as it has apparently remained undeveloped throughout its known history and as a result, no sources of contamination are considered to be present within the boundaries of the site.

The results of the chemical analyses have indicated the samples tested to be free from elevated concentrations of contaminants. As a result, a requirement for remedial measures is not envisaged.

However, in view of the relatively few samples tested over an area of this size, it would be prudent to maintain a watching brief throughout the groundworks.

6.6 Waste Disposal

Under the Waste Framework Directive, waste is classified as being either Hazardous or Non-Hazardous and landfills receiving waste are classified as accepting hazardous or non-hazardous wastes or the non-hazardous sub-category of inert waste in accordance with the Waste Directive. Waste classification is a staged process and this investigation represents the preliminary sampling exercise of that process. Once the extent and location of the waste that is to be removed has been defined, further sampling and testing may be necessary. The results from this ground investigation should be used to help define the sampling plan for such further testing, which could include WAC leaching tests where the totals analysis indicates the soil to be a hazardous waste or inert waste from a contaminated site. It should however be noted that the Environment Agency guidance WM3⁶ states that landfill WAC analysis, specifically leaching test results, must not be used for waste classification purposes.

Any spoil arising from excavations or landscaping works, which is not to be re-used in accordance with the CL:AIRE⁷ guidance, will need to be disposed of to a licensed tip. Waste going to landfill is subject to landfill tax at either the current standard rate of £126.15 per tonne (about £231.00 per m³) or at the lower rate of £4.05 per tonne (roughly £7.50 per m³). However, the classifications for tax purposes and disposal purposes differ and currently all made ground and topsoil is taxable at the 'standard' rate and only naturally occurring soil and stones, which are accurately described as such in terms of the 2011 Order, would qualify for the 'lower rate' of landfill tax.

6 Environment Agency 2015. *Guidance on the classification and assessment of waste*. Technical Guidance WM3 First Edition

7 CL:AIRE March 2011. *The Definition of Waste: Development Industry Code of Practice* Version 2



Based on the technical guidance provided by the EA it is considered likely that the soils encountered during this ground investigation, as represented by the chemical analyses carried out, would be generally classified as follows.

Soil Type	Waste Classification (Waste Code)	WAC Testing Required Prior to Landfill Disposal?	Current applicable rate of Landfill Tax
Made ground	Non-hazardous (17 05 04)	No	£126.15/tonne (Standard rate)
Natural Soil	Inert non-hazardous (17 05 04)	Should not be required but confirm with receiving landfill	£4.05 / tonne (Reduced rate for uncontaminated naturally occurring rocks and soils)

Under the requirements of the Waste Directive all waste needs to be pre-treated prior to disposal. The pre-treatment process must be physical, thermal, chemical or biological, including sorting. It must change the characteristics of the waste in order to reduce its volume, hazardous nature, facilitate handling or enhance recovery. The waste producer can carry out the treatment but they will need to provide documentation to prove that this has been carried out. Alternatively, the treatment can be carried out by an approved contractor. The Environment Agency has issued a position paper⁸ which states that in certain circumstances, segregation at source may be considered as pre-treatment and thus excavated material may not have to be treated prior to landfilling if the soils can be segregated onsite prior to excavation by sufficiently characterising the soils insitu prior to excavation.

The above opinion with regard to the classification of the excavated soils is provided for guidance only and should be confirmed by the receiving landfill once the soils to be discarded have been identified. The local waste regulation department of the Environment Agency (EA) should be contacted to obtain details of tips that are licensed to accept the soil represented by the test results. The tips will be able to provide costs for disposing of this material but may require further testing.

7.0 Outstanding Risks & Issues

This section of the report aims to highlight areas where further work is required as a result of limitations on the scope of this investigation, or where issues have been identified by this investigation that warrant further consideration. The scope of risks and issues discussed in this section is by no means exhaustive, but covers the main areas where additional work may be required.

7.1 Site-Specific Risks

If during ground works any visual or olfactory evidence of contamination is identified it is recommended that further investigation be carried out and that the risk assessment is reviewed. This area of doubt should be drawn to the attention of prospective contractors and further investigation will be required or sufficient contingency should be provided to cover the outstanding risk.

7.2 General Risks

The ground is a heterogeneous natural material and variations will inevitably arise between the locations at which it is investigated. This report provides an assessment of the general ground conditions based on the discrete points at which the ground was sampled, but there may be ground conditions (including soil, rock, gas and groundwater) elsewhere on site that have not been revealed by this investigation and therefore could not have been taken into account in this report. The ground conditions should be subject to review as the development proceeds to ensure that any variations from the Ground Model are properly assessed by a suitably qualified person.

The comments made regarding gas and groundwater are based on observations made during the period the work has been carried out. Conditions may vary as a result of seasonal or other effects.

Where any conclusions and recommendations contained in this report have been based upon information provided by others, it has been assumed that all relevant information has been provided by those parties and that such information is accurate. Any such information has not been independently verified by GEA, unless otherwise stated in the report. GEA accepts no liability for any inaccurate conclusions, assumptions or actions taken resulting from any inaccurate information supplied to GEA from others.

8 Environment Agency 23 Oct 2007 *Regulatory Position Statement Treating non-hazardous waste for landfill - Enforcing the new requirement*



Appendix

a. Field Work

Site Plan
Borehole Records

b. Lab Testing

Geotechnical Test Results
Chemical Test Results
Generic Risk Based Screening Values



appendix a

Field Work

Site Plan
Borehole Records

Site Great Ashby, Stevenage, Hertfordshire SG4 7EA

Client Picture Estates Ltd

Job Number
J25152

Sheet
1 / 1





Dynamic (Windowless) Sampler

BH101
Sheet 1 of 1

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name Great Ashby GA2 School Site	Project No. J25152	Start Date 2025-06-12	End Date 2025-06-12	

Client Picture Estates Ltd	Consultant	Contractor
-------------------------------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES 0.2			(0.30)		TOPSOIL (Very stiff desiccated dark brown sandy clay with rounded to angular, medium to coarse gravels of flint)	
						0.30		Stiff brown sandy gravelly CLAY. Gravels are fine to coarse rounded to angular flint and medium chalk.	0.5
		1.00				(0.80)		Firm to stiff orange-brown slightly sandy CLAY with occassional gravel and carbonised rootlets.	1.0
		1.00	SPT D 1.45	N=15 (2,3/4,3,4,4) N60=17		1.10		Interval of coarse subrounded to subangular frequent flints. (1.30 - 1.40m)	1.5
		2.00				2.00		Firm orange-brown silty CLAY with carbonised rootlets.	2.0
		2.00	SPT D 2.45	N=15 (2,2/3,3,4,5) N60=17					2.5
		3.00							3.0
		3.00	SPT D 3.45	N=11 (2,2/2,3,3,3) N60=12					3.5
						(3.45)			4.0
		4.00							4.5
		4.00	SPT D 4.45	N=13 (2,2/3,3,4,3) N60=15					5.0
		5.00							5.5
		5.00	SPT D 5.45	N=21 (3,3/5,5,5,6) N60=23		5.45		End of Borehole at 5.45m	6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks	Method, Plant, Stability, Dimensions 0.00 - 5.45m WS	Logger LH
---------	---	--------------



Dynamic (Windowless) Sampler

BH102
Sheet 1 of 1

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name Great Ashby GA2 School Site	Project No. J25152	Start Date 2025-06-12	End Date 2025-06-12	

Client Picture Estates Ltd	Consultant	Contractor
-------------------------------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
						(0.30)		TOPSOIL (Very stiff desiccated dark brown sandy clay with rounded to angular, medium to coarse gravels of flint and roots and rootlets)	
		0.60	D 0.7			0.30		Stiff orange-brown sandy CLAY	0.5
		1.00	SPT	N=23 (6,6/3,5,6,9) N60=26		(0.70)			1.0
		1.60	D 1.7			1.00		Soft to firm orange-brown very sandy CLAY with carbonised rootlets	1.5
		2.00	SPT	N=11 (2,1/2,3,3,3) N60=12		(2.90)		Interval of frequent carbonised rootlets. (1.45 - 1.65m)	2.0
		2.60	D 2.7						2.5
		3.00	SPT	N=13 (2,1/3,3,3,4) N60=15					3.0
		3.60	D 3.7						3.5
		4.00	SPT	N=25 (4,3/6,6,7,6) N60=28		3.90		Stiff to very stiff brown slightly sandy slightly gravelly CLAY with fine to coarse angular to subangular flints and fine to medium chalk	4.0
		4.60	D 4.7			(1.55)			4.5
		5.00	SPT	N=19 (2,3/3,5,5,6) N60=21					5.0
						5.45		End of Borehole at 5.45m	5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks	Method, Plant, Stability, Dimensions 0.00 - 5.45m WLS	Logger LH
Checked By: AT Approved By: SB Status: FINAL		



Dynamic (Windowless) Sampler

BH103
Sheet 1 of 1

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name Great Ashby GA2 School Site	Project No. J25152	Start Date 2025-06-12	End Date 2025-06-12	

Client Picture Estates Ltd	Consultant	Contractor
-------------------------------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
						(0.25) 0.25		TOPSOIL (Very stiff desiccated dark brown sandy clay with rounded to angular, medium to coarse gravels of flint)	
		0.70	D 0.8					Stiff reddish-brown slightly sandy CLAY with occasional gravels of medium to coarse, subrounded to subangular flint.	0.5
		1.00	SPT	N=25 (1,2/5,6,8,6) N60=28					1.0
						(2.25)		Black staining from carbonised rootlets. (1.10 - 1.20m) Interval of coarse subrounded to subangular regular flints. (1.30 - 1.40m)	1.5
		1.70	D 1.8						2.0
		2.00	SPT	N=23 (2,3/5,5,6,7) N60=26					2.5
						2.50		Gradational boundary into stiff becoming firm with depth yellow-brown slightly gravelly sandy CLAY. Occasional coarse subrounded gravels and cobbles of flint.	3.0
		2.70	D 2.8						3.5
		3.00	SPT	N=24 (2,3/5,6,6,7) N60=27					4.0
						(2.95)			4.5
		3.70	D 3.8						5.0
		4.00	SPT	N=22 (2,4/4,5,5,8) N60=25					5.5
									6.0
		4.70	D 4.8						6.5
		5.00	SPT	N=25 (3,3/5,6,6,8) N60=28					7.0
						5.45		End of Borehole at 5.45m	7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks	Method, Plant, Stability, Dimensions 0.00 - 5.45m WS	Logger LH
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Dynamic (Windowless) Sampler

BH104

Sheet 1 of 1

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name Great Ashby GA2 School Site	Project No. J25152	Start Date 2025-06-12	End Date 2025-06-12	

Client Picture Estates Ltd	Consultant	Contractor
-------------------------------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES 0.2			(0.20) 0.20		TOPSOIL (Very stiff desiccated dark brown sandy clay with rounded to angular, medium to coarse gravels of flint)	
		1.00 1.00	SPT D 1.45	N=14 (2,3/4,3,4,3) N60=16		(1.80)		Stiff becoming very stiff reddish-brown slightly sandy slightly gravelly CLAY. Gravels are angular fine to caorse flints and fine chalk, with a flint cobble at 1.50 m.	0.5 1.0 1.5
		2.00 2.00	SPT D 2.45	N=4 (1,1/1,1,1,1) N60=4		2.00		CHALK recovered as soft white clayey slightly gravelly SILT with layers of sandy clay at depths of between 2.00 m and 3.00 m.	2.0 2.5
		3.00 3.00	SPT D 3.45	N=0 (1,0/0,0,0,0) N60=0		(3.45)			3.0 3.5
		4.00 4.00	SPT D 4.45	N=3 (1,0/1,0,1,1) N60=3					4.0 4.5
		5.00 5.00	SPT D 5.45	N=12 (1,1/4,4,2,2) N60=13		5.45			5.0 5.5
								End of Borehole at 5.45m	6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0

Remarks	Method, Plant, Stability, Dimensions 0.00 - 5.45m WS	Logger LH
Checked By: AT Approved By: SB Status: FINAL		



GEA

Dynamic (Windowless) Sampler

BH105
Sheet 1 of 1

Hole Type WLS	Easting	Northing	Ground Level (m)	Scale 1:50
Project Name Great Ashby GA2 School Site	Project No. J25152	Start Date 2025-06-12	End Date 2025-06-12	

Client Picture Estates Ltd	Consultant	Contractor
-------------------------------	------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES 0.2			(0.20) 0.20		TOPSOIL (Very stiff desiccated dark brown sandy clay with rounded to angular, medium to coarse gravels of flint)	
		0.60	D 0.7					Stiff to very stiff brown slightly gravelly to gravelly CLAY. Gravels are fine to coarse angular flints and fine chalk.	0.5
		1.00	SPT	N=22 (2,4/4,5,6,7) N60=25		(1.40)			1.0
		1.60	D 1.7			1.60		Coarse mudstone at 1.50mm, root traces to 1.00m, sub 1mm. (1.50m)	1.5
		2.00	SPT	N=21 (3,3/4,4,7,6) N60=23				Stiff reddish-brown slightly sandy CLAY with occasional rounded gravels. Becoming slightly gravelly with depth consisting of flint and chalk, with rounded cobble of flint at 2.50 m.	2.0
		2.60	D 2.7						2.5
		3.00	SPT	N=20 (2,2/4,4,5,7) N60=22					3.0
		3.60	D 3.7			(3.50)			3.5
		4.00	SPT	N=26 (6,10/7,5,6,8) N60=29					4.0
		4.60	D 4.7						4.5
		5.00	SPT	N=36 (4,5/9,9,10,8) N60=40		5.10 (0.35)		CHALK recovered as off-white clayey SILT	5.0
						5.45		End of Borehole at 5.45m	5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks	Method, Plant, Stability, Dimensions 0.00 - 5.45m WS	Logger LH
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appendix b

Lab Testing

Geotechnical Test Results

Chemical Test Results

Generic Risk Based Screening Values



Summary of Water Content, Liquid Limit (4 point) and Plastic Limit Results

Job No. 37488	Project Name Great Ashby G2 School Site	Programme	
		Samples received	25/06/2025
Project No. J25152	Client GEA	Schedule received	24/06/2025
		Project started	26/06/2025
		Testing Started	09/07/2025

Hole No.	Sample				Soil Description	Water Content %	Passing 425µm %	Preparation	LL %	PL %	PI %	Remarks
	Ref	Top m	Base m	Type								
BH101	-	3.00	-	D	Orangish brown slightly mottled dark grey slightly sandy silty CLAY	20.4	100	Tested in natural condition	37	19	18	
BH103	-	1.70	-	D	Reddish brown slightly mottled bluish grey slightly gravelly silty CLAY (gravel is fm and sub-angular to rounded)	30.9	90	Tested after >425um removed by hand	74	36	38	
BH105	-	0.60	-	D	Orangish brown slightly mottled grey slightly sandy slightly gravelly silty CLAY with occasional chalk fragments (gravel is fm and sub-angular to rounded)	20.3	90	Tested after >425um removed by hand	57	22	35	

80g/300 cone used unless otherwise stated.

 UKAS TESTING 2519	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: 10/07/2025
	Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)		



LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No.

37488

Borehole/Pit No.

BH101

Site Name

Great Ashby G2 School Site

Sample No.

-

Project No.

J25152

Client

GEA

Depth Top

3.00

m

Depth Base

-

m

Sample Type

D

Soil Description

Orangish brown slightly mottled dark grey slightly sandy silty CLAY

Samples received

25/06/2025

Schedules received

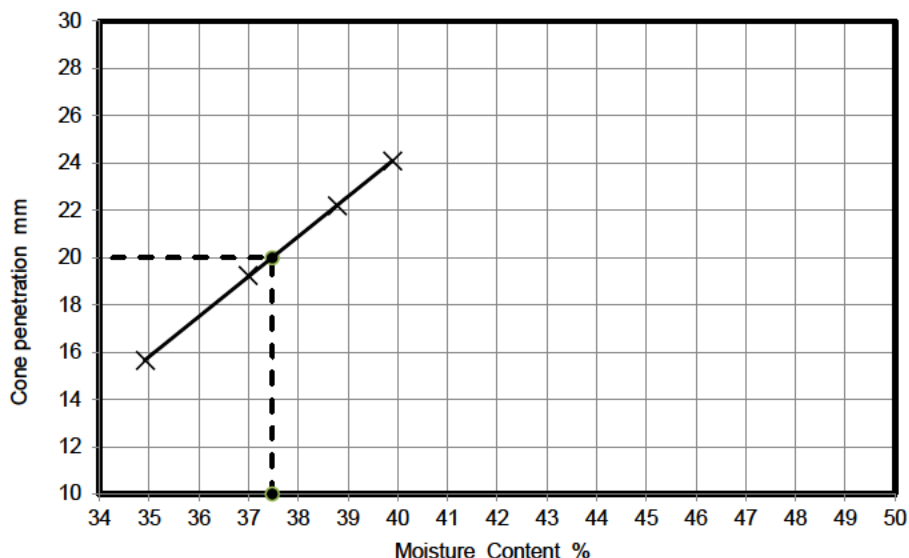
24/06/2025

Project Started

26/06/2025

Date Tested

09/07/2025



WATER CONTENT

20.4

%

% PASSING 425µm SIEVE

100

%

LIQUID LIMIT

37

%

PLASTIC LIMIT

19

%

PLASTICITY INDEX

18

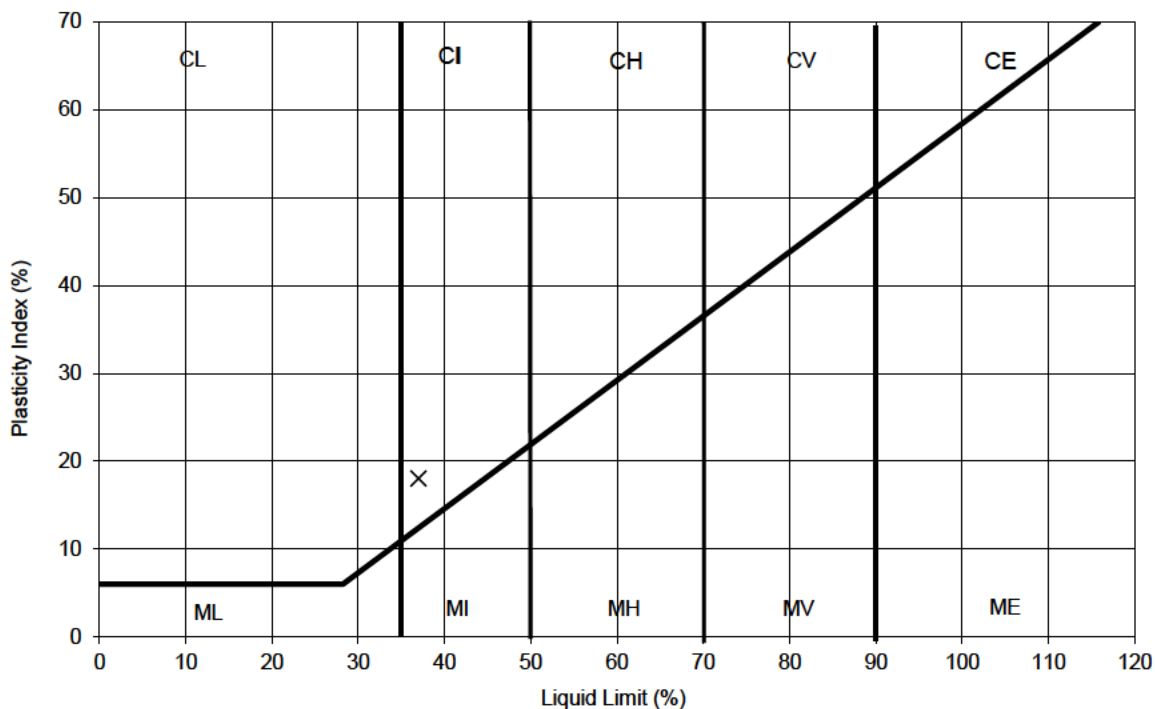
%

Preparation Method

Tested in natural condition

Remarks

PLASTICITY INDEX



TEST METHODS:

BS EN ISO 17892 Part 1: 2014 + A1:2022 Water Content

BS EN ISO 17892 Part 12: 2018 +A2:2022 Liquid and plastic limit

These results only apply to the items tested. 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

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

Checked and Approved

Initials: J.P

Date: 10/07/2025

MSF-5 R2



LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No.

37488

Borehole/Pit No.

BH103

Site Name

Great Ashby G2 School Site

Sample No.

-

Project No.

J25152

Client

GEA

Depth Top

1.70

m

Depth Base

-

m

Sample Type

D

Soil Description

Reddish brown slightly mottled bluish grey slightly gravelly silty CLAY
(gravel is fm and sub-angular to rounded)

Samples received

25/06/2025

Schedules received

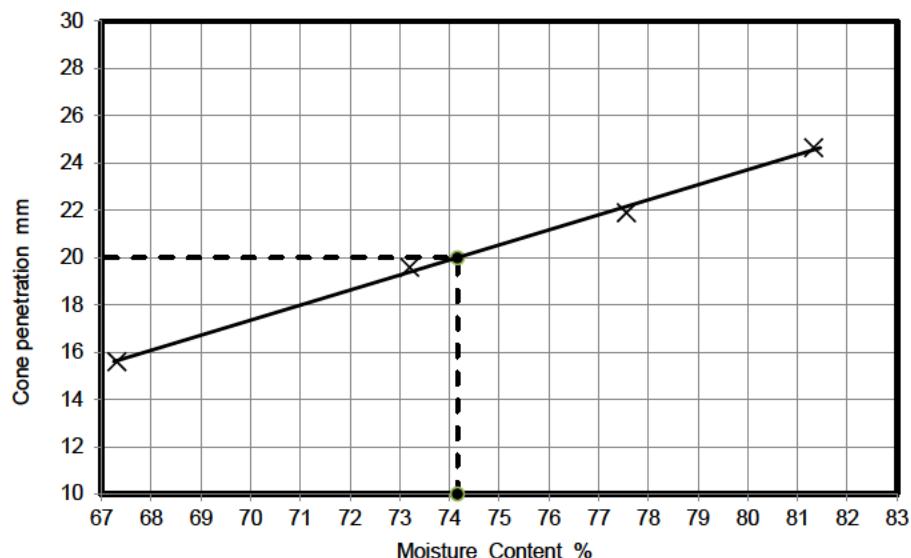
24/06/2025

Project Started

26/06/2025

Date Tested

09/07/2025



WATER CONTENT

30.9

%

% PASSING 425µm SIEVE

90

%

LIQUID LIMIT

74

%

PLASTIC LIMIT

36

%

PLASTICITY INDEX

38

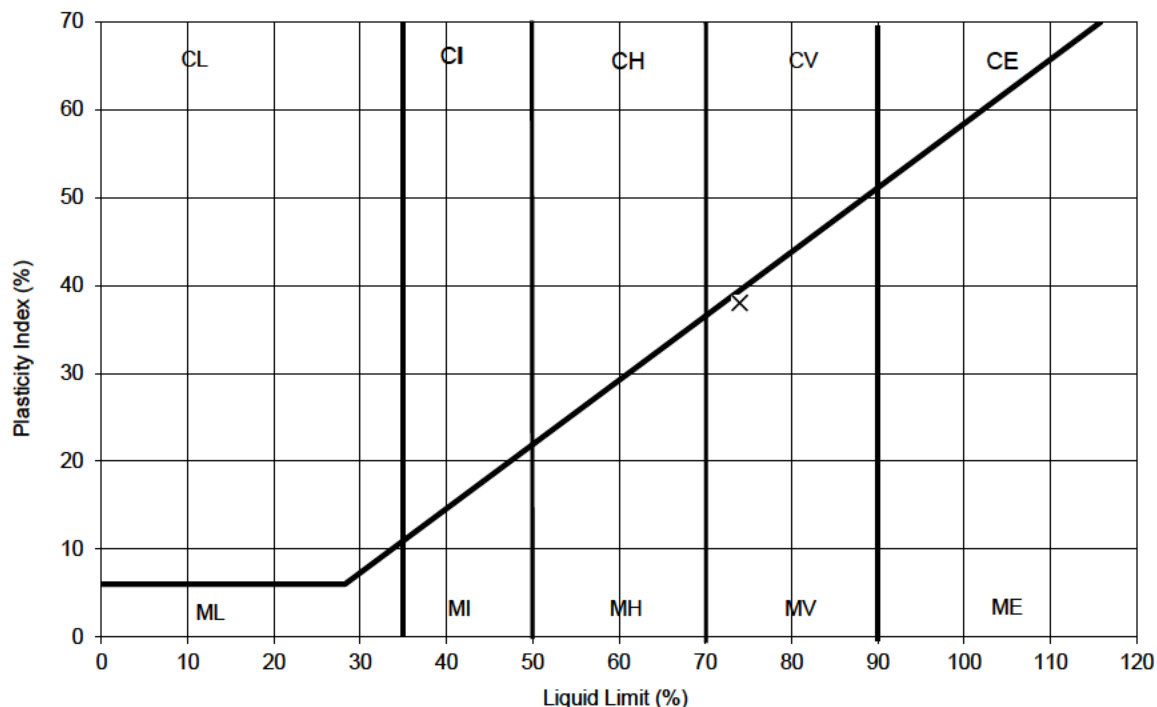
%

Preparation Method

Tested after >425µm
removed by hand

Remarks

PLASTICITY INDEX



TEST METHODS:

BS EN ISO 17892 Part 1: 2014 + A1:2022 Water Content

BS EN ISO 17892 Part 12: 2018 +A2:2022 Liquid and plastic limit

These results only apply to the items tested. 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

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

Checked and
Approved

Initials: J.P

Date: 10/07/2025

MSF-5 R2



LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX

Job No.

37488

Borehole/Pit No.

BH105

Site Name

Great Ashby G2 School Site

Sample No.

-

Project No.

J25152

Client

GEA

Depth Top

0.60

m

Depth Base

-

m

Sample Type

D

Soil Description

Orangish brown slightly mottled grey slightly sandy slightly gravelly silty CLAY with occasional chalk fragments (gravel is fm and sub-angular to rounded)

Samples received

25/06/2025

Schedules received

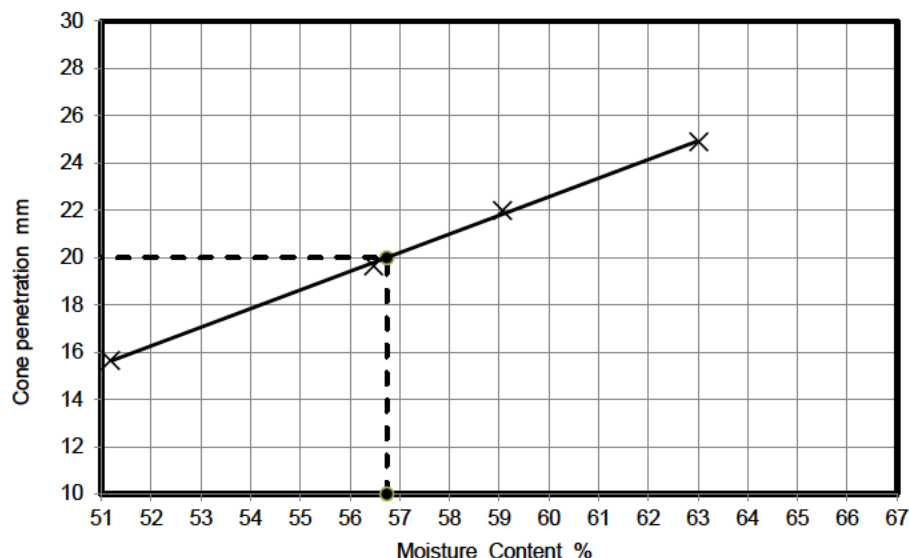
24/06/2025

Project Started

26/06/2025

Date Tested

09/07/2025



WATER CONTENT

20.3

%

% PASSING 425µm SIEVE

90

%

LIQUID LIMIT

57

%

PLASTIC LIMIT

22

%

PLASTICITY INDEX

35

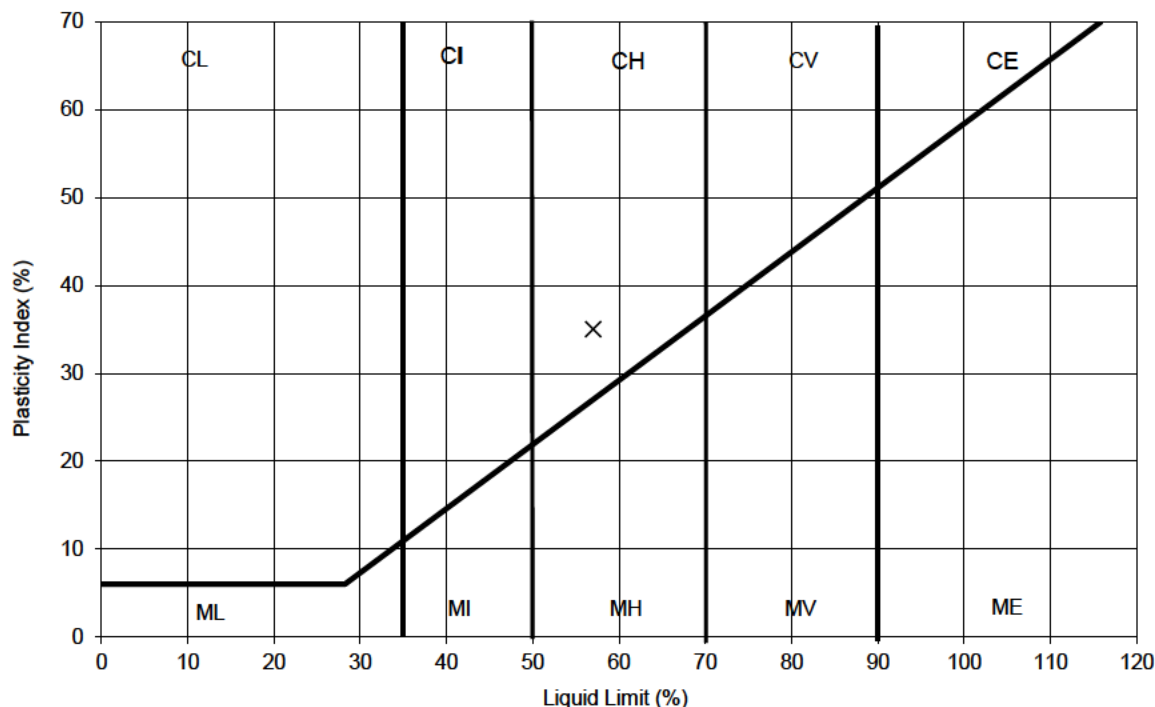
%

Preparation Method

Tested after >425µm removed by hand

Remarks

PLASTICITY INDEX



TEST METHODS:

BS EN ISO 17892 Part 1: 2014 + A1:2022 Water Content

BS EN ISO 17892 Part 12: 2018 +A2:2022 Liquid and plastic limit

These results only apply to the items tested. 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

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

Checked and Approved

Initials: J.P

Date: 10/07/2025

MSF-5 R2

		Saturation Water Content - Summary of Results Tested in accordance with BS1377-2 :2022 & BS EN ISO 17892-2:2014									
Job No. 37488		Project Name Great Ashby G2 School Site						Programme			
								Samples received		25/06/2025	
								Schedule received		24/06/2025	
Project No. J25152		Client GEA						Project started		26/06/2025	
								Testing Started		07/07/2025	
Hole No.	Sample				Description	SWC %	Water Content %	Bulk Density Mg/m3	Dry Density Mg/m3	Volume cm3	Remarks
	Ref	Top m	Base m	Type							
BH104	-	4.00	-	D	Off white putty CHALK with rare fm intact chalk fragments	33.4	33.0	1.89	1.42	5	
		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: 10/07/2025	
2519		Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)								MSF-5-R18	

		Sulphate Content (Gravimetric Method) for 2:1 Soil: Water Extract and pH Value - Summary of Results Tested in accordance with BS1377 : Part 3 : 2018, Clause 7.6 & Clause 12							
Job No. 37488		Project Name Great Ashby G2 School Site						Programme Samples received 25/06/2025 Schedule received 24/06/2025 Project started 26/06/2025 Testing Started 30/07/2025	
Project No. J25152		Client GEA							
Hole No.	Sample				Soil description	Dry Mass passing 2mm %	SO4 Content mg/l	pH	Remarks
	Ref	Top m	Base m	Type					
BH105	-	1.00	-	D	Orangish brown slightly gravelly sandy silty CLAY (gravel is fm and sub-angular)	92	200	7.9	
BH102	-	0.60	0.70	D	Orangish brown slightly sandy silty CLAY	100	200	8.0	
BH104	-	1.00	-	D	Brown slightly gravelly slightly sandy silty CLAY with chalk deposits (gravel is fmc and sub-angular)	80	160	8.0	
		Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU Tel: 01923 711 288 Email: James@k4soils.com These results only apply to the items tested NOTE: The report shall not be reproduced except in full without authority of the laboratory							Checked and Approved Initials J.P Date: 10/07/2025
2519		Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)							MSF-5-R29

Geotechnical & Environmental Associates
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Analytical Report Number : 25-032399

Project / Site name:	Great Ashby HA2 School Site, Stevenage SG4 7EA	Samples received on:	18/06/2025
Your job number:	J25152	Samples instructed on/ Analysis started on:	19/06/2025
Your order number:		Analysis completed by:	27/06/2025
Report Issue Number:	1	Report issued on:	28/06/2025
Samples Analysed:	3 soil samples		



Signed:

Rachel Chappell
Key Account Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

Lab Sample Number	587948	587949	587950
Sample Reference	BH105	BH104	BH101
Sample Number	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A
Depth (m)	0.10-2.00	0.10-2.00	0.10-2.00
Date Sampled	12/06/2025	12/06/2025	12/06/2025
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	8.7	7.2
Total mass of sample received	kg	0.1	NONE	0.6	0.6	0.6

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSA	DSA	DSA
Analysis completed	N/A	N/A	N/A	26/06/2025	26/06/2025	26/06/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	9.1	8.4	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	25000	620	650
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3900	27	26
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.93	0.0134	0.0131
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1930	13.4	13.1
Sulphide	mg/kg	1	MCERTS	3	< 1.0	< 1.0
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	91	1.7	1.8
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2	1.2	1.4

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	0.18	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.14	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	2.1	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.46	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.4	0.08	0.09
Pyrene	mg/kg	0.05	MCERTS	2.9	0.05	0.07
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	1.4	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	1.8	0.06	0.06
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.82	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.4	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.83	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.15	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.93	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	18.2	< 0.80	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	15	15
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.2	0.3
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8

Analytical Report Number: 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

Lab Sample Number				587948	587949	587950
Sample Reference				BH105	BH104	BH101
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				0.10-2.00	0.10-2.00	0.10-2.00
Date Sampled				12/06/2025	12/06/2025	12/06/2025
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	33	28	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	18	20
Lead (aqua regia extractable)	mg/kg	1	MCERTS	160	29	49
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	18	20	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.2	1.3	1.2
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	140	61	60

Petroleum Hydrocarbons

TPH (>EC8 - EC10) HS_ID_TOTAL	mg/kg	0.02	MCERTS	< 0.02	< 0.02	< 0.02
TPH (>EC10 - EC12) EH_CU_ID_TOTAL	mg/kg	2	MCERTS	2.5	< 2.0	< 2.0
TPH (>EC10 - EC35) EH_CU_ID_TOTAL	mg/kg	10	NONE	93	< 10	< 10
TPH (>EC12 - EC16) EH_CU_ID_TOTAL	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0
TPH (>EC16 - EC21) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	14	< 10	< 10
TPH (>EC21 - EC35) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	74	< 10	< 10
TPH Total >EC8 - EC35 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	93	< 10	< 10
TPH (EC10 - EC40) EH_CU_ID_TOTAL	mg/kg	10	MCERTS	120	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
587948	BH105	None Supplied	0.10-2.00	Brown loam and clay with gravel and vegetation
587949	BH104	None Supplied	0.10-2.00	Brown clay and loam with gravel and vegetation
587950	BH101	None Supplied	0.10-2.00	Brown clay and loam with gravel and vegetation

Analytical Report Number : 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

Analytical Report Number : 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

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Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Analytical Report Number : 25-032399

Project / Site name: Great Ashby HA2 School Site, Stevenage SG4 7EA

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH101	N/A	S	587950	c	Sulphide in soil	L010-PL	c
BH104	N/A	S	587949	c	Sulphide in soil	L010-PL	c
BH105	N/A	S	587948	c	Sulphide in soil	L010-PL	c

		Geotechnical & Environmental Associates www.gea-ltd.co.uk		Generic Risk-Based Soil Screening Values																																																																																																																																																																																																																																					
Site Great Ashby, Stevenage, Hertfordshire SG4 7EA				Job Number J25152																																																																																																																																																																																																																																					
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<table><tr><th>Contaminant</th><th>Screening Value mg/kg</th><th>Data Source</th></tr><tr><td colspan="3">Metals</td></tr><tr><td>Arsenic</td><td>37</td><td>C4SL</td></tr><tr><td>Cadmium</td><td>22</td><td>C4SL</td></tr><tr><td>Chromium (III)</td><td>910</td><td>S4UL</td></tr><tr><td>Chromium (VI)</td><td>21</td><td>C4SL</td></tr><tr><td>Copper</td><td>2,400</td><td>S4UL</td></tr><tr><td>Lead</td><td>200</td><td>C4SL</td></tr><tr><td>Elemental Mercury</td><td>1.2</td><td>S4UL</td></tr><tr><td>Inorganic Mercury</td><td>200</td><td>C4SL</td></tr><tr><td>Nickel</td><td>130</td><td>S4UL</td></tr><tr><td>Selenium</td><td>250</td><td>S4UL</td></tr><tr><td>Zinc</td><td>3,700</td><td>S4UL</td></tr><tr><td colspan="3">Anions</td></tr><tr><td>Soluble Sulphate</td><td>500 mg/l</td><td>Structures</td></tr><tr><td>Sulphide</td><td>50</td><td>Structures</td></tr><tr><td>Chloride</td><td>400</td><td>Structures</td></tr><tr><td colspan="3">Others</td></tr><tr><td>Organic Carbon (%)</td><td>6</td><td>Methanogenic potential</td></tr><tr><td>Total Cyanide</td><td>140</td><td>WRAS</td></tr><tr><td>Total Mono Phenols</td><td>184</td><td>SGV</td></tr><tr><td colspan="3">PAH</td></tr><tr><td>Naphthalene</td><td>15.00</td><td>C4SL</td></tr><tr><td>Acenaphthylene</td><td>170</td><td>S4UL</td></tr><tr><td>Acenaphthene</td><td>210</td><td>S4UL</td></tr><tr><td>Fluorene</td><td>170</td><td>S4UL</td></tr><tr><td>Phenanthrene</td><td>95</td><td>S4UL</td></tr><tr><td>Anthracene</td><td>2,400</td><td>S4UL</td></tr><tr><td>Fluoranthene</td><td>280</td><td>S4UL</td></tr><tr><td>Pyrene</td><td>620</td><td>S4UL</td></tr><tr><td>Benzo(a)anthracene</td><td>7.2</td><td>S4UL</td></tr><tr><td>Chrysene</td><td>15</td><td>S4UL</td></tr><tr><td>Benzo(b)fluoranthene</td><td>2.6</td><td>S4UL</td></tr><tr><td>Benzo(k)fluoranthene</td><td>77.0</td><td>S4UL</td></tr><tr><td>Benzo(a)pyrene</td><td>4.35</td><td>C4SL</td></tr><tr><td>Indeno(1 2 3 cd)pyrene</td><td>27.0</td><td>S4UL</td></tr><tr><td>Dibenz(a h)anthracene</td><td>0.24</td><td>S4UL</td></tr><tr><td>Benzo (g h i)perylene</td><td>320</td><td>S4UL</td></tr></table>			Contaminant	Screening Value mg/kg	Data Source	Metals			Arsenic	37	C4SL	Cadmium	22	C4SL	Chromium (III)	910	S4UL	Chromium (VI)	21	C4SL	Copper	2,400	S4UL	Lead	200	C4SL	Elemental Mercury	1.2	S4UL	Inorganic Mercury	200	C4SL	Nickel	130	S4UL	Selenium	250	S4UL	Zinc	3,700	S4UL	Anions			Soluble Sulphate	500 mg/l	Structures	Sulphide	50	Structures	Chloride	400	Structures	Others			Organic Carbon (%)	6	Methanogenic potential	Total Cyanide	140	WRAS	Total Mono Phenols	184	SGV	PAH			Naphthalene	15.00	C4SL	Acenaphthylene	170	S4UL	Acenaphthene	210	S4UL	Fluorene	170	S4UL	Phenanthrene	95	S4UL	Anthracene	2,400	S4UL	Fluoranthene	280	S4UL	Pyrene	620	S4UL	Benzo(a)anthracene	7.2	S4UL	Chrysene	15	S4UL	Benzo(b)fluoranthene	2.6	S4UL	Benzo(k)fluoranthene	77.0	S4UL	Benzo(a)pyrene	4.35	C4SL	Indeno(1 2 3 cd)pyrene	27.0	S4UL	Dibenz(a h)anthracene	0.24	S4UL	Benzo (g h i)perylene	320	S4UL	<table><tr><th>Contaminant</th><th>Screening Value mg/kg</th><th>Data Source</th></tr><tr><td colspan="3">Hydrocarbons</td></tr><tr><td>Banded TPH (8-10)</td><td>52</td><td>Calc1</td></tr><tr><td>Banded TPH (10-12)</td><td>114</td><td>Calc1</td></tr><tr><td>Banded TPH (12-16)</td><td>215</td><td>Calc1</td></tr><tr><td>Banded TPH (16-21)</td><td>400</td><td>Calc1</td></tr><tr><td>Banded TPH (21-35)</td><td>1692</td><td>Calc1</td></tr><tr><td>Benzene</td><td>0.2</td><td>C4SL</td></tr><tr><td>Toluene</td><td>120</td><td>SGV</td></tr><tr><td>Ethyl Benzene</td><td>65</td><td>SGV</td></tr><tr><td>Xylene</td><td>42</td><td>SGV</td></tr><tr><td>Aliphatic C5-C6</td><td>42</td><td>S4UL</td></tr><tr><td>Aliphatic C6-C8</td><td>100</td><td>S4UL</td></tr><tr><td>Aliphatic C8-C10</td><td>27</td><td>S4UL</td></tr><tr><td>Aliphatic C10-C12</td><td>130</td><td>S4UL</td></tr><tr><td>Aliphatic C12-C16</td><td>1100</td><td>S4UL</td></tr><tr><td>Aliphatic C16-C35</td><td>65,000</td><td>S4UL</td></tr><tr><td>Aromatic C6-C7</td><td>See Benzene</td><td>S4UL</td></tr><tr><td>Aromatic C7-C8</td><td>See Toluene</td><td>S4UL</td></tr><tr><td>Aromatic C8-C10</td><td>34</td><td>S4UL</td></tr><tr><td>Aromatic C10-C12</td><td>74</td><td>S4UL</td></tr><tr><td>Aromatic C12-C16</td><td>140</td><td>S4UL</td></tr><tr><td>Aromatic C16-C21</td><td>260</td><td>S4UL</td></tr><tr><td>Aromatic C21-C35</td><td>1100</td><td>S4UL</td></tr><tr><td>PRO (C5 –C10)</td><td>323</td><td>Calc2</td></tr><tr><td>DRO (C12 –C28)</td><td>66,500</td><td>Calc2</td></tr><tr><td>Lube Oil (C28 –C44)</td><td>66,100</td><td>Calc2</td></tr><tr><td>TPH</td><td>500</td><td>Trigger to consider speciated testing</td></tr><tr><td colspan="3">Chlorinated Solvents</td></tr><tr><td>1,1,1 trichloroethane (TCA)</td><td>8.8</td><td>S4UL</td></tr><tr><td>tetrachloroethane (PCA)</td><td>1.2</td><td>S4UL</td></tr><tr><td>tetrachloroethene (PCE)</td><td>0.31</td><td>C4SL</td></tr><tr><td>trichloroethene (TCE)</td><td>0.0093</td><td>C4SL</td></tr><tr><td>1,2-dichloroethane (DCA)</td><td>0.11</td><td>C4SL</td></tr><tr><td>vinyl chloride (Chloroethene)</td><td>0.0064</td><td>C4SL</td></tr><tr><td>tetrachloromethane (Carbon tetra</td><td>0.026</td><td>S4UL</td></tr><tr><td>trichloromethane (Chloroform)</td><td>0.91</td><td>S4UL</td></tr><tr><td>cis1-2 dichloroethene (DCE)</td><td>0.46</td><td>C4SL</td></tr></table>			Contaminant	Screening Value mg/kg	Data Source	Hydrocarbons			Banded TPH (8-10)	52	Calc1	Banded TPH (10-12)	114	Calc1	Banded TPH (12-16)	215	Calc1	Banded TPH (16-21)	400	Calc1	Banded TPH (21-35)	1692	Calc1	Benzene	0.2	C4SL	Toluene	120	SGV	Ethyl Benzene	65	SGV	Xylene	42	SGV	Aliphatic C5-C6	42	S4UL	Aliphatic C6-C8	100	S4UL	Aliphatic C8-C10	27	S4UL	Aliphatic C10-C12	130	S4UL	Aliphatic C12-C16	1100	S4UL	Aliphatic C16-C35	65,000	S4UL	Aromatic C6-C7	See Benzene	S4UL	Aromatic C7-C8	See Toluene	S4UL	Aromatic C8-C10	34	S4UL	Aromatic C10-C12	74	S4UL	Aromatic C12-C16	140	S4UL	Aromatic C16-C21	260	S4UL	Aromatic C21-C35	1100	S4UL	PRO (C5 –C10)	323	Calc2	DRO (C12 –C28)	66,500	Calc2	Lube Oil (C28 –C44)	66,100	Calc2	TPH	500	Trigger to consider speciated testing	Chlorinated Solvents			1,1,1 trichloroethane (TCA)	8.8	S4UL	tetrachloroethane (PCA)	1.2	S4UL	tetrachloroethene (PCE)	0.31	C4SL	trichloroethene (TCE)	0.0093	C4SL	1,2-dichloroethane (DCA)	0.11	C4SL	vinyl chloride (Chloroethene)	0.0064	C4SL	tetrachloromethane (Carbon tetra	0.026	S4UL	trichloromethane (Chloroform)	0.91	S4UL	cis1-2 dichloroethene (DCE)	0.46	C4SL
Contaminant	Screening Value mg/kg	Data Source																																																																																																																																																																																																																																							
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Soluble Sulphate	500 mg/l	Structures																																																																																																																																																																																																																																							
Sulphide	50	Structures																																																																																																																																																																																																																																							
Chloride	400	Structures																																																																																																																																																																																																																																							
Others																																																																																																																																																																																																																																									
Organic Carbon (%)	6	Methanogenic potential																																																																																																																																																																																																																																							
Total Cyanide	140	WRAS																																																																																																																																																																																																																																							
Total Mono Phenols	184	SGV																																																																																																																																																																																																																																							
PAH																																																																																																																																																																																																																																									
Naphthalene	15.00	C4SL																																																																																																																																																																																																																																							
Acenaphthylene	170	S4UL																																																																																																																																																																																																																																							
Acenaphthene	210	S4UL																																																																																																																																																																																																																																							
Fluorene	170	S4UL																																																																																																																																																																																																																																							
Phenanthrene	95	S4UL																																																																																																																																																																																																																																							
Anthracene	2,400	S4UL																																																																																																																																																																																																																																							
Fluoranthene	280	S4UL																																																																																																																																																																																																																																							
Pyrene	620	S4UL																																																																																																																																																																																																																																							
Benzo(a)anthracene	7.2	S4UL																																																																																																																																																																																																																																							
Chrysene	15	S4UL																																																																																																																																																																																																																																							
Benzo(b)fluoranthene	2.6	S4UL																																																																																																																																																																																																																																							
Benzo(k)fluoranthene	77.0	S4UL																																																																																																																																																																																																																																							
Benzo(a)pyrene	4.35	C4SL																																																																																																																																																																																																																																							
Indeno(1 2 3 cd)pyrene	27.0	S4UL																																																																																																																																																																																																																																							
Dibenz(a h)anthracene	0.24	S4UL																																																																																																																																																																																																																																							
Benzo (g h i)perylene	320	S4UL																																																																																																																																																																																																																																							
Contaminant	Screening Value mg/kg	Data Source																																																																																																																																																																																																																																							
Hydrocarbons																																																																																																																																																																																																																																									
Banded TPH (8-10)	52	Calc1																																																																																																																																																																																																																																							
Banded TPH (10-12)	114	Calc1																																																																																																																																																																																																																																							
Banded TPH (12-16)	215	Calc1																																																																																																																																																																																																																																							
Banded TPH (16-21)	400	Calc1																																																																																																																																																																																																																																							
Banded TPH (21-35)	1692	Calc1																																																																																																																																																																																																																																							
Benzene	0.2	C4SL																																																																																																																																																																																																																																							
Toluene	120	SGV																																																																																																																																																																																																																																							
Ethyl Benzene	65	SGV																																																																																																																																																																																																																																							
Xylene	42	SGV																																																																																																																																																																																																																																							
Aliphatic C5-C6	42	S4UL																																																																																																																																																																																																																																							
Aliphatic C6-C8	100	S4UL																																																																																																																																																																																																																																							
Aliphatic C8-C10	27	S4UL																																																																																																																																																																																																																																							
Aliphatic C10-C12	130	S4UL																																																																																																																																																																																																																																							
Aliphatic C12-C16	1100	S4UL																																																																																																																																																																																																																																							
Aliphatic C16-C35	65,000	S4UL																																																																																																																																																																																																																																							
Aromatic C6-C7	See Benzene	S4UL																																																																																																																																																																																																																																							
Aromatic C7-C8	See Toluene	S4UL																																																																																																																																																																																																																																							
Aromatic C8-C10	34	S4UL																																																																																																																																																																																																																																							
Aromatic C10-C12	74	S4UL																																																																																																																																																																																																																																							
Aromatic C12-C16	140	S4UL																																																																																																																																																																																																																																							
Aromatic C16-C21	260	S4UL																																																																																																																																																																																																																																							
Aromatic C21-C35	1100	S4UL																																																																																																																																																																																																																																							
PRO (C5 –C10)	323	Calc2																																																																																																																																																																																																																																							
DRO (C12 –C28)	66,500	Calc2																																																																																																																																																																																																																																							
Lube Oil (C28 –C44)	66,100	Calc2																																																																																																																																																																																																																																							
TPH	500	Trigger to consider speciated testing																																																																																																																																																																																																																																							
Chlorinated Solvents																																																																																																																																																																																																																																									
1,1,1 trichloroethane (TCA)	8.8	S4UL																																																																																																																																																																																																																																							
tetrachloroethane (PCA)	1.2	S4UL																																																																																																																																																																																																																																							
tetrachloroethene (PCE)	0.31	C4SL																																																																																																																																																																																																																																							
trichloroethene (TCE)	0.0093	C4SL																																																																																																																																																																																																																																							
1,2-dichloroethane (DCA)	0.11	C4SL																																																																																																																																																																																																																																							
vinyl chloride (Chloroethene)	0.0064	C4SL																																																																																																																																																																																																																																							
tetrachloromethane (Carbon tetra	0.026	S4UL																																																																																																																																																																																																																																							
trichloromethane (Chloroform)	0.91	S4UL																																																																																																																																																																																																																																							
cis1-2 dichloroethene (DCE)	0.46	C4SL																																																																																																																																																																																																																																							
Notes																																																																																																																																																																																																																																									
Concentrations measured below these screening values may be considered to represent 'uncontaminated conditions' which pose a 'LOW' risk to human health. Concentrations measured in excess of these values indicate a potential risk which require further, site specific risk assessment.																																																																																																																																																																																																																																									
C4SL - Defra Category 4 Screening value based on Low Level of Toxicological Risk																																																																																																																																																																																																																																									
SGV - Soil Guideline Value, derived from the CLEA model and published by Environment Agency 2009 - where not superseded by C4SL																																																																																																																																																																																																																																									
S4UL - LQM/CIEH Suitable for use Level (2015) based on 'minimal' level of risk																																																																																																																																																																																																																																									
Calc1 - sum of thresholds for Ali & Aro fractions - assuming a 35% Aro:65% Ali ratio as is commonly encountered in the soil																																																																																																																																																																																																																																									
Calc2 - sum of nearest available carbon range specified including BTEX for PRO fraction																																																																																																																																																																																																																																									
Total PAH based on B(a)P / 0.15 - GEA experience indicates that Benzo(a) pyrene rarely exceeds 15% of the total PAH concentration																																																																																																																																																																																																																																									



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