



GRM Development Solutions Ltd
Laurus House
First Avenue
Centrum 100
Burton upon Trent
Staffordshire
DE14 2WH

Tel: 01283 551 249
Web: www.grm-uk.com

Our Ref: P10250/TVL.2
Date: 11th November 2025

Charlie Roberts
Tilbury Douglas Construction NW
By Email Only

Dear Charlie,

RE: Sandilands Community Primary School – Topsoil Suitability Assessment and Post-demolition Ground Investigation

Further to your instruction, GRM has attended the above site to undertake additional validation of imported soil used in soft landscaping areas and post demolition validation in the footprint of the former school. This letter reports on the findings of the samples taken. GRM standard limitations of reporting are provided in Appendix A of this report.

The proposed development includes the demolition of the existing school and the construction of a new school including hard and soft outdoor playing fields and soft landscaping/play areas. The proposed development layout is presented in Appendix B.

Soil Validation

The following information was requested in order to validate soils imported for use in the soft landscaping areas.

- Details of the sources, nature, and volume of imported soil.
- Sampling of the soils by a geoenvironmental consultant post import to site. Typically, a sampling rate of 1 per 100m³ for a greenfield site and 1 per 50m³ for a brownfield or generated soil would be acceptable with a minimum of 3 samples.
- Chemical testing of the samples by an accredited laboratory.
- A short assessment of the results against appropriate criteria relative to the end use.

Details of the Sources

GRM were informed that 80 topsoil loads were required at the site (c.720m³). Two potential sources were put forward by Tilbury Douglas; SED Bryn Hall (Topsoil A) and Wincham Yard (Topsoil B), the certification and BS3882 topsoil test results provided by the supplier are presented in Appendix C.



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The preferred source was SED Bryn Hall. As this was a generated/brownfield source a testing rate of 1 sample per 50m³ was required, therefore based on the proposed import of 720m³, 15 samples were required.

Sampling

As the soils were being brought in gradually over a period of two weeks (approximately 10 loads a day), two visits were undertaken: one on the 30th September 2025 and one on the 10th October 2025. The first visit included collecting five samples of the SED Bryn Hall topsoil (Topsoil A) from a stockpile near the centre of the site and one sample of the Wincham Yard soil (Topsoil B) from a test pile that was supplied. The second visit included collecting ten samples of SED Bryn Hall topsoil from where it had been recently placed in front of the school. A Sampling Location Plan is presented in Appendix D.

Testing and Results

GRM attended site to collect a total of 16 topsoil samples (15 Topsoil A and 1 Topsoil B). These were all scheduled for a GRM validation suite (metals inorganics, speciated PAHs, banded aliphatic and aromatic hydrocarbons (TPHCWG) and an asbestos screen).

The results have been assessed to determine whether benzo(a)pyrene could be used as a surrogate marker in the assessment of carcinogenic risks posed by genotoxic PAHs in soils. Such assessments should be based upon toxicological benchmarks derived from the data for two coal tar mixtures presented by Culp et al. (1998). The graph presented in Appendix E shows that benzo(a)pyrene can be used as a surrogate marker, with the exception of naphthalene, for the imported topsoil.

The results of the chemical analysis are presented in Appendix F and have been compared against GRM's TAC, for a residential with plant uptake end use (a more sensitive land use and therefore considered to be a conservative approach), which are presented in Appendix G. In summary the results are all below GRM's TAC threshold for all contaminants of concern.

Additional Ground Investigation

Following demolition of the former school buildings, further investigation was required beneath their footprint to demonstrate there was no residual contamination present that could pose a risk to end users of the site.

The post-demolition contamination assessment consisted of six trial pits excavated to depths between 1.0m below existing ground level (begl) to 1.6m begl. Three trial pits were used to assess the made ground for any visual or olfactory signs of contamination and to gather samples for contamination testing to demonstrate the absence of a contamination risk to end users.

During the trial pitting, made ground overlying natural Glaciofluvial Sheet Deposits was encountered in all of the trial pits.

Made Ground to depths between 0.35m begl to 0.90m begl, comprising dark brown and grey mottled black clayey sand with gravel of brick, ceramics, concrete, nails, wood, sandstone, quartzite, chert and rare tarmacadam/asphalt. It is assumed this was derived from natural soils that have been mixed with demolition materials during the demolition process.

Glaciofluvial Sheet Deposits were recorded beneath the made ground and typically comprised a loose to medium dense, brown slightly silty sand with gravel of sandstone, chert with rare organic matter.

An Exploratory Hole Location Plan (pre and post demolition) and the exploratory hole logs are presented in Appendix H and I respectively.

Testing and Results

Three samples of made ground were sent for a GRM validation suite (metals inorganics, speciated PAHs, banded aliphatic and aromatic hydrocarbons (TPHCWG) and an asbestos screen).

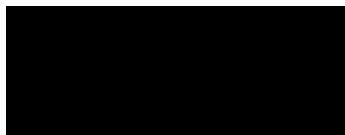
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The results of the chemical analysis are presented in Appendix F and have been compared against GRM's TACs, for a residential with plant uptake end use (conservative approach), which are presented in Appendix G. In summary the results are all below GRM's TAC thresholds for all contaminants of concern.

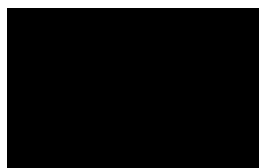
Conclusion

The results for the topsoil and the made ground soils beneath the footprint of the former school have been compared against a residential with plant uptake end-use (conservative assessment) and it considered that the soils are suitable for their intended use and pose a negligible risk to end users of the site.

Yours sincerely,
for GRM Development Solutions Ltd



George Salloway BSc (Hons) MSc MEnvSc
Senior Geo-environmental Scientist



Siobhan Jackson BSc (Hons) MEnvSc CEnv
Principal Geo-environmental Scientist

Enclosed

Appendix A – GRMs Standard Limitations of Reporting
Appendix B – Proposed Development Layout
Appendix C – Topsoil Supplier certification and BS3882 results
Appendix D – Topsoil Sampling Locations
Appendix E – PAH Profiling Graph
Appendix F – Chemical Analysis Results
Appendix G – GRM Tier 1 Assessment Criteria
Appendix H – Exploratory Hole Location Plan
Appendix I – Exploratory Hole Logs



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GENERAL APPRAISAL COMMENTS

i INFORMATION SOURCES

Where available the following sources have been used for the identification and assessment of potential ground hazards:

- Relevant British Standards
- British Geological Survey (BGS) Geology Map Scale 1:10,000 for local area
- British Geological Survey (BGS) Geology Map Scale 1:50,000/1:63,320
- BGS Memoir
- BGS Borehole Records: <https://mapapps2.bgs.ac.uk/geoindex/home.html>
- BGS online viewer: <https://geologyviewer.bgs.ac.uk>
- Magic Groundwater Vulnerability Maps
- Historical Ordnance Survey (OS) Maps
- Environmental Data Report
- Environment Agency Website: <http://www.environment-agency.gov.uk/>
- Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites, UKWIR, 2010.
- Coal Authority Records / Coal Mining Report
- DEFRA/Environment Agency Contaminated Land publications and DoE Industry Profiles
- BRE Guide BR211 (2023), 'Radon: Guidance on protective measures for new buildings (including supplementary advice for extensions, conversions and refurbishment projects)'
- UK HAS Radon Maps: <https://www.ukradon.org/information/ukmaps>
- CIRIA C665 'Assessing risks posed by hazardous ground gases to buildings'
- BS8485:2015 +A1: 2019, 'Code of Practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'
- Other technical references used throughout this document are detailed in the text.

ii CONTAMINANTS OF CONCERN

The DoE Industry Profiles are normally used to assess likely contaminants from past land use and potential nearby industrial sources. For land uses where no profile is available, likely contaminants of concern are selected by GRM based on past experience of similar sites, a general screening suite of contaminants covered by CLEA and common contaminants from the Industry Profiles.

- | | | |
|------------|-------------------|--|
| • Arsenic | • Copper | • Water soluble sulphate |
| • Cadmium | • Nickel | • PAH (polycyclic aromatic hydrocarbons) |
| • Chromium | • Zinc | |
| • Lead | • Phenols | |
| • Mercury | • cyanide (total) | |
| • Selenium | • pH | |

Asbestos and PCBs are listed in the vast majority of profiles. PCBs are listed as the profiles expect electricity substations and switch boxes on all industrial sites. There is the potential for asbestos containing material to be mixed up with made ground, following any demolition works.

iii CONCEPTUAL MODEL METHODOLOGY

The consideration of contamination is based upon the principles of risk assessment, using the 'source-pathway-receptor' model in order to establish the presence, or potential presence, of a pollutant linkage.

To create a risk, contamination must have the potential to cause harm to susceptible targets or receptors such as humans, the water environment or the built environment. The potential for harm to occur requires three conditions to be satisfied to form a pollutant linkage:

- The presence of substances that may cause harm (SOURCE).
- The presence of a target which may be harmed (RECEPTOR).
- The existence of a plausible migration route between the source and the receptor (PATHWAY).

In the absence of a plausible pollutant linkage there is no risk. Where a potential linkage is identified in order for it not to pose a risk to the identified receptor it must be broken.

iv INTRUSIVE INVESTIGATION SAMPLING METHODOLOGY

The ground investigation (including fieldwork, sampling, monitoring and laboratory analyses) has been designed to identify and assess potential ground related problems and to allow cost effective solutions to be advised. It has been planned on the basis of the desk study, site inspection and the proposed development layout (where available). All fieldwork and soil descriptions were carried out in general accordance with relevant British Standards.

The exploratory holes have been positioned and advanced to depths to determine the general ground/groundwater/gas conditions below the site. A general grid pattern has been adopted, where possible, to provide sufficient information based on the current proposed layout scheme. Some holes have been targeted at particular hazards identified in the Phase I assessment. The resultant exploratory hole density is considered to be commensurate with the complexity of the site conditions and detail of information required for this phase of the investigation.

v GROUND GAS RISK ASSESSMENT METHODOLOGY

Gas monitoring programmes undertaken by GRM are designed to broadly comply with the recommendations outlined in CIRIA Report C665 'Assessing risks posed by hazardous ground gas to buildings' (2007) and BS8576 'Guidance on Investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs) (2013).

To assess the risks posed by ground gases such as radon, carbon dioxide and methane, the relevant current guidance has been used. For radon the site has been assessed following the guidelines in 'Radon: guidance on protective measures for new dwellings (including supplementary advice for extensions, conversions and refurbishment projects) (BR211: 2023)'. For methane and carbon dioxide the primary guidance document used to determine if protection measures are required is *BS8485:2015 Code of practice for the design of protective measures from methane and carbon dioxide ground gases for new buildings*. This uses hazardous gas flow rates (Q_{hg}), which are gas concentrations multiplied by borehole flow rates, to derive a Gas Flow Rate (GSV) for the site. The gas regime is then determined based on the GSV and other limiting factors such as gas concentrations.

Where flow is not recorded during the monitoring a default flow rate of 0.1l/hr will be used in the assessment to produce a positive result.

vi HUMAN HEALTH RISK ASSESSMENT METHODOLOGY

Guidance contained in the Environment Agency's CLEA Reports has been used to assess the risks posed to human health.

For residential developments that include domestic gardens the default Tier 1 Assessment Criteria (TAC) for 'residential land with plant uptake' are used, i.e. a female with a start age class of one and an end age class of six. All pathways are considered including the consumption of home-grown vegetables.

For residential developments that do not include domestic gardens the default Tier 1 Assessment Criteria (TAC) for 'residential land without plant uptake' are used, i.e. a female with a start age class of one and an end age class of six. All pathways are considered except the consumption of home-grown vegetables. For commercial/industrial developments the default Tier 1 Assessment Criteria (TAC) for 'commercial/industrial' are used, i.e. a female with a start age class of sixteen and an end age class of eighteen. All pathways are considered except the consumption of home-grown vegetables.

The TAC used by GRM include Category 4 Screening Levels (C4SLs) published by DEFRA, values calculated by GRM using the CLEA v1.071 risk assessment, and values and Suitable for Use Levels (S4UL) developed by LQM/CIEH. The TAC used in the assessment are selected based on the lowest site specific SOM values returned as part of the chemical analysis.

Where soil chemical analysis results are found to exceed the TAC, Site-Specific Risk Assessments may be undertaken using the CLEA v1.071 risk assessment software using the age classes and pathways described above.

vii RISK TO SITE WORKERS – GENERAL COMMENTS

The risks to site workers are similar to those posed to site end users, although likely to be less severe due to the site workers' shorter exposure to the identified contamination. However, site workers (particularly groundworkers) are more likely to come into direct contact with contaminated soils due to the nature of their work. On this basis ground and construction workers should be provided with basic Personal Protective Equipment based on the site's general health and safety risk assessment, but including as a minimum safety footwear, gloves and overalls.

A site specific risk assessment should be carried out for all hazards identified within the ground investigation in accordance with current health and safety legislation. This assessment should identify any measures required to further reduce risks i.e. providing further Personal Protective Equipment, welfare facilities and if necessary preventing access to certain areas.

Demolition and dismantling of existing structures on the site must be carried out to a safe and acceptable standard, in accordance with current UK guidance and best practice. Whilst not ground related, asbestos and hazardous substances surveys should be conducted prior to any demolition.

Any unusual colours, odours and suspicious ground should be reported immediately to site management and then GRM.

Whilst this appraisal has considered the long-term effects of contamination, GRM can also help during the formulation of Health and Safety documentation, if required.

viii CONTROLLED WATERS RISK ASSESSMENT METHODOLOGY

Where the desk study and fieldwork do not reveal a potential source of contamination no leachate or groundwater testing will be performed. Where a potential source is identified the testing will comprise leachate testing on the material considered most likely to pose a risk, groundwater testing will be undertaken if water is present at shallow depth.

The UK Drinking Water Standards (UKDWS) or Environmental Quality Standards (EQS) are usually adopted for comparison with the leachate/groundwater test results. When the most sensitive receptor is considered to be the aquifer (groundwater) UKDWS will be adopted as the Initial Tier 1 screening values.

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Where the most sensitive receptor is a surface water feature the EQS values will be used as Initial Tier I Screening values.

ix CONSTRUCTION MATERIALS RISK ASSESSMENT METHODOLOGY

The 'screening levels' adopted for the assessment of risk to construction materials are taken from the following documents:

- UK Water Industry Research (UKWIR) Contamination thresholds for sub-surface water pipes, for the protection of buried pipes.
- Building Research Establishment (BRE) Special Digest SD1 (2005), 'Concrete in Aggressive Ground', for the protection of buried concrete.

x WASTE DISPOSAL, SITE WASTE MANAGEMENT PLANS AND MATERIAL MANAGEMENT PLANS

Under current Waste Management Regulations, waste soil materials produced from the site will require characterisation to enable it to be disposed of correctly.

The chemical analysis results included in this report should be provided to the relevant landfill operators to establish the characterisation of the waste, confirm its suitability for landfill disposal and provide estimated costings. If material is classified as hazardous, then the site will need to be registered with the Environment Agency prior to the movement of the waste. Depending on the receiving landfill's current permit, further chemical analysis, incorporating Waste Acceptance Criteria (WAC) leachate analysis, may be required.

All materials removed from the site will be classified as 'waste' and therefore must be removed by a suitably licensed carrier of waste. This applies whether or not the waste is contaminated. All waste removed to landfill will attract Landfill Tax.

The developer/builder is likely to be classed as the waste producer and therefore, has a duty of care to ensure that all waste is disposed of appropriately. This includes ensuring the waste carrier is licensed and disposes of the waste to a suitably licensed landfill site. They are also required to keep a paper trail from 'cradle to grave' including copies of the waste disposal tickets.

Efficient materials management on site is recommended as it can lead to significant cost savings when compared to the traditional side casting or single stockpile of arisings. GRM can assist in the production of Material Management Plans under the CL:AIRE Definition of Waste: Code of Practice. The DoWCoP enables:

- The direct transfer and re-use of clean naturally occurring soil materials between sites, and
- The re-use of both contaminated and uncontaminated materials on their site of origin and between sites within defined Cluster projects.

GRM can also undertake the role of Qualified Person and submit the DoW CoP project Declaration.

Likewise making the site as volume neutral as possible will reduce the costs of development. Whilst not a statutory requirement, Site Waste Management Plans allow better waste management practices, help to reduce the amount of waste produced and identify best environmental disposal options. Implementing a Site Waste Management Plan (SWMP) can reduce costs (increasing business profits) and maximise resource efficiency.

xi GEOTECHNICAL ASSESSMENT GENERAL COMMENTS

Where finished floor levels of proposed structures have not been provided by the Client, then for the purposes of initial assessment, GRM will assume that finished levels will not vary appreciably from the existing ground levels. If the depths of any underground engineering works (i.e. sewers, pumping stations etc.) are unknown they will not be taken in to account in the assessment and it will be assumed that any such works will not compromise foundation or ground stability.

Should the development proposals or finished levels be different from these assumptions then the comments/recommendations in the Geotechnical Assessment may require revising.

It should be noted that the results of window sampling and/or cable percussive boreholes may not give a true indication of a soils actual engineering properties (i.e. stability, mass structure etc). GRM consider that that prior to development trial pitting should be undertaken to confirm the recommendations in the Geotechnical Assessment.

xii GEOTECHNICAL ASSESSMENT – ENGINEERING GROUND TREATMENT

Near surface soils have the potential to be disturbed by weathering and site traffic. Precautions should always be taken to avoid this, as excessive disturbance may leads to more onerous floor slab designs, road cap thickness and increased amounts of off-site disposal etc.

Near surface soils may need treatment or reinforcing to allow safe movement of construction plant and labour. An assessment by the contractor should be undertaken once the type of machinery/plant needed to complete the development is known.

xiii GEOTECHNICAL ASSESSMENT – EXCAVATIONS

Excavation instability (over-break) can result in damage to existing services or structures (e.g. foundations, roads or boundary walls/fences) both on and off-site, as well as increased foundation concrete costs. In order to minimise this, all excavations deeper than 1.2m deep (or any excavation within 1.5m of any existing structure or service) should be supported. Full support should be provided to the full depth of all near vertically sided excavations in made ground, soft and very soft clays and granular soils. A reduction to intermediate support should be acceptable within firm and stiffer natural clays.

Wherever possible, man entry into excavations should be prevented; however, where this is not possible, entry to, and time spent in, excavations should be kept to a minimum.

The build program should be tailored to reflect the impact that deep excavations through potentially unstable strata can have on adjacent properties, so that they are not undermined.

All excavations on site should be in accordance with HSE guidelines and stability should be practically maintained at all times. Reference should be made to HSE construction information sheet No. 8 (Revision 1) 'Safety in Excavations'.

Care should be taken to ensure that falls from excavation faces do not adversely affect the integrity of foundation concrete.

If contaminated water enters excavations it should be removed and transported to an appropriate treatment facility by a suitably licensed carrier before construction begins.

xiv GEOTECHNICAL ASSESSMENT – SUBSTRUCTURES

Where practicable, existing buried construction should be fully removed; however, if this is not practicable all new foundations should be carried down to fully penetrate it and it should be broken well away from all new structures.

There may be existing structures and/or infrastructure in close proximity to the proposed development. New build foundations may be constructed next to pavements with existing underground services beneath them, or excavations may be required near existing footings associated with adjacent properties. These potential hazards need to be taken into consideration when designing foundations and the groundworker needs to be made aware of their potential impact during the redevelopment works. Foundations close to existing underground services or buildings may require alternative foundation techniques (such as piling) to protect the integrity of these structures.

The contractor for the works should carry them out in such a fashion so as to not cause excessive overbreak, concrete usage or undermine existing buildings/roads/ services that are to be retained.

xv **GEOTECHNICAL ASSESSMENT – SOAKAWAYS**

Soakaway testing in trial pits by GRM is broadly carried out in accordance with BRE DG 365 (2016). The testing comprises the excavation of a test pit to a suitable depth, and the placement of water into the pit. The level of water present is then monitored over time. For borehole installations, the permeability testing (falling head/rising head) is undertaken in accordance with BS5930.

If it is decided to proceed with the use of soakaway drainage, then the following general points should be noted:

- Soakaways should not be placed so that water can be discharged through potentially contaminated made ground.
- The Environment Agency may require soakaways to be sealed systems such that only roof run off falls to soakaway.
- Interceptors are likely to be required for soakaways for highway drainage. The adopting authority for the highways should be consulted at the earliest opportunity regarding the use of soakaways for highways drainage.
- Consideration of site levels and slopes should be taken into account during the design.
- The construction of all soakaways should be in accordance with the current building regulations.
- Soakaways should not be placed within 5m of a proposed building.
- Placement of soakaways needs to be considered so as to avoid ponding of water down slope.
- The base of a soakaway should not be below the highest recorded water level.
- The Environment Agency prefer 1m of dry soil to be present between the base of a soakaway and the water table to provide attenuation for contamination.

xvi **GEOTECHNICAL ASSESSMENT – FOUNDATIONS**

If soft or hard spots are encountered during foundation excavation then they should be replaced with suitably compacted material or the footings deepened to suitable strata, to avoid differential settlement.

If strata of differing bearing character (e.g. sand and clay) are encountered at foundation levels within the excavations for a single plot then the excavation depths should be altered as appropriate to ensure the foundations rest on a single stratum, or strata that will not induce differential settlement. Where this is impractical then GRM should be contacted to assess a reinforced concrete detail or an alternative foundation solution (e.g. piles or vibro-replacement).

NOTES ON LIMITATIONS

General

GRM Development Solutions Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement had been executed, or with whom an assignment had been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from GRM Development Solutions Limited; a charge may be levied against such approval.

GRM Development Solutions Limited accepts no responsibility or liability for:

- a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and
- b) the consequences of this document being used by any third party with whom an agreement has not been executed.

Phase I Environmental Audits/ Desk Studies

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, GRM Development Solutions Limited reserves the right to review such information and as considered necessary and appropriate to modify the opinions accordingly. It should be noted that any risks identified in a Phase 1 report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Environmental Audits (Contamination Investigations)

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated with potential human targets, building materials, and controlled waters.

The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to the areas unoccupied by the building(s) on the site and by buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues need to be resolved.

For these reasons if costs have been included in relation to site remediation these must be considered as provisional only and must, in any event, be confirmed by a commercial adviser.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. Whilst exploratory testing is intended to gain an accurate representation of the site, the very nature of sampling and testing is such that it cannot ensure that all localised conditions are detected.

The risk assessment and opinions provided take in to consideration, inter alia, currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Phase II Geo-environmental Investigations (Combined Geotechnical and Contamination Investigations)

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of the environment risks together with engineering and development implications. If costs have been included in relation to site development a commercial adviser must confirm these.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site for each of the exploratory holes. There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time the site work was conducted. It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects. The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.



The risk assessment and opinions provided take in to consideration, inter alia, currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.



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NOTES

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Rev	Date	Notes	By	CHK
01	28.02.23	Final issue	NH	AD
02	28.02.23	Update	NH	AD

KEY

	Vehicular grade Asphalt/Concrete to Engineers spec with 125mm H82 road works
	Pedestrian grade macadam to Engineers spec
	Concrete block paving
	Coloured Wet pour safety surface
	Existing trees/woodland to be removed
	Existing trees. Retained and protected during construction in accordance with Tree Protection Plan
	New tree planting. 14 - 15cm girth
	Mandan / re-establish amenity grass areas. New grass areas to be seeded over minimum 150mm depth of topsoil
	Eco Species Rich Grassland 'Germinator' WFG 25
	Ornamental shrub planting into 400mm depth topsoil & compost. Also, shrubs per m2 to 3 the pots. 75mm depth bark mulch spread on completion of planting
	Hedge shrub planting into 400mm depth topsoil & compost. Also, shrubs per m2 to 3 the pots. 75mm depth bark mulch spread on completion of planting. Hawthorn, Field maple, Holly, Crab apple, Field rose, Wild cherry & Guelder rose. Planted in a double staggered row.
	Existing building to be demolished
	Existing fencing to be retained
	New Wattleweave Fencing
	Sho. EV charging (1no. unit per 2no. cars)
	Red line boundary
	Potential location for outdoor legacy equipment

elliswilliams

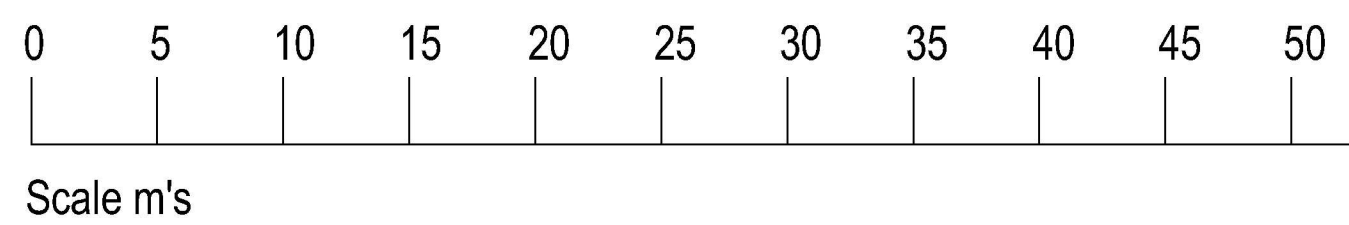
Project Number: 2914
Project Name: SANDILANDS

Drawing Status: PRELIMINARY
Drawing Number: SRP1034-EWA-ZZ-DR-L-9003
Drawing Name: LANDSCAPE PLAN

Date: 28.02.23
Drawn By: NH

Rev: P01
Scale: 1:300 @ A0

131 Shoreditch High Street London E1 6JE
T: 020 7841 7200 E: info@ewa.co.uk W: ewa.co.uk





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Certificate of Analysis

Client: STUART BALDWIN
(T283) SED SERVICES LTD
LANDGATE FARM
LANDGATE LANE
BRYN
WIGAN WN4 0EJ

Originator: TOPSOIL

Lab ID: 99388 - 758032
Sample ID: SED-Bryn Hall
Sample Weight: 1849g

Date Received: 10/07/2025
Date Reported: 18/07/2025

BS 3882 : 2015 SPECIFICATION FOR TOPSOIL Multipurpose Grade

				Compliant with range (Y/N)					
				Multi-P	Acid	Calc	Low-F	Low-F Acid	Low-F Calc
Texture:	Clay	% w/w	10						
	Silt	% w/w	10						
	Sand	% w/w	80						
	Textural Class		Sandy Loam	Y	Y	Y	Y	Y	Y
				See area of permitted soil textural classes in Fig. 1.					
Organic Matter:		% w/w	5.9	Y	Y	Y	Y	Y	Y
Coarse	>2 mm	% w/w	3.4	Y	Y	Y	Y	Y	Y
Fragment	>20 mm	% w/w	2.0	Y	Y	Y	Y	Y	Y
Content:	>50 mm	% w/w	0.0	Y	Y	Y	Y	Y	Y
Soil pH:			8.1	Y	N	Y	Y	N	Y
Carbonate:		% w/w	4.6			Y			Y
Available	Nitrogen	% w/w	0.287	Y	Y	Y			
Plant	Phosphorus	mg/l	32.2 (3)*	Y	Y	Y	N	N	N
Nutrients:	Potassium	mg/l	787.7 (5)*	Y	Y	Y			
	Magnesium	mg/l	110.9 (3)*	Y	Y	Y			
Carbon:Nitrogen Ratio:		:1	8.9	Y	Y	Y	Y	Y	Y
Exchangeable Sodium Percentage:		%	6.4						
Phytotoxic	Total Zinc	mg/kg	32.6	Y	Y	Y	Y	Y	Y
Contaminants:	Total Copper	mg/kg	10.2	Y	Y	Y	Y	Y	Y
	Total Nickel	mg/kg	9.2	Y	Y	Y	Y	Y	Y
Visible	> 2mm	% w/w	0.00	Y	Y	Y	Y	Y	Y
Contaminants:	Plastics	% w/w	0.00	Y	Y	Y	Y	Y	Y
	Number of Sharps		0	Y	Y	Y	Y	Y	Y
Additional	Available Sodium	mg/l	143.5						
Analysis:	Available Calcium	mg/l	1255.0						
	Conductivity	uS/cm	3067	Y					
Compliance:				Y	N	Y	N	N	N

Results are expressed on a dry matter basis.

* Soil indices from RB209

Released by:

Teresa Clyne

Date: 18/07/2025

DECLARATION:

I certify that this sample has been analysed by NRM in accordance with BS 3882 Specification for Topsoil (2015).

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS

Tel: +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com

Analytical Report

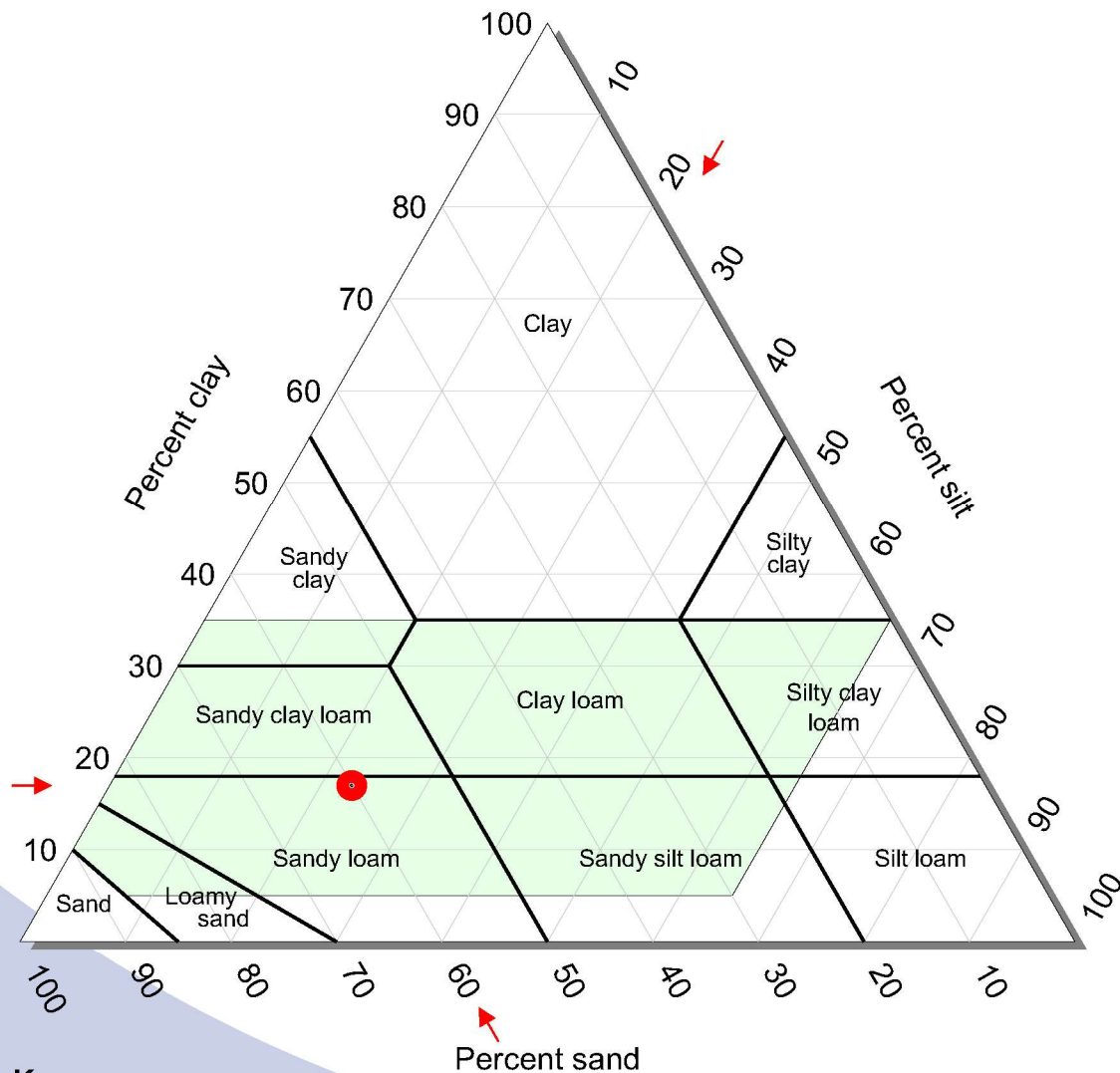
Client: STUART BALDWIN
(T283) SED SERVICES LTD
LANDGATE FARM
LANDGATE LANE
BRYN
WIGAN WN4 0EJ

Originator: TOPSOIL

Lab ID: 99388 - 758032
Sample ID: SED-Bryn Hall
Sample Weight: 1822g

Date Received: 10/07/2025
Date Reported: 18/07/2025

Fig. 1. Textural Class: Sandy Loam (compliant)



Analytical Notes

Final page must indicate end of report. Page 3

Accreditation and method details

NRM is a UKAS-accredited testing laboratory (No 2334), accredited to BS EN ISO 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF communique dated April 2017). <http://ilac.org/?download=120917>

NRM is accredited for particular determinands in specific matrices as set out in the laboratory's current UKAS schedule of accreditation https://www.ukas.com/wp-content/uploads/schedule_uplds/00002/2334Testing_Multiple.pdf

Accreditation applies to the following parameters in this report and is applicable to SOIL samples only. All other tests within this report are unaccredited.

Test	Analysis SOP	Method Description
Fluoride	JAS-487	Sulphuric acid extraction (1:10 ratio) and determination by ion selective electrode
Arsenic	JAS-510 / JAS-300	Aqua regia digest on hot block and determination by ICP-OES
Barium		
Beryllium		
Cadmium		
Chromium		
Cobalt		
Copper		
Lead		
Molybdenum		
Mercury		
Nickel		
Vanadium		
Zinc		
Selenium	JAS-510 / JAS-455	Aqua regia digest on hot block and determination by AFS

Analysis Notes

Analysis is carried out on the air-dried (<30°C) and ground sample.

The results as reported relate only to the item(s) submitted for testing.

The results are presented on a dry matter basis.

Indices are derived solely from the numerical value and test result without reference to measurement uncertainty.

Document Control

This test report shall not be reproduced, except in full, without the written approval of the laboratory.

We cannot offer interpretation or opinions for results.

Sampling information

BS ISO 18512:2007 (Soil quality – Guidance on long and short-term storage of soil samples) states that for pH the period of stability and therefore holding time for a wet or 'fresh' soil sample is one week from sampling. Other determinants in the fresh sample may be considered stable for up to a month. Once the sample has been dried the sample may then be considered stable for up to 3 years. No records are maintained by NRM on date sampled or date dried so all samples within this report are considered not to be meeting the requirements of this BS / ISO. Consequently, all pH results given are those of the as-received sample and may not reflect the pH value of the sample when taken.

END OF REPORT



ANALYTICAL TEST REPORT

Report Number 25-04773, issue number 1

Contract name: Wincham Yard Topsoil Stockpile 3

Client reference: WYT Stockpile 3

Clients name: UK Aggregates & Plant Ltd

Clients address: UK Aggregates & Plant Ltd
First floor, Merchant Exchange
Waters Green
Macclesfield
Cheshire SK11 6JX

Samples received: 16/05/2025

Analysis started: 16/05/2025

Analysis completed: 29/05/2025

Report issued: 29/05/2025

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
U/S	Sample not suitable for testing
NAD	No Asbestos Detected

Abbie Neasham-Bourn
Senior Reporting
Administrator



Approved by: Abbie Neasham-Bourn
Senior Reporting Administrator

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

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

SAMPLE INFORMATION

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

Lab ref	Sample ID	Depth (m)	Sample description	Material removed	% Removed	% Moisture
49322	SP3 Sample 1	-	Brown Loamy Sand with Gravel.	-	-	9.0

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

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

Lab ref	Sample ID	Depth (m)	Deviating	Tests (Reason for deviation)
49322	SP3 Sample 1	-	N	

SOILS

Lab Number					49322
Sample ID					SP3 Sample 1
Sampling Date					14/05/2025
Test	Method	Accred	LoD	Units	
Moisture Content	CE001	N	0.1	%	9.0
Arsenic	CE264	U	1.8	mg/kg	6.8
Barium	CE264	U	1.9	mg/kg	389
Cadmium	CE264	M	1.6	mg/kg	< 1.6
Chromium	CE264	U	2	mg/kg	19.4
Copper	CE264	M	1.6	mg/kg	97.8
Lead	CE264	U	2.3	mg/kg	88.0
Mercury	CE264	U	0.7	mg/kg	< 0.7
Nickel	CE264	M	2.1	mg/kg	17.9
Selenium	CE264	U	3	mg/kg	< 3.0
Vanadium	CE264	N	1.8	mg/kg	38.5
Zinc	CE264	M	4	mg/kg	129
pH	CE004	M	0.1	pH units	8.0
Acid Soluble Sulphate (SO ₄)	CE062	M	100	mg/kg	1260
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50
Total Cyanide	CE077	N	1	mg/kg	1.1
Free Cyanide	CE077	N	1	mg/kg	< 1.0
Polyaromatic hydrocarbons					
Naphthalene	CE087	M	0.016	mg/kg	0.060
Acenaphthylene	CE087	M	0.015	mg/kg	0.036
Acenaphthene	CE087	M	0.013	mg/kg	0.111
Fluorene	CE087	U	0.013	mg/kg	0.085
Phenanthrene	CE087	M	0.014	mg/kg	0.946
Anthracene	CE087	U	0.017	mg/kg	0.361
Fluoranthene	CE087	M	0.017	mg/kg	2.52
Pyrene	CE087	M	0.016	mg/kg	2.35
Benzo(a)anthracene	CE087	U	0.012	mg/kg	1.43
Chrysene	CE087	M	0.028	mg/kg	1.47
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	1.89
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	0.700
Benzo(a)pyrene	CE087	U	0.019	mg/kg	1.71
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	1.17

SOILS

Lab Number					49322
Sample ID					SP3 Sample 1
Sampling Date					14/05/2025
Test	Method	Accred	LoD	Units	
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	0.262
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	1.05
Total PAH(16)	CE087	N	0.28	mg/kg	16.2
Total Petroleum Hydrocarbons					
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	1.4
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	1.2
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	2.5
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	31.8
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	3.2
>C5-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	3.6
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	10.9
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	13.9
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	106
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	22.2
>C5-C44 Total Aliphatic	CE250	N	-	mg/kg	40
>C5-C44 Total Aromatic	CE250	N	-	mg/kg	157
>C5-C44 Total (HS_1D_MS+EH_2D_Total)	CE250	N	14	mg/kg	196
Asbestos					
Asbestos Identification	SUBCO N	SU	0	-	NAD

SOIL VOCS

Lab Number					49322
Sample ID					SP3 Sample 1
Sampling Date					14/05/2025
Test	Method	Accred	LoD	Units	
VOC					
1,1-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
Tetrachloromethane	CE174	N	0.01	mg/kg	< 0.010
1,1,1-Trichloroethane	CE174	N	0.01	mg/kg	< 0.010
Trichloroethylene	CE174	N	0.01	mg/kg	< 0.010
Tetrachloroethylene	CE174	N	0.01	mg/kg	< 0.010
Trans - 1-2 -dichloroethylene	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
1,1,1,2-Tetrachloroethane	CE174	N	0.01	mg/kg	< 0.010
Cis-1,2-Dichloroethene	CE174	N	0.01	mg/kg	< 0.010
Vinyl chloride	CE174	N	0.01	mg/kg	< 0.010

DECLARATION OF COMPLIANCE (BS3882:2015)

Lab ref	49322	Date received	16/05/2025
Contract name	Wincham Yard Topsoil Stockpile 3	Analysis started	28/05/2025
Sample ID	SP3 Sample 1	Analysis completed	29/05/2025
OS Grid reference	Not supplied	Report issued	23/05/2025
Date sampled	14/05/2025		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	11.5						
Silt content	% w/w	61.7						
Sand content	% w/w	26.8						
Soil texture	class	Sandy Silt Loam	Y	Y	Y	Y	Y	Y

Stone content								
>2mm	% w/w	13.1	N	N	N	N	N	N
>20mm	% w/w	0.0	N	N	N	N	N	N
>50mm	% w/w	0.0	N	N	N	N	N	N

Mass loss on ignition								
Clay 5-20%	% w/w	3.5	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH ¹	pH units	8.0	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w CaCO ₃	7.4			Y			Y
Nitrogen (total)	% w/w N	0.08	N	N	N			
Carbon:Nitrogen ratio	-	25.8	N	N	N	Y	Y	N
Phosphorus (extractable)	mg/l P	40	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	196	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	77	Y	Y	Y			
Electrical conductivity ²	µS/cm	367	Y					

Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	92.5	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	14.7	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	117	Y	Y	Y	Y	Y	Y

VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	<0.1	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	<0.1	Y	Y	Y	Y	Y	Y
Sharps	% w/w	None	Y	Y	Y	Y	Y	Y

¹ Results are accredited to MCERTS if matrix confirmed as soil

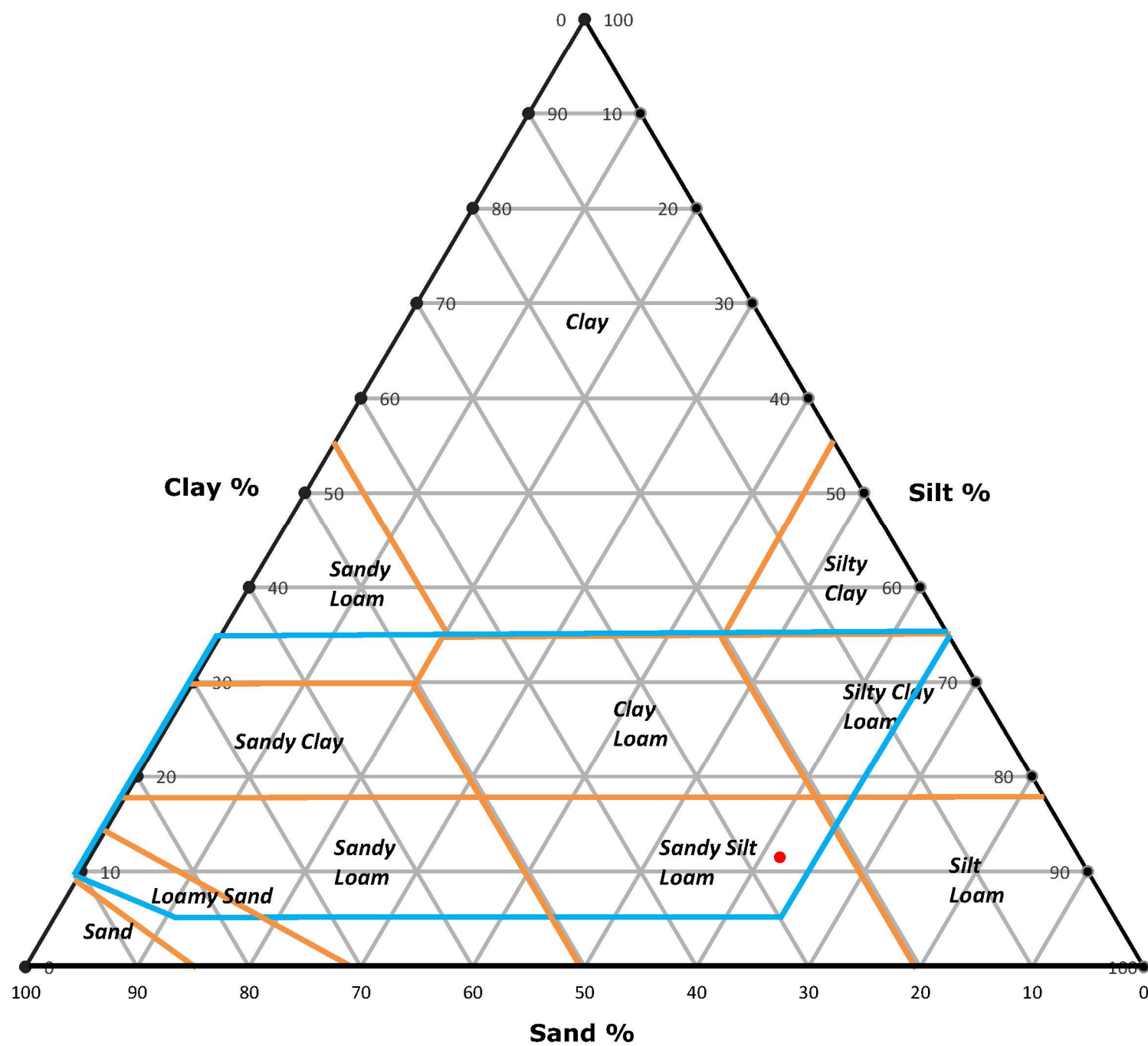
² Results in leachate are accredited to ISO17025

Disclaimer: The limits in this report are provided for guidance only and values are transcribed from BS3882:2015

Chemtech Environmental Ltd does not take responsibility for any errors or omissions in the transcription, and all data should be verified by the end user.

Any assessments made are based on the published results from the Laboratory and make no assessment of uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. Method uncertainty levels can be provided independently upon request.

Assessment is outside the scope of the laboratory's UKAS accreditation.



METHOD DETAILS

METHOD	TESTNAME	METHOD SUMMARY	ANALYSIS BASIS
CE267	VPH in Soil	HS-GCFID	As submitted sample
CE250	GCXGC in Solids	DCM Extraction and GCxGC-FID	As submitted sample
SUBCON	Asbestos Solid	HSG248	Air Dried Sample
CE007	Electrical conductivity of Solids	Potentiometric	As submitted sample
CE088	Extractable Cations - BS3882	Ammonium Nitrate Extraction and ICPOES	Air dried sample
CE089	Extractable Phosphorus - BS3882	Sodium Hydrogen Carbonate extraction andd ICPOES	Air dried sample
CE174	VOC in solids	HS-GCMS	As submitted sample
CE062	Acid Soluble Sulphate in Solids	HCl Extract and ICPOES	Air dried sample
CE264	Metals by ICP in Soil	ICPOES	Air dried sample
CE087	PAH in Soil	DCM Extraction and GCMS	As submitted sample
CE078	Phenols in Solids	Continuous Flow Analyser	As submitted sample
CE077	Cyanides in Solids	Continuous Flow Analyser	As submitted sample
CE198	Primacs in Solids	Primacs	Air dried sample
CE006	Loss on ignition at 440 deg C	Gravimetric	Air dried sample

REPORT INFORMATION

Report No.:25-04773, issue number 1

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

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

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

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

The results relate only to the sample received.

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

Moisture Content Calculated on a Wet Weight basis

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

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

Methods, procedures and performance data are available on request.

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

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

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

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

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

Statement of Conformity

Statement of Conformity

Where Chemtech reports a statement of conformity to a specification, the decision rules applied are derived from the Ilac document ILAC G8:09/2019.

Acceptance limits (AL), applied are derived from the tolerance limits (TL) by you the client or applicable standard (e.g. 2003.33.EC Council Decision, BS3882, BS8601)

Agreed and reported Decision Rule:

“PASS” if the result < TL, and the bias / precision values for the process meet the targets defined within the methodology and/or applied accreditation.

Reported Decisions:

Result < TL for determinands: PASS

Result > TL for determinands: FAIL

Definitions Used:

Acceptance limit (AL) Specified upper or lower bounds of permissible measured quantity values.

Tolerance limit (TL) Specified upper or lower bound of permissible values of a property.

Accreditation of WAC/BS3882/BS8601

Accreditation in Soil to MCERTS is only applicable for specific matrix types identified as soil (Sand/Loam/Clay) during the sample assessment

If the sample is classified as not soil, not accreditation is conveyed



WASTE TRANSFER NOTE / DUTY OF CARE

Permit : EPR/MP3135DF Permit : EPR/MP3093VU

Waste Carrier No : CBDU49854

Delivery Ticket No. 346809

Collection Date: 30/9/25	Delivery Date: 30/9/25	Drivers Name: SHANE D
From: SED BRYN	Deliver to: ASHKEA, SANDILANDS	
POC:	Stockpile:	
Product: BGB	EWC:	
Gross Weight:	Tare Weight:	Net Weight: 1 x FULL LOAD
Notes:		
Vehicle: P017 UFB	Trailer No:	

I certify that the Goods Collected in Good Order and Condition

Print Name:

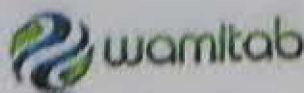
Date:

I certify that the Goods Received in Good Order and Condition

Print Name:

Date:

I certify that the "Waste Hierarchy" has been applied as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.



Landgate Farm, Landgate Lane, Bryn, Wigan WN4 0EJ

Tel: 01942 723479 Fax: 01942 726555

e-mail: info@sedservices.co.uk

VAT No: 873841200

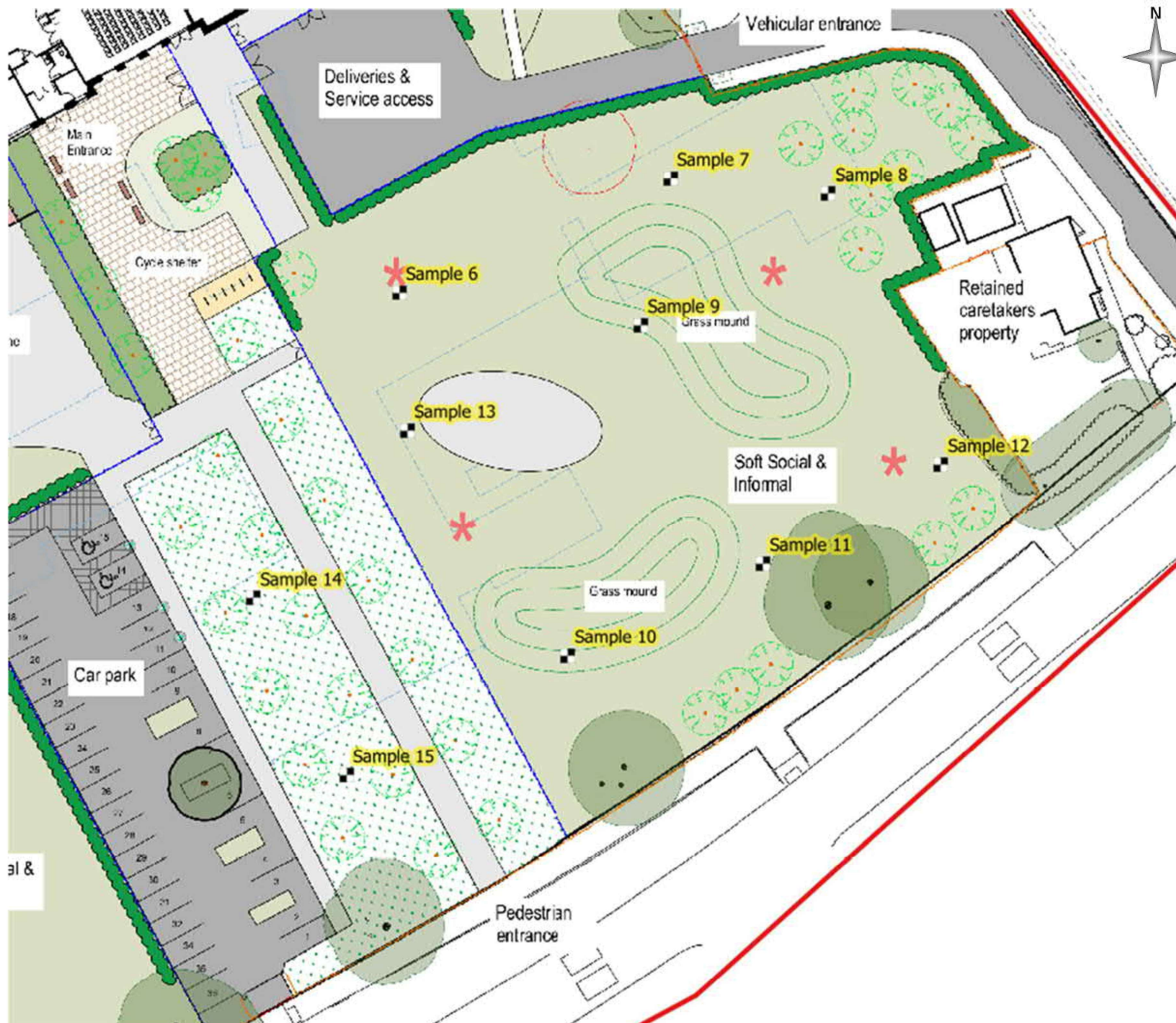
Company Registration No: 05602201



A P P E N D I X D

Land Appraisal | Environmental | Geotechnical | Design | Mining | Inspections

GRM Development Solutions Limited, Laurus House, First Avenue, Centrum 100, Burton upon Trent, Staffs DE14 2WH
www.grm-uk.com | info@grm-uk.com | 01283 551249 Company No. 3099018 (England), VAT Reg. No. 658 1005 48



DO NOT SCALE

NOTES:

Validation Sample Location

Validation sample 1 to 5 collected from a stockpile.



GRM Development Solutions Ltd

Laurus House, First Ave, Centrum 100,

Burton-on-Trent, Staffordshire

Tel: 01283 551 249 Fax: 01283 211 968

mail@grm-uk.com www.grm-uk.com

CLIENT:

Tilbury Douglas

PROJECT:

**Sandilands Primary School,
Manchester**

TITLE:

Validation Sample Location Plan

SCALE@SIZE :

NTS

ISSUE:

FINAL

DESIGN/DRAWN :

GS

DATE:

October 2025

PROJECT No:

P10250

DRAWING No:

1

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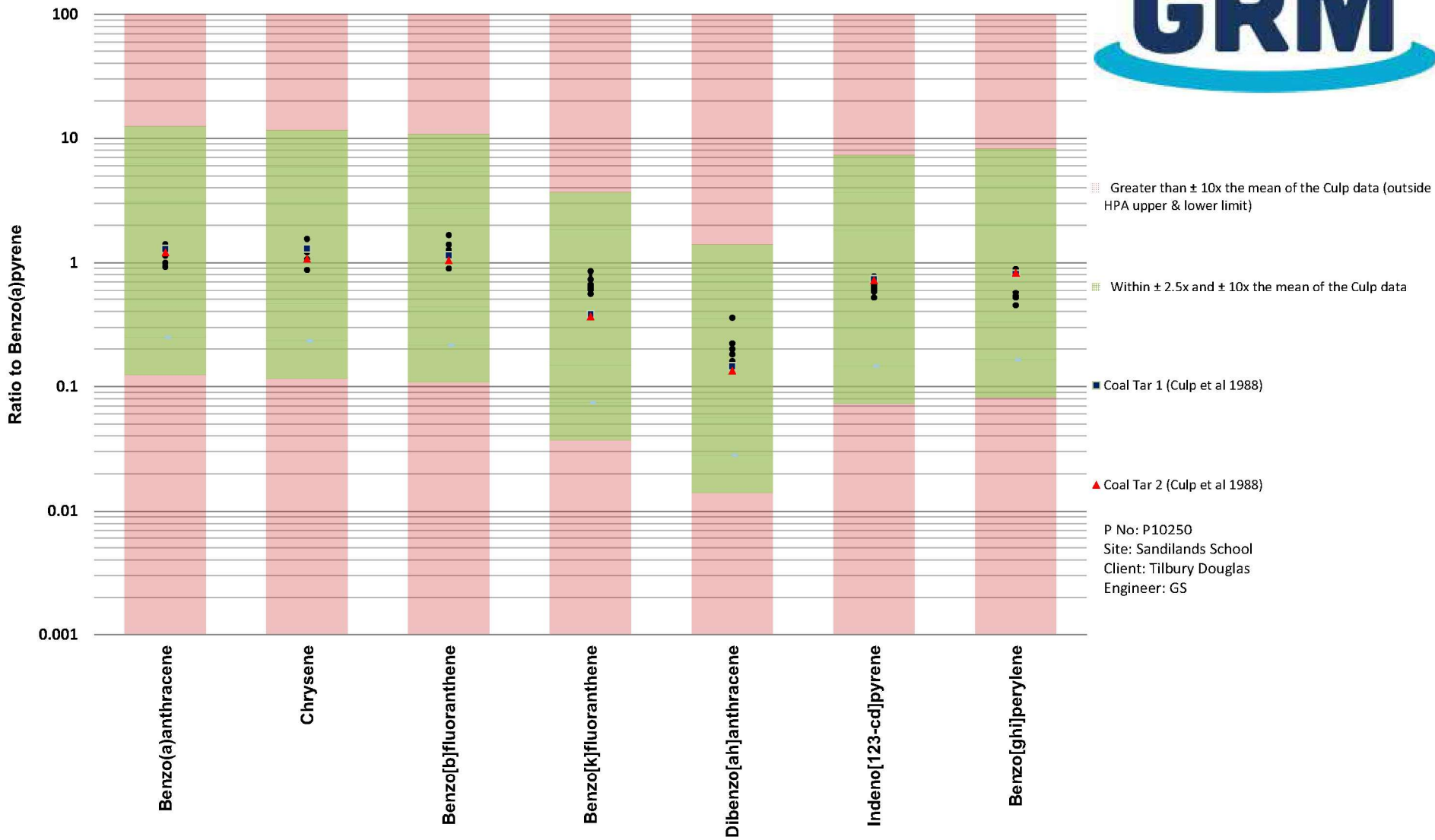


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PAH Mixture Analysis





A P P E N D I X F

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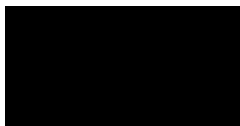


GRM Development Solutions

Laurus House
First Avenue
Centrum 100
Burton Upon Trent
DE14 2WH

Analytical Test Report: L25/10445/GRM - 25-84677

Your Project Reference:	P10250 Sandilands School, Manchester		
Your Order Number:	P10250	Samples Received / Instructed:	02/10/2025 / 02/10/2025
Report Issue Number:	1	Sample Tested:	02/10 to 15/10/2025
Samples Analysed:	6 sample(s)	Report issued:	15/10/2025



James Gane
Analytical Services Manager
CTS

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation

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

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27



4161



7 - 11 Harding Street
Leicester
LE1 4DH

L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School,
Manchester

Analytical Test Results - Solid

Lab Reference	609295	609296	609297	609298	609299	609300
Client Sample ID	-	-	-	-	-	-
Client Sample Location	TS-A-01	TS-A-02	TS-A-03	TS-A-04	TS-A-05	TS-B-01
Client Sample Type	ES	ES	ES	ES	ES	ES
Client Sample Number	SP	SP	SP	SP	SP	SP
Depth - Top (m)	-	-	-	-	-	-
Depth - Bottom (m)	-	-	-	-	-	-
Date of Sampling	30/09/2025	30/09/2025	30/09/2025	30/09/2025	30/09/2025	30/09/2025
Time of Sampling	-	-	-	-	-	-
Sample Matrix	Sand	Sand	Sand	Sand	Sand	Sand
Determinant	Units	Accreditation				
Arsenic	(mg/kg)	MCERTS	< 10	< 10	< 10	< 10
Cadmium	(mg/kg)	MCERTS	0.4	0.4	0.5	0.7
Chromium (Total)	(mg/kg)	UKAS	< 1.0	< 1.0	< 1.0	2.4
Copper	(mg/kg)	MCERTS	25	19	19	130
Lead	(mg/kg)	MCERTS	35	29	31	77
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	8.7	7.5	9.3	14
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	57	52	55	99
Total Phenols	(mg/kg)	MCERTS	< 2.0	< 2.0	< 2.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 2.0	< 2.0	< 2.0	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 3.0	< 3.0	< 3.0	< 1.0
pH	pH Units	MCERTS	7.9	7.7	7.6	7.7
Sulphate (Water soluble as SO ₄)	(mg/l)	u	100	110	97	210
Acenaphthene	(mg/kg)	MCERTS	0.04	0.05	0.09	< 0.20
Acenaphthylene	(mg/kg)	UKAS	< 0.02	0.02	< 0.02	0.38
Anthracene	(mg/kg)	UKAS	0.04	0.08	0.15	1.1
Benzo (a) anthracene	(mg/kg)	MCERTS	0.12	0.21	0.26	3.7
Benzo (a) pyrene	(mg/kg)	MCERTS	0.09	0.15	0.19	4.0
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.15	0.21	0.24	3.6
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.08	0.10	0.12	2.4
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.06	0.08	0.10	1.8
Chrysene	(mg/kg)	MCERTS	0.14	0.19	0.25	3.5
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	0.02	0.03	0.03	0.64
Fluoranthene	(mg/kg)	MCERTS	0.36	0.55	0.76	7.7
Fluorene	(mg/kg)	MCERTS	0.03	0.07	0.10	0.26
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	0.07	0.09	0.11	2.5
Naphthalene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.20
Phenanthrene	(mg/kg)	MCERTS	0.29	0.44	0.70	3.0
Pyrene	(mg/kg)	MCERTS	0.29	0.44	0.73	7.0
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	1.8	2.8	3.9	42
SOM (via TOC)	(%)	UKAS	7.6	5.0	6.2	3.8
Asbestos	-	UKAS	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected



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7 - 11 Harding Street
Leicester
LE1 4DH

L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School,
Manchester

Analytical Test Results - VPH / EPH

Lab Reference	609295	609296	609297	609298	609299	609300
Client Sample ID	-	-	-	-	-	-
Client Sample Location	TS-A-01	TS-A-02	TS-A-03	TS-A-04	TS-A-05	TS-B-01
Client Sample Type	ES	ES	ES	ES	ES	ES
Client Sample Number	SP	SP	SP	SP	SP	SP
Depth - Top (m)	-	-	-	-	-	-
Depth - Bottom (m)	-	-	-	-	-	-
Date of Sampling	30/09/2025	30/09/2025	30/09/2025	30/09/2025	30/09/2025	30/09/2025
Time of Sampling	-	-	-	-	-	-
Sample Matrix	Sand	Sand	Sand	Sand	Sand	Sand
Determinant	Units	Accreditation				
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	0.11	< 0.06	0.23
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	1.9	1.9	3.2	3.5
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	2.6	2.6	4.8	4.8
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	15	27	33	55
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	36	47	54	78
Aliphatic >C ₃₅ to C ₄₀ [EH_2D_AL]	(mg/kg)	MCERTS	4.8	5.8	6.7	8.3
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	3.6	5.5	6.1	8.5
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	15	19	22	38
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	120	110	110	210
Aromatic >C ₃₅ to C ₄₀ [EH_2D_AR]	(mg/kg)	MCERTS	19	18	21	37
Total >C ₅ to C ₄₀ [EH_2D+HS_1D_Total]	(mg/kg)	MCERTS	220	240	260	450



L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School, Manchester

Sample Descriptions

7 - 11 Harding Street
Leicester
LE1 4DH

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
609295	-	TS-A-01	ES	SP	Brown slightly gravelly slightly clayey silty sand with occasional rootlets	13	< 0.1	100
609296	-	TS-A-02	ES	SP	Brown slightly gravelly slightly clayey silty sand with rare rootlets	14	< 0.1	100
609297	-	TS-A-03	ES	SP	Brown slightly gravelly slightly clayey silty sand with rare rootlets	14	< 0.1	100
609298	-	TS-A-04	ES	SP	Brown slightly gravelly slightly clayey silty sand with rare rootlets	13	< 0.1	100
609299	-	TS-A-05	ES	SP	Brown slightly gravelly slightly clayey silty sand with occasional rootlets	14	< 0.1	100
609300	-	TS-B-01	ES	SP	Brown slightly gravelly slightly clayey silty sand with occasional rootlets	14	12	100



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7 - 11 Harding Street
Leicester
LE1 4DH

L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School, Manchester

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
609295	-	TS-A-01	ES	SP	Chromium(Hexavalent)/Phenol/Cyanide - Reporting limit raised due to sample matrix interference.
609296	-	TS-A-02	ES	SP	Chromium(Hexavalent)/Phenol/Cyanide - Reporting limit raised due to sample matrix interference.
609297	-	TS-A-03	ES	SP	Chromium(Hexavalent)/Phenol/Cyanide - Reporting limit raised due to sample matrix interference.
609298	-	TS-A-04	ES	SP	Chromium(Hexavalent)/Phenol/Cyanide - Reporting limit raised due to sample matrix interference.
609299	-	TS-A-05	ES	SP	Chromium(Hexavalent)/Phenol/Cyanide - Reporting limit raised due to sample matrix interference.
609300	-	TS-B-01	ES	SP	PAHAR - 1/10 Dilution



L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School, Manchester

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1 Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
GCXGCS	MS - CL - TPH & EPH by GCXGC	As received	Passing 10mm test sieve	Determination of TPH and EPH in soils via GCxGC-FID
CWGS	Calculation from VPH-S and EPH-S	As received	Passing 10mm test sieve	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in soils via Headspace-GC-MS and GC-GC-FID respectively
VPHS	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis



L25/10445/GRM - 25-84677

Project Reference - P10250 Sandilands School, Manchester

HWOL TPH Acronym Index

7 - 11 Harding Street
Leicester
LE1 4DH

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics and Aromatics
AL	Aliphatics Only
AR	Aromatics Only
2D	GC-GC - Double Coil Gas Chromatography
#1	EH_Total but with humics mathmatically subtracted
#2	EH_Total but with fatty acids mathmatically subtracted
-	Operator - underscore to separate acronyms (except for +)
+	Operator to indicate cumlative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



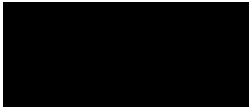
4161



A PHENNA GROUP COMPANY

7 - 11 Harding Street
Leicester
LE1 4DH**GRM Development Solutions**Laurus House
First Avenue
Centrum 100
Burton Upon Trent
DE14 2WH**Analytical Test Report: L25/10807/GRM - 25-86023**

Your Project Reference:	Sandilands School, Manchester P10250		
Your Order Number:	P10250	Samples Received / Instructed:	13/10/2025 / 13/10/2025
Report Issue Number:	1	Sample Tested:	13/10 to 22/10/2025
Samples Analysed:	10 sample(s)	Report issued:	22/10/2025



Emily Blissett
Report Manager
CTS

Notes:**General**

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2.

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation

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

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduced except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27



4161


 7 - 11 Harding Street
 Leicester
 LE1 4DH

L25/10807/GRM - 25-86023

 Project Reference - Sandilands School,
 Manchester P10250

Analytical Test Results - Solid

Lab Reference			614517	614518	614519	614520	614521	614522
Client Sample ID			TS-A-06	TS-A-07	TS-A-08	TS-A-09	TS-A-10	TS-A-11
Client Sample Location			-	-	-	-	-	-
Client Sample Type			ES	ES	ES	ES	ES	ES
Client Sample Number			-	-	-	-	-	-
Depth - Top (m)			0.10	0.10	0.10	0.10	0.10	0.10
Depth - Bottom (m)			0.10	0.10	0.10	0.10	0.10	0.10
Date of Sampling			10/10/2025	10/10/2025	10/10/2025	10/10/2025	10/10/2025	10/10/2025
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation						
Arsenic	(mg/kg)	MCERTS	< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	(mg/kg)	MCERTS	1.1	1.1	1.1	1.3	1.2	1.2
Chromium (Total)	(mg/kg)	UKAS	3.7	1.8	3.0	< 1.0	1.5	< 1.0
Copper	(mg/kg)	MCERTS	19	21	19	21	24	23
Lead	(mg/kg)	MCERTS	47	50	47	52	58	63
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	10	9.2	9.1	9.0	8.9	9.9
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	100	96	91	110	110	100
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	2.6	2.7	2.2	3.5	3.5	4.5
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	1.2	1.3	2.1	1.7	2.0
pH	pH Units	MCERTS	8.0	7.9	8.0	7.7	7.8	7.7
Sulphate (Water soluble as SO ₄)	(mg/l)	u	130	140	170	98	140	65
Acenaphthene	(mg/kg)	MCERTS	0.05	0.04	0.05	0.03	< 0.02	< 0.02
Acenaphthylene	(mg/kg)	UKAS	0.03	0.03	< 0.02	0.03	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	0.06	0.06	0.07	0.06	0.04	0.06
Benzo (a) anthracene	(mg/kg)	MCERTS	0.17	0.19	0.16	0.17	0.13	0.22
Benzo (a) pyrene	(mg/kg)	MCERTS	0.16	0.20	0.15	0.16	0.12	0.20
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.19	0.22	0.17	0.19	0.15	0.22
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.12	0.14	0.11	0.11	0.08	0.12
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.08	0.10	0.08	0.08	0.06	0.10
Chrysene	(mg/kg)	MCERTS	0.16	0.19	0.16	0.17	0.13	0.21
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	0.02	0.03	0.02	0.02	< 0.02	0.04
Fluoranthene	(mg/kg)	MCERTS	0.49	0.50	0.48	0.51	0.38	0.51
Fluorene	(mg/kg)	MCERTS	0.03	0.03	0.05	0.05	< 0.02	< 0.02
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	0.10	0.13	0.11	0.11	0.08	0.12
Naphthalene	(mg/kg)	MCERTS	< 0.02	0.02	< 0.02	0.06	< 0.02	< 0.02
Phenanthrene	(mg/kg)	MCERTS	0.28	0.28	0.32	0.27	0.17	0.20
Pyrene	(mg/kg)	MCERTS	0.45	0.44	0.42	0.41	0.33	0.50
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	2.4	2.6	2.4	2.4	1.8	2.6
SOM (via TOC)	(%)	UKAS	5.4	6.6	4.8	5.2	5.9	5.9
Asbestos	-	UKAS	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected



4161


 7 - 11 Harding Street
 Leicester
 LE1 4DH

L25/10807/GRM - 25-86023

 Project Reference - Sandilands School,
 Manchester P10250

Analytical Test Results - Solid

Lab Reference			614523	614524	614525	614526
Client Sample ID			TS-A-12	TS-A-13	TS-A-14	TS-A-15
Client Sample Location			-	-	-	-
Client Sample Type			ES	ES	ES	ES
Client Sample Number			-	-	-	-
Depth - Top (m)			0.10	0.10	0.10	0.10
Depth - Bottom (m)			0.10	0.10	0.10	0.10
Date of Sampling			10/10/2025	10/10/2025	10/10/2025	10/10/2025
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	Units	Accreditation				
Arsenic	(mg/kg)	MCERTS	< 10	< 10	< 10	< 10
Cadmium	(mg/kg)	MCERTS	1.2	0.9	0.8	0.9
Chromium (Total)	(mg/kg)	UKAS	< 1.0	2.1	3.9	2.6
Copper	(mg/kg)	MCERTS	18	19	21	20
Lead	(mg/kg)	MCERTS	47	46	39	49
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	7.8	8.4	11	8.7
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	100	93	75	99
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	5.0	3.2	< 1.0	2.9
Chromium (Hexavalent)	(mg/kg)	u	1.9	< 2.0	2.1	< 2.0
pH	pH Units	MCERTS	7.9	7.9	7.9	7.8
Sulphate (Water soluble as SO ₄)	(mg/l)	u	110	150	< 10	150
Acenaphthene	(mg/kg)	MCERTS	0.04	0.09	< 0.02	0.07
Acenaphthylene	(mg/kg)	UKAS	< 0.02	0.04	< 0.02	0.03
Anthracene	(mg/kg)	UKAS	0.05	0.13	0.04	0.08
Benzo (a) anthracene	(mg/kg)	MCERTS	0.17	0.34	0.13	0.26
Benzo (a) pyrene	(mg/kg)	MCERTS	0.15	0.31	0.12	0.28
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.20	0.33	0.15	0.32
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.11	0.19	0.09	0.18
Benzo (k) fluoranthene	(mg/kg)	MCERTS	0.08	0.15	0.06	0.14
Chrysene	(mg/kg)	MCERTS	0.15	0.30	0.12	0.25
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	0.02	0.05	< 0.02	0.05
Fluoranthene	(mg/kg)	MCERTS	0.49	1.0	0.38	0.74
Fluorene	(mg/kg)	MCERTS	< 0.02	0.07	< 0.02	0.06
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	0.11	0.18	0.09	0.17
Naphthalene	(mg/kg)	MCERTS	< 0.02	0.02	0.02	0.02
Phenanthrene	(mg/kg)	MCERTS	0.20	0.66	0.16	0.45
Pyrene	(mg/kg)	MCERTS	0.42	0.87	0.33	0.63
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	2.3	4.7	1.8	3.7
SOM (via TOC)	(%)	UKAS	5.5	6.8	6.8	5.8
Asbestos	-	UKAS	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected



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 7 - 11 Harding Street
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L25/10807/GRM - 25-86023

 Project Reference - Sandilands School,
 Manchester P10250

Analytical Test Results - VPH / EPH

Lab Reference	614517	614518	614519	614520	614521	614522
Client Sample ID	TS-A-06	TS-A-07	TS-A-08	TS-A-09	TS-A-10	TS-A-11
Client Sample Location	-	-	-	-	-	-
Client Sample Type	ES	ES	ES	ES	ES	ES
Client Sample Number	-	-	-	-	-	-
Depth - Top (m)	0.10	0.10	0.10	0.10	0.10	0.10
Depth - Bottom (m)	0.10	0.10	0.10	0.10	0.10	0.10
Date of Sampling	10/10/2025	10/10/2025	10/10/2025	10/10/2025	10/10/2025	10/10/2025
Time of Sampling	-	-	-	-	-	-
Sample Matrix	Clay	Clay	Clay	Clay	Clay	Clay
Determinant	Units	Accreditation				
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	0.29	< 0.06
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	0.34	< 0.06	0.11
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	1.6	1.6	1.5	1.3
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	4.2	5.2	3.8	2.9
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	19	25	23	22
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	67	64	58	54
Aliphatic >C ₃₅ to C ₄₀ [EH_2D_AL]	(mg/kg)	MCERTS	6.7	9.3	9.0	7.5
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	4.6	4.4	3.9	2.7
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	17	15	14	10
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	200	160	160	140
Aromatic >C ₃₅ to C ₄₀ [EH_2D_AR]	(mg/kg)	MCERTS	24	26	26	21
Total >C ₅ to C ₄₀ [EH_2D+HS_1D_T&#]	(mg/kg)	MCERTS	340	310	300	260



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L25/10807/GRM - 25-86023

Project Reference - Sandilands School,
Manchester P10250

Analytical Test Results - VPH / EPH

Lab Reference			614523	614524	614525	614526
Client Sample ID			TS-A-12	TS-A-13	TS-A-14	TS-A-15
Client Sample Location			-	-	-	-
Client Sample Type			ES	ES	ES	ES
Client Sample Number			-	-	-	-
Depth - Top (m)			0.10	0.10	0.10	0.10
Depth - Bottom (m)			0.10	0.10	0.10	0.10
Date of Sampling			10/10/2025	10/10/2025	10/10/2025	10/10/2025
Time of Sampling			-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay
Determinant	Units	Accreditation				
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	0.37
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	0.14	< 0.06	0.10	< 0.06
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	1.6	1.9	1.5	1.8
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	3.2	4.0	3.0	4.1
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	20	27	17	24
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	58	75	49	68
Aliphatic >C ₃₅ to C ₄₀ [EH_2D_AL]	(mg/kg)	MCERTS	8.2	9.9	7.2	8.3
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	3.0	6.0	2.8	5.8
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	11	20	9.6	19
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	160	210	140	200
Aromatic >C ₃₅ to C ₄₀ [EH_2D_AR]	(mg/kg)	MCERTS	24	36	23	31
Total >C ₅ to C ₄₀ [EH_2D+HS_1D_T&R]	(mg/kg)	MCERTS	290	390	260	360



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L25/10807/GRM - 25-86023

Project Reference - Sandilands School, Manchester P10250

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
614517	TS-A-06	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	15	< 0.1	80
614518	TS-A-07	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	16	< 0.1	80
614519	TS-A-08	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	17	< 0.1	89
614520	TS-A-09	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	18	< 0.1	74
614521	TS-A-10	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	18	< 0.1	83
614522	TS-A-11	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	19	< 0.1	78
614523	TS-A-12	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	19	< 0.1	79
614524	TS-A-13	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	17	< 0.1	86
614525	TS-A-14	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	23	< 0.1	93
614526	TS-A-15	-	ES	-	Dark brown slightly gravelly sandy silty clay with frequent organic matter	15	< 0.1	94



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L25/10807/GRM - 25-86023

Project Reference - Sandilands School, Manchester P10250

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
614517	TS-A-06	-	ES	-	
614518	TS-A-07	-	ES	-	
614519	TS-A-08	-	ES	-	VPH/BTEX - Sample taken from container with headspace.
614520	TS-A-09	-	ES	-	
614521	TS-A-10	-	ES	-	
614522	TS-A-11	-	ES	-	
614523	TS-A-12	-	ES	-	
614524	TS-A-13	-	ES	-	Chromium(Hexavalent) - Reporting limit raised due to sample matrix interference.
614525	TS-A-14	-	ES	-	Chromium(Hexavalent) - Reporting limit raised due to sample matrix interference.
614526	TS-A-15	-	ES	-	VPH/BTEX - Sample taken from container with headspace.



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L25/10807/GRM - 25-86023

Project Reference - Sandilands School, Manchester P10250

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
GCGCS	MS - CL - TPH & EPH by GCGC	As received	Passing 10mm test sieve	Determination of TPH and EPH in soils via GCGC-FID
CWGS	Calculation from VPH-S and EPH-S	As received	Passing 10mm test sieve	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in soils via Headspace-GC-MS and GC-GC-FID respectively
VPHS	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis



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L25/10807/GRM - 25-86023

Project Reference - Sandilands School, Manchester P10250

HWOL TPH Acronym Index

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



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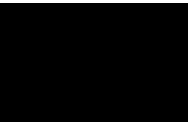
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Leicester
LE1 4DH

GRM Development Solutions

Laurus House
First Avenue
Centrum 100
Burton Upon Trent
DE14 2WH

Analytical Test Report: L25/10443/GRM - 25-84673

Your Project Reference:	P10250 Sandilands School, Manchester		
Your Order Number:	P10250	Samples Received / Instructed:	02/10/2025 / 02/10/2025
Report Issue Number:	1	Sample Tested:	02/10 to 15/10/2025
Samples Analysed:	3 sample(s)	Report issued:	15/10/2025



James Gane
Analytical Services Manager
CTS

Notes:**General**

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation

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

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

This report shall not be reproduce except in full

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

UKAS accreditation on waters only covers the Ground water and Surface water matrices

Date of Issue: 27.08.25

Issued by: J. Gane

Issue No: 4

Rev No: 27



4161



L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School,
Manchester

Analytical Test Results - Solid

Lab Reference			609289	609290	609291
Client Sample ID			-	-	-
Client Sample Location			TP02	TP04	TP06
Client Sample Type			ES	ES	ES
Client Sample Number			-	-	-
Depth - Top (m)			0.20	0.20	0.40
Depth - Bottom (m)			0.20	0.20	0.40
Date of Sampling			30/09/2025	30/09/2025	30/09/2025
Time of Sampling			-	-	-
Sample Matrix			Sand	Clay	Sand
Determinant	Units	Accreditation			
Arsenic	(mg/kg)	MCERTS	< 10	< 10	< 10
Cadmium	(mg/kg)	MCERTS	0.9	0.5	0.6
Chromium (Total)	(mg/kg)	UKAS	3.7	4.4	< 1.0
Copper	(mg/kg)	MCERTS	43	16	13
Lead	(mg/kg)	MCERTS	48	40	47
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	17	20	7.5
Selenium	(mg/kg)	u	< 8.0	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	85	44	39
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0	< 1.0
pH	pH Units	MCERTS	11.2	8.5	7.9
Sulphate (Water soluble as SO ₄)	(mg/l)	u	560	84	120
Acenaphthene	(mg/kg)	MCERTS	1.7	< 0.02	0.05
Acenaphthylene	(mg/kg)	UKAS	< 0.20	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	3.2	< 0.02	0.29
Benzo (a) anthracene	(mg/kg)	MCERTS	3.8	< 0.02	1.0
Benzo (a) pyrene	(mg/kg)	MCERTS	2.7	< 0.02	0.83
Benzo (b) fluoranthene	(mg/kg)	MCERTS	3.2	< 0.02	0.93
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	1.5	< 0.02	0.46
Benzo (k) fluoranthene	(mg/kg)	MCERTS	1.4	< 0.02	0.40
Chrysene	(mg/kg)	MCERTS	3.5	< 0.02	0.92
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	0.49	< 0.02	0.12
Fluoranthene	(mg/kg)	MCERTS	10	< 0.02	2.5
Fluorene	(mg/kg)	MCERTS	2.0	< 0.02	0.04
Indeno (1, 2, 3-cd) pyrene	(mg/kg)	MCERTS	1.4	< 0.02	0.48
Naphthalene	(mg/kg)	MCERTS	2.0	< 0.02	< 0.02
Phenanthrene	(mg/kg)	MCERTS	13	< 0.02	0.77
Pyrene	(mg/kg)	MCERTS	8.7	< 0.02	2.2
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	59	< 0.32	11
SOM (via TOC)	(%)	UKAS	2.9	5.8	2.3
Asbestos	-	UKAS	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected



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L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School,
Manchester

Analytical Test Results - VPH / EPH

Lab Reference			609289	609290	609291
Client Sample ID			-	-	-
Client Sample Location			TP02	TP04	TP06
Client Sample Type			ES	ES	ES
Client Sample Number			-	-	-
Depth - Top (m)			0.20	0.20	0.40
Depth - Bottom (m)			0.20	0.20	0.40
Date of Sampling			30/09/2025	30/09/2025	30/09/2025
Time of Sampling			-	-	-
Sample Matrix			Sand	Clay	Sand
Determinant	Units	Accreditation			
Benzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
Toluene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
Ethylbenzene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
m&p Xylene	(mg/kg)	MCERTS	< 0.02	< 0.02	< 0.02
o-Xylene	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
MTBE	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
Aliphatic >C ₅ to C ₆ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06
Aliphatic >C ₆ to C ₈ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06
Aliphatic >C ₈ to C ₁₀ [HS_MS_1D_AL]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06
Aliphatic >C ₁₀ to C ₁₂ [EH_2D_AL]	(mg/kg)	MCERTS	1.8	< 1.0	1.4
Aliphatic >C ₁₂ to C ₁₆ [EH_2D_AL]	(mg/kg)	MCERTS	6.3	1.9	2.7
Aliphatic >C ₁₆ to C ₂₁ [EH_2D_AL]	(mg/kg)	MCERTS	14	3.3	3.7
Aliphatic >C ₂₁ to C ₃₅ [EH_2D_AL]	(mg/kg)	MCERTS	66	23	14
Aliphatic >C ₃₅ to C ₄₀ [EH_2D_AL]	(mg/kg)	MCERTS	27	2.5	2.7
Aromatic >C ₅ to C ₇ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
Aromatic >C ₇ to C ₈ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.01	< 0.01	< 0.01
Aromatic >C ₈ to C ₁₀ [HS_MS_1D_AR]	(mg/kg)	MCERTS	< 0.06	< 0.06	< 0.06
Aromatic >C ₁₀ to C ₁₂ [EH_2D_AR]	(mg/kg)	MCERTS	1.2	< 1.0	< 1.0
Aromatic >C ₁₂ to C ₁₆ [EH_2D_AR]	(mg/kg)	MCERTS	7.6	< 1.0	1.4
Aromatic >C ₁₆ to C ₂₁ [EH_2D_AR]	(mg/kg)	MCERTS	24	2.8	4.1
Aromatic >C ₂₁ to C ₃₅ [EH_2D_AR]	(mg/kg)	MCERTS	100	28	12
Aromatic >C ₃₅ to C ₄₀ [EH_2D_AR]	(mg/kg)	MCERTS	43	33	2.3
Total >C ₅ to C ₄₀ [EH_2D+HS_1D_Total]	(mg/kg)	MCERTS	300	94	44



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LE1 4DH

L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School, Manchester

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
609289	-	TP02	ES	-	Made Ground- brown gravelly slightly clayey silty sand with occasional brick fragments	11	38	78
609290	-	TP04	ES	-	Brown slightly gravelly slightly sandy silty clay	22	< 0.1	100
609291	-	TP06	ES	-	Made Ground- grey gravelly slightly clayey silty sand with rare brick fragments	8.0	12	82



L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School, Manchester

7 - 11 Harding Street
Leicester
LE1 4DH

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
609289	-	TP02	ES	-	PAHAR - 1/10 Dilution
609290	-	TP04	ES	-	
609291	-	TP06	ES	-	



L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School, Manchester

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1 Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
GCXGCS	MS - CL - TPH & EPH by GCXGC	As received	Passing 10mm test sieve	Determination of TPH and EPH in soils via GCxGC-FID
CWGS	Calculation from VPH-S and EPH-S	As received	Passing 10mm test sieve	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in soils via Headspace-GC-MS and GC-GC-FID respectively
VPHS	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis



L25/10443/GRM - 25-84673

Project Reference - P10250 Sandilands School, Manchester

HWOL TPH Acronym Index

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics and Aromatics
AL	Aliphatics Only
AR	Aromatics Only
2D	GC-GC - Double Coil Gas Chromatography
#1	EH_Total but with humics mathmatically subtracted
#2	EH_Total but with fatty acids mathmatically subtracted
-	Operator - underscore to separate acronyms (except for +)
+	Operator to indicate cumlative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



A P P E N D I X G

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	GRM TIER 1 ASSESSMENT CRITERIA		
LAND USE	Residential with Plant Uptake		
CONTAMINANT	Metals and Inorganic Compounds		
^a Arsenic	37		
^a Cadmium	22		
^b Chromium III	910		
^a Chromium VI	21		
^a Lead	200		
^{b/c} Mercury	11		
^b Selenium	250		
^b Nickel	130		
^b Phenols	200		
^b Copper	2400		
^b Zinc	3700		
^d Cyanide	34		
	Organic Compounds		
BTEX	1% SOM	2.5% SOM	6% SOM
^a Benzene	0.20	0.41	0.87
^b Toluene	130	290	660
^b Ethylbenzene	47	110	260
^b <i>o</i> - xylene	60	140	330
^b <i>m</i> - xylene	59	140	320
^b <i>p</i> - xylene	56	130	310
Non Genotoxic PAHs			
^b Acenaphthene	210	510	1100
^b Acenaphthylene	170	420	920
^b Anthracene	2400	5400	11000
^b Fluoranthene	280	560	890
^b Fluorene	170	400	860
^b Naphthalene	2.3	5.6	13
^b Phenanthrene	95	220	440
^b Pyrene	620	1200	2000
Genotoxic PAHs			
^{a/e} Benzo(a)pyrene	5	5	5
ALIPHATIC HYDROCARBONS			
^b C5-C6	42	78	160
^b C6-C8	100	230	530
^b C8-C10	27	65	150
^b C10-C12	130	330	760
^b C12-C16	1100	2400	4300
^b C16-35	65000	92000	110000
AROMATIC HYDROCARBONS			
^b C5-7 (benzene)	70	140	300
^b C7-8 (toluene)	130	290	660
^b C8-C10	34	83	190
^b C10-C12	74	180	380
^b C12-C16	140	330	660
^b C16-C21	260	540	930
^b C21-C35	1100	1500	1700

Notes

- a C4SL - SP1010 (2014) - Benzene (2.5% SOM) and Benzo(a)pyrene values (1% and 2.5% SOM) have been calculated using default C4SL parameters in CLEA v1.071. Cadmium using lifetime exposure.
- b LQM/CIEH S4UL values (2015). Publication number S4UL3066.
- c S4UL for Methyl Hg used.
- d Atkins ATRISKsoil Value
- e Benzo(a)pyrene is a surrogate marker for the 8 genotoxic PAHs (Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(ah)anthracene, Ideno(1,2,3-cd)pyrene)
All values in mg/kg unless otherwise stated

GRM TAC 02-2024



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Legend

Site Boundary

Exploratory Holes

Trial Pit



NOTES:

Notes



CLIENT:	Tilbury Douglas
PROJECT:	Sandiland Primary School
TITLE:	Exploratory hole Location Plan - Old Layout

PROJECT No:	P10250	DATE:	October 2025	DESIGN/DRAWN:	GS
DRAWING NUMBER:	2	ISSUE:	Final		
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GRM Development Solutions Ltd

Tel: 01283 551 249

mail@grm-uk.com

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NOTES:

Notes



CLIENT:

Tilbury Douglas

PROJECT:

Sandiland Primary School

TITLE:

Exploratory hole Location Plan - New Layout

PROJECT No:

P10250

DATE:

October 2025

DESIGN/DRAWN:

GS

DRAWING NUMBER:

3

ISSUE:

Final

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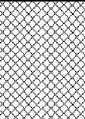
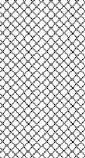
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1>Trial Pit Log</h1>			Trial Pit No TP01 Sheet 1 of 1	
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.36	
Client: Tilbury Douglas					GRM Project Ref: P10250		Coordinates 379589 E 389619 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.10	28.26	 Dark brown, slightly clayey gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-angular of brick, concrete, clay pipe and sandstone. MADE GROUND  Medium dense, greyish brown mottled light brown and brown, slightly clayey sandy GRAVEL Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular of concrete, brick, clay pipe, sandstone, chert and rare clinker. MADE GROUND  Medium dense, brown mottled light brown slightly silty fine to coarse SAND with rare sub-angular cobbles of sandstone. GLACIOFLUVIAL SHEET DEPOSITS		
	0.50	ES		0.55	27.80			
	0.90	D		1.20	27.16			
							End of Pit at 1.200m	

Date Excavated: 30/09/2025		Groundwater Observations:	
Date Backfilled: 30/09/2025		No groundwater encountered during excavation.	
Shoring: None			
Stability: Stable during excavation.			
Plant Used: 8 Tonne Tracked Excavator		Reason for termination of Trial Pit:	
Logged by: JM		Target depth achieved.	
General Remarks:			

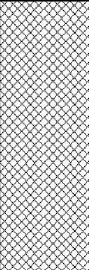
Relative density is approximate and determined by observation only.		Version: FINAL		Scale: 1:25	
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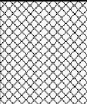
		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1>Trial Pit Log</h1>			Trial Pit No TP02 Sheet 1 of 1	
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.45	
Client: Tilbury Douglas					GRM Project Ref: P10250		Coordinates 379585 E 389635 N	

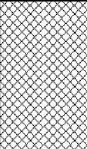
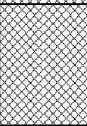
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES		0.40	28.05		Brown, slightly clayey cobbly sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-angular of brick, concrete, nails, sandstone and tarmac. Cobbles as angular to sub-angular of tarmac. MADE GROUND	1
	0.70	ES					Medium dense, brown mottled grey slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-rounded of brick, ceramic, sandstone, chert and rare wood fragments. MADE GROUND	
				0.95	27.50		Medium dense, brown, slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-angular of sandstone and rare chert. GLACIOFLUVIAL SHEET DEPOSITS	
				1.20	27.25		Medium dense, dark grey mottled greenish grey, locally slightly silty slightly gravelly fine to coarse SAND. Rare organic matter. GLACIOFLUVIAL SHEET DEPOSITS	
				1.60	26.85	End of Pit at 1.600m		
								2
								3
								4

Date Excavated: 30/09/2025		Groundwater Observations:	
Date Backfilled: 30/09/2025		No groundwater encountered during excavation.	
Shoring: None			
Stability: Stable during excavation.			
Plant Used: 8 Tonne Tracked Excavator		Reason for termination of Trial Pit:	
Logged by: JM		Target depth achieved.	
General Remarks:			

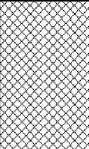
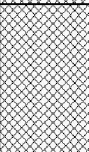
Relative density is approximate and determined by observation only.	Version: FINAL	Scale: 1:25
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		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1>Trial Pit Log</h1>			Trial Pit No TP03 Sheet 1 of 1		
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.34		
Client: Tilbury Douglas					GRM Project Ref: P10250			Coordinates 379617 E 389643 N	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.50	D					Light grey limestone gravel over, dark brown locally mottled blackish brown, slightly clayey slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-angular of brick, concrete and rare tarmac. MADE GROUND		
	1.10	D		0.90	27.44		Medium dense, brown mottled light brown, locally slightly silty slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-rounded of quartzite, sandstone and rare chert. GLACIOFLUVIAL SHEET DEPOSITS <i>becoming grey below 1.20m bgl.</i>		
				1.30	27.04		End of Pit at 1.300m		
Date Excavated: 30/09/2025				Groundwater Observations:					
Date Backfilled: 30/09/2025				No groundwater encountered during excavation.					
Shoring: None									
Stability: Stable during excavation.									
Plant Used: 8 Tonne Tracked Excavator				Trial Pit Dimensions (m):		Reason for termination of Trial Pit:			
Logged by: JM				0.70  2.00		Target depth achieved.			
General Remarks:									
Relative density is approximate and determined by observation only.									
Version: FINAL Scale: 1:25									

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1>Trial Pit Log</h1>			Trial Pit No TP04 Sheet 1 of 1		
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.36		
Client: Tilbury Douglas					GRM Project Ref: P10250			Coordinates 379638 E 389626 N	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	ES		0.35	28.01		Brown, locally clayey slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-angular of brick, concrete, sandstone and rare wood fragments. MADE GROUND		
	0.70	D					Medium dense, brown mottled light brown, locally slightly silty slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-rounded of quartzite, sandstone and rare chert. GLACIOFLUVIAL SHEET DEPOSITS		
				1.00	27.36		End of Pit at 1.000m		
Date Excavated: 30/09/2025				Groundwater Observations:					
Date Backfilled: 30/09/2025				No groundwater encountered during excavation.					
Shoring: None									
Stability: Stable during excavation.									
Plant Used: 8 Tonne Tracked Excavator				Trial Pit Dimensions (m):		Reason for termination of Trial Pit:			
Logged by: JM				0.70  2.00		Target depth achieved.			
General Remarks:									
Relative density is approximate and determined by observation only.									
Version: FINAL Scale: 1:25									

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1>Trial Pit Log</h1>			Trial Pit No TP05 Sheet 1 of 1	
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.36	
Client: Tilbury Douglas					GRM Project Ref: P10250		Coordinates 379651 E 389652 N	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40	ES		0.50	27.86		Dark brown mottled light brown and brown gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-rounded of brick, quartzite, sandstone and rare concrete. MADE GROUND	1
	0.80	ES		0.90	27.46		Loose to medium dense, light brown mottled brown, locally slightly gravelly fine to coarse SAND. Gravel is fine to coarse, angular to sub-rounded of quartzite and sandstone with localised brick and tarmac. MADE GROUND	
	1.00	D		1.30	27.06		Loose to medium dense, brown mottled light brown, slightly gravelly fine to coarse SAND. Gravel is fine to coarse. Sub-angular to sub-rounded of quartzite, chert and sandstone. GLACIOFLUVIAL SHEET DEPOSITS	
	End of Pit at 1.300m							
Date Excavated: 30/09/2025			Groundwater Observations:					
Date Backfilled: 30/09/2025			No groundwater encountered during excavation.					
Shoring: None								
Stability: Stable during excavation.								
Plant Used: 8 Tonne Tracked Excavator			Trial Pit Dimensions (m):			Reason for termination of Trial Pit:		
Logged by: JM			0.70  2.00			Target depth achieved.		
General Remarks:								
Relative density is approximate and determined by observation only.								
Version:			FINAL			Scale: 1:25		

		GRM Development Solutions Ltd Laurus House, First Avenue, Centrum 100, Burton-on-Trent, DE14 2WH Tel (HQ): 01283 551249 Email: info@grm-uk.com		<h1 style="text-align: center;">Trial Pit Log</h1>			Trial Pit No TP06 Sheet 1 of 1	
Site Name: Sandilands Community Primary School							Ground Level (mAOD) 28.48	
Client: Tilbury Douglas					GRM Project Ref: P10250		Coordinates 379667 E 389659 N	

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40	ES		0.50	27.98		Brown mottled light brown and blackish brown, locally clayey gravelly fine to coarse SAND with pockets of sandy gravelly clay. Gravel is fine to coarse, angular to sub-angular of brick, limestone and concrete. MADE GROUND	1
	0.90	ES		1.00	27.48		Medium dense, dark brown, locally clayey slightly gravelly fine to coarse SAND with band of cream sand. Gravel is fine to coarse, angular to sub-angular of brick, concrete, quartzite and sandstone. MADE GROUND	
	1.20	D		1.40	27.08		Medium dense, greyish brown mottled brown slightly gravelly fine to coarse SAND. Gravel is fine to coarse, sub-angular to sub-rounded of quartzite and sandstone. GLACIOFLUVIAL SHEET DEPOSITS	
	End of Pit at 1.400m							2
								3
								4

Date Excavated: 30/09/2025		Groundwater Observations:	
Date Backfilled: 30/09/2025		Slightly damp strata encountered between 1.0m - 1.4m begl.	
Shoring: None			
Stability: Stable during excavation.			
Plant Used: 8 Tonne Tracked Excavator		Reason for termination of Trial Pit:	
Logged by: JM		Target depth achieved.	
General Remarks:			

Relative density is approximate and determined by observation only.	Version: FINAL	Scale: 1:25
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Soakaway Testing | Specialist Land Surveys

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Ground Gas Assessments | Material Management Plans
Environmental Impact Assessments & Reports
Remediation Strategies & Validation | Due Diligence Audits

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Retaining Wall Design | Ground Stability | Vibration Assessments
Value Engineering

Design

Budget Foundation Schedules | Detailed Foundation Design
Structural Design | Structural Surveys

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Mine Workings | Mine Shafts | Subsidence | Mineral Resource Assessments

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