

Greenhead College

Final Remediation Verification Report

Galliford Try Building – North East & Yorkshire

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1.0

Introduction

1.0 Introduction

1.1 The Site

The Client, Galliford Try Building North East & Yorkshire (Galliford Try), is proposing to redevelop parts of the existing Greenhead College in Huddersfield. The wider site covers an area of approximately 2.5Ha and is located some 500m west of Huddersfield Town Centre, centred at NGR 413746E, 416747N. The site is currently an operational college and includes car parking and recreational space.

Figure 1-1 shows the site location and the extent of the development boundary.

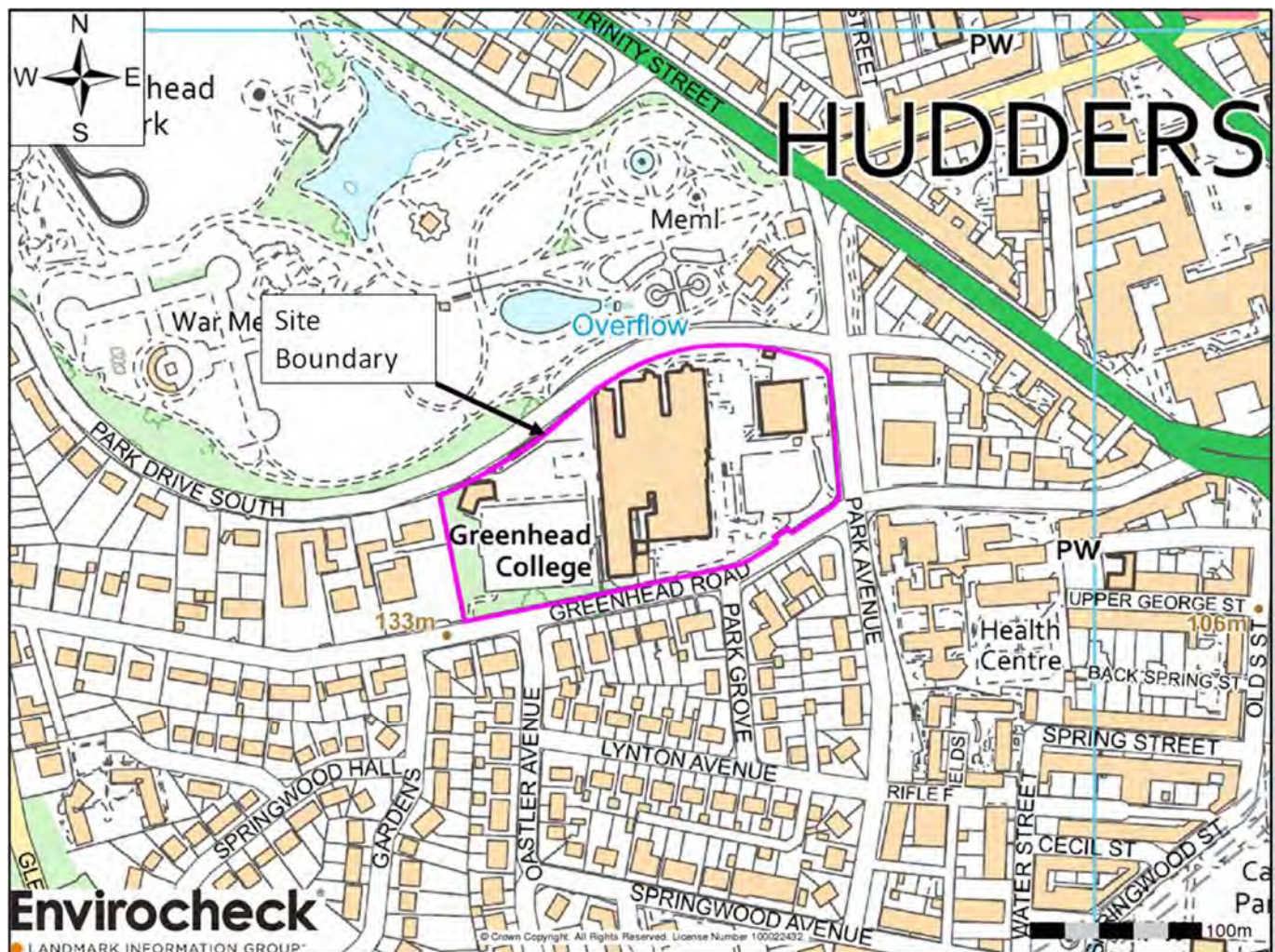


Figure 1-1: Site Location Plan

1.2 The Scheme

The scheme includes for the demolition of part of the existing Greenhead College and the construction of a new building within a similar footprint, referred to as the 'infill' building. A new, multi storey college building has been constructed within the former car park in the southeast of the site.

The development also includes for the replacement of the existing sports pitches in the west with new car parking and an artificial sports pitch. Most of the proposed development will be either building footprints, hardstanding or artificial sports pitches and less than approximately 5% of the development will comprise soft landscaping. The majority of the existing

soft landscaped areas, predominantly those around the boundary of the site, will not be subject to any further significant development given the presence of semi mature and mature trees.

Given the scope of the development and the necessity to keep the existing college building open during construction, the works have been completed over the following phases:

- **Phase 1:** Construction of new car parking and soft landscaping in the west and the main college building in the south east, including areas of hardstanding, infrastructure and very small areas of new soft landscaping.
- **Phase 2:** Demolition of the existing college building, followed by the construction of the new 'infill' building. The artificial sports pitches, external infrastructure and hard and soft landscaping surrounding the existing college building will also be completed during this phase.

1.3 Context & Purpose

Cundall was commissioned by the Client to prepare a Remediation Verification Report to satisfy the relevant planning condition and to validate that the scheme was undertaken in accordance with Cundall's Detailed Remediation and Verification Strategy (ref 7, Section 1.4).

Given the phasing of the works and the requirement for the Client to release part of the development for occupation, prior to completion of the full site, the verification works were undertaken under two separate phases (as detailed in Section 1.2) and shown in Figure 1-2.

Version P01 of this Verification Report was completed in September 2023 and was submitted to Kirklees Local Authority to have been submitted to and accepted by Kirklees Local Authority (see Reference 11, Section 1.4). This revision to the Remediation Verification Report applies to the whole scheme, including both Phase 1 and Phase 2 and captures all the remediation undertaken throughout the development of the site.

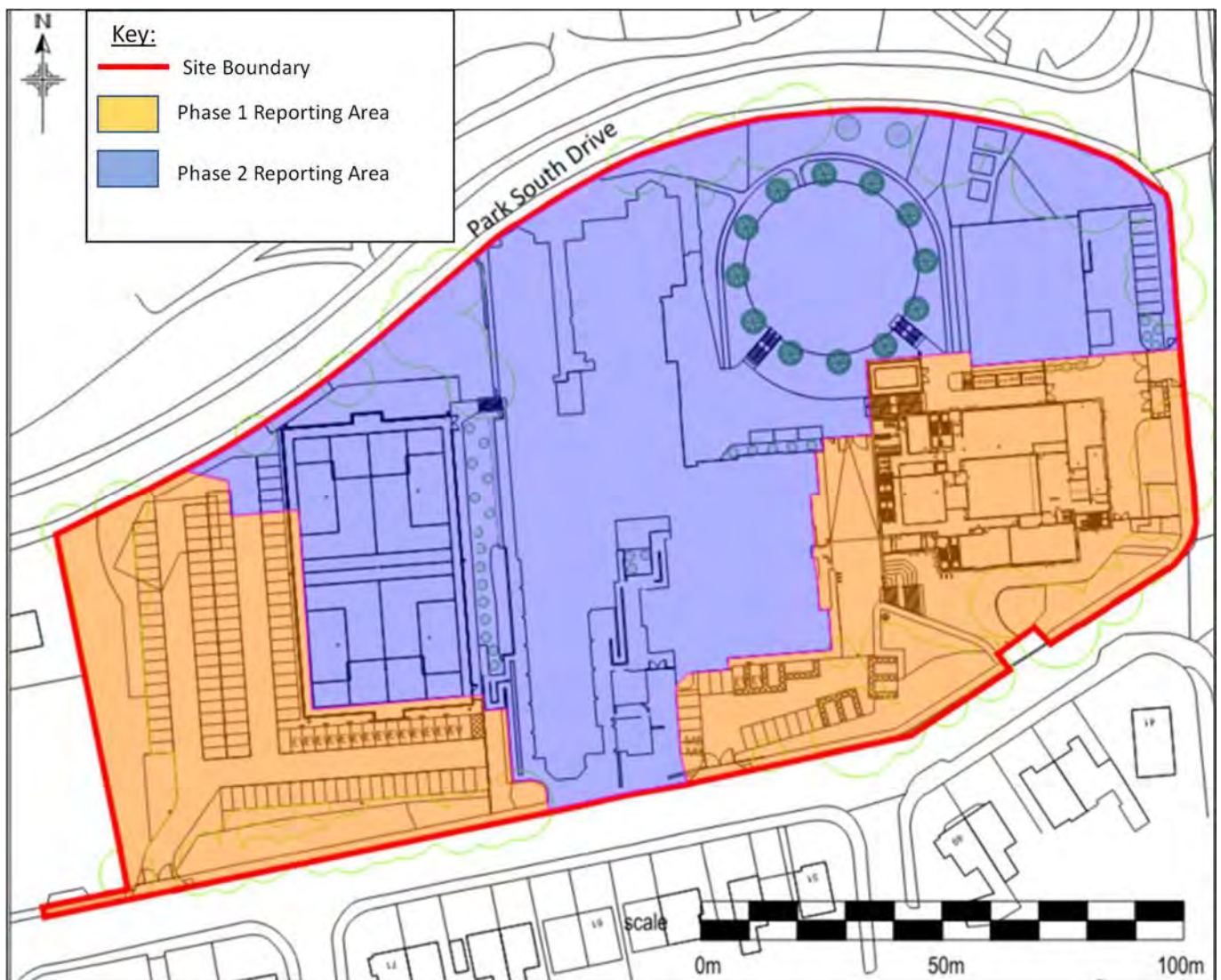


Figure 1-2: Phase 1 Remediation Verification Boundary

Given that the whole site will be discussed in this report, Phase 1 and Phase 2 in the context of the Figure 1-2 will not be discussed in this report and the new building in the south east will be referred to as the 'Main Building'. The area centrally that included for the demolition of the existing structure and construction of a new building will be referred to as the 'infill' building.

This report verifies that the identified land quality (geoenvironmental) risks in the development area were appropriately managed and mitigated.

It is not within the scope of this report to provide verification of the geotechnical aspects of the works (such as compliance with the Earthworks Specification), or of the stabilisation of mineworkings, which is also outside the scope of this report and has been reported separately by Sirius within the Drilling and Grouting Completion Report (ref 6, Section 1.4) for the main building.

1.4 Sources of Information

This report is based upon a review of the following data:

1. EPS (September 2020) Greenhead College, Phase 1 Geo-Environmental Desk Study (Report ref. UK20.5113).
2. EPS (November 2020) Greenhead College, Phase II Geo-environmental Assessment. (Report ref. UK20.5113b) Issue 1.

3. Cundall (September 2021) Coal Mining Risk Assessment at Greenhead College, Kirklees (Report ref. 1029739.RPT.GL.001) RevA.
4. Cundall (November 2021) Phase II Geotechnical and Geoenvironmental Assessment (Report ref. NE8659-CDL-ZZ-XX-RP-GE-60200) Rev C.
5. Sirius (January 2022) Specification for the Stabilisation of Shallow Mine Workings, (Report ref. SDL4284)
6. Sirius (June 2022) Completion Report for the Drilling and Grouting of Mine Workings at Greenhead Sixth Form College, Huddersfield' Report ref SDL4284.
7. Cundall, August 2022 'Detailed Remediation and Verification Strategy' Ref. NE8659-CDL-ZZ-XX-RP-GE-60201 Rev B.
8. Oobe (November 2022) Urban Greening Factor, Drawing No. NE8659-OOB-ZZ-00-DR-L-0009.
9. Cundall (July 2023) Ground Floor Slab General Arrangement, Drawing No. NE8659-CCS-XX-00-DR-S-31002.
10. Cundall, (September 2023) 'Detailed Remediation and Verification Strategy' Ref. NE8659-CDL-ZZ-XX-RP-G-60201 P01. Updated from reference 7 only for file reference number.
11. Kirklees Council, (November 2023) 'Discharge of Condition 8 (Validation Report) of previous 2021-93674 for partial redevelopment of Greenhead College' Ref 2023/92667.
12. Oobe (September 2024) Site Layout Plan as Proposed / Block Plan Drawing No. NE8659-OOB-ZZ-00-DR-L-0001.

1.5 Limitations

The opinions provided and recommendations given in this report are based on the information contained within the sources referenced in Section 1.4, which have been based on visual site inspection, information provided by third parties, the results of the ground investigations and factual data provided by the Client and their sub-contractor(s).

This report is based upon the data provided by the Client (or appointed sub-contractor) to Cundall, and site inspections undertaken by Cundall. Cundall cannot be held responsible for any data omissions, or any activities not agreed with the Local Planning Authority for which they had no prior knowledge.

2.0

Background Information

2.0 Background Information

2.1 Site Description

A detailed review of the site is included within Cundall's Geotechnical and Geoenvironmental assessment (ref 4, Section 1.4) and should be read in conjunction with this report.

The site is an irregular shape and occupies an area approximately 2.5Ha in size to the west of Huddersfield town centre. It sits south of Park Drive South and north of Greenhead Road. The area is predominantly residential with some commercial units to the east and Greenhead Park to the north.

The site is occupied by the existing Greenhead College and associated infrastructure. Prior to redevelopment, a sports pitch was present in the west and a car park was in the south east. The site boundary was generally occupied by soft landscaping including mature and semi mature trees.

The site is generally located on two levels and is split centrally by a gabion wall, with the higher elevation in the west at around 130.5mAOD and the lower level in the east at approximately 127.0mAOD.

2.2 Site History

The available mapping from 1851 shows Greenhead Hall School to be present in the centre of the site. The school building has developed with the addition of several buildings, sports pitches and car parking with the most recent development in the north east of the school, understood to have been constructed between 2003 and 2009.

2.3 Ground Conditions

Historical ground investigation by EPS in October 2020 and Dunelm in April 2021 generally recorded the following succession of strata:

- Tarmacadam hardstanding in areas of car parking and access road to a maximum depth of 0.20m bgl
- Topsoil in landscaped areas to a maximum depth of 0.40m bgl.
- Granular sub base below tarmacadam hardstanding to a maximum depth of 0.40m bgl.
- Cohesive and granular Made ground across the majority of the site to a maximum depth of 2.20m bgl.
 - Granular made ground was generally described as black gravelly sand with ash and clinker and was recorded across most of the site except the south west and south. The made ground was recorded to a maximum depth of 1.10m in the north west of the site.
 - Cohesive made ground was generally recorded below the granular made ground as soft to firm, light brown sandy gravelly clay. The cohesive made ground was recorded at a maximum depth of 2.20m bgl in the north west.
- Completely weathered Pennine Lower Coal Measures typically described as soft to firm sandy gravelly clay, was recorded below the made ground and was recorded at thicknesses of between 0.90m and 1.50m. The cohesive deposits became stiffer with depth and were recorded to a maximum depth of 116.90m AOD.
- Competent Pennine Lower Coal Measures were predominantly encountered as mudstone, described as dark grey extremely weak to medium strong thinly laminated mudstone. A thin band of sandstone was recorded in the far western part of the site.

Water was encountered within one exploratory hole in the south east at 3m bgl and was considered to be representative of perched water within the completely weathered mudstone.

Detailed descriptions of the ground conditions discussed above, including exploratory hole logs, are included within EPS Phase II Geo-Environmental Assessment (ref 2, Section 1.4) and Dunelm Factual Ground Investigation Report, included within Cundall's Geotechnical and Environmental Assessment (ref 4, Section 1.4).

2.4 Identified Areas of Contamination

2.4.1 Human Health

Elevated concentrations of PAH compounds were recorded within three exploratory holes, two of which were located in the south east below the proposed building footprint and one located within the north west, below the proposed sports pitches.

2.4.2 Gas Risk

The Cundall Geotechnical and Geoenvironmental Assessment (ref 4, Section 1.4) included six rounds of ground gas monitoring and a further three rounds were undertaken during and following the drilling and grouting of the underground mine workings. The results of the ground gas monitoring were assessed and characterised the site as a Characteristic Situation 2 (CS-2), under which scenario ground gas protection measures are required.

3.0

Remediation Strategy

3.0 Remediation Strategy

3.1 Summary of Approved Remediation Strategy

3.1.1 Objectives and Principles of Remediation

Prior to commencement of the works a Detailed Remediation and Verification Strategy (ref 7, Section 1.4) was prepared by Cundall. The purpose of the strategy was to outline remedial measures and implement controls in accordance with the current contaminated land and planning guidance, regulations and legislation. Additionally, the strategy served to:

- Satisfy the Local Planning Authority that upon completion of the works the identified risks have been adequately mitigated.
- Ensure construction workers are not put at an unacceptable short-term risk during the redevelopment works.
- Provide a Verification Strategy for the works. This is required to verify that the remedial works undertaken are implemented in accordance with the agreed Strategy.

The latest revision of the Remediation & Verification Strategy was issued to the Contaminated Land Officer (CLO) at Kirklees Council and no comments were received. The document stipulated that the following remedial measures were required to be implemented to comply with the agreed Remediation Strategy.

3.1.2 Base of Excavation and As Built Survey

Both as built and as dug (base of excavation) surveys were required to be completed.

3.1.3 Human Health Risks (Clean Cover System in Areas of New Soft Landscaping)

Elevated concentrations of Speciated Polycyclic Aromatic Hydrocarbons (PAHs) were identified during the ground investigation that requires mitigation measures to prevent future end users and maintenance workers coming into contact with contaminated soils.

The proposed mitigation measures include the placement of a clean cover system, comprising a minimum 300mm thickness of clean topsoil / subsoil overlying a geotextile separator in areas of new (not existing) soft landscaping only, where made ground is present.

Where made ground is not present, and in areas of existing soft landscaping, the clean cover system is not required.

3.1.4 Ground Gas

The gassing situation across the site has been assessed as Characteristic Situation 2 (CS-2), under which scenario all new developments require ground gas protection measures.

Further information on the ground gas protection measures is detailed below.

3.1.4.1 Main Building

The proposed college building in the south east of the site is classified as a Type C Building (in accordance with BS8485) and therefore requires a gas protection score of 2.5 points. It is understood that this is to be achieved by the use of a ground bearing slab and the placement and verification of a suitable ground gas membrane by an independent specialist.

3.1.4.2 Infill Building

The infill building will be required to include fixed gas monitors that measure hazardous ground gases in rooms that are most susceptible to gas risk, i.e. non ventilated enclosed spaces such as small plant rooms or storage rooms. A concept design was produced by Cundall as part of the Remediation Strategy to identify rooms where fixed gas monitors may be

required and this included for small plant rooms and cupboards. This was to be reviewed and designed by a specialist contractor as part of the detailed design phase.

3.1.4.3 Existing Building

Similar to the infill building, it was agreed with the Local Authority that fixed gas monitors should be installed into rooms most susceptible to gas risk and immediately adjacent to the proposed, infill building. Some locations were provided as part of Cundall's concept design, but these were to be reviewed and designed by a specialist contractor as part of the detailed design phase.

3.1.5 Water Supply Pipes

All new potable water supply pipes at the site were to conform with one of the following remedial options:

1. Place all new potable water supply pipes in either natural soils or directly into new buildings (i.e., no direct contact with existing made ground soils), thus preventing contact with made ground soils.
2. Upgrade the water supply pipes to a proprietary potable water supply pipe designed for contaminated sites such as 'Protect-line' together with the associated connections.

3.1.6 Material Control

3.1.6.1 Required validation of Imported / Site Won Aggregates

Site won and imported materials were to be tested in accordance with the frequencies detailed in Table 3 and meet the criteria of Table 4 in Cundall's Detailed Remediation and Verification Strategy (ref 7, Section 1.4).

The validation was to consist of a minimum of two chemical testing results (depending on the origin of the material) for each source of imported or site won aggregate.

3.1.7 Required Validation of Landscaping Material

Fill placed in soft landscaped areas were to be tested in accordance with the frequencies detailed in Table 3 and meet the criteria of Table 4 in Cundall's Detailed Remediation and Verification Strategy (ref 7, Section 1.4).

The validation was to consist of a minimum of two chemical testing results (depending on the origin of the material) for each source of imported or site won aggregate.

3.1.7.1 Soil Disposal

Any materials exported from site to landfill were to be hauled by a registered waste carrier and a Waste Transfer Note (WTN) shall be completed, signed and retained by all parties involved. The WTN shall state the volume of waste, the nature of the material and statement of its chemical composition. The WTN shall be kept by the Main Contractor.

Site records shall be kept detailing any previously unidentified contamination encountered during the construction works and any deviations from the agreed remediation strategy.

3.1.8 Areas of Unforeseen Ground Contamination

Where any previously unidentified contamination was encountered during the construction works then site records were needed to be kept including any deviations from the agreed Remediation Strategy.

3.1.9 Variations to the Remediation Strategy

Any significant deviation from the agreed remediation strategy was to be agreed in writing with the LPA and their CLO prior to implementation.

4.0

Remediation and Verification Works Undertaken

4.0 Remediation and Verification Works Undertaken

4.1 Enabling Works Undertaken

The enabling works undertaken across the site predominantly consisted of the breaking out of concrete below building footprints and macadam hardstanding in car parking and a reduced level dig to formation. Excavations within the western part of the site were typically shallow and in the south eastern part of the site extended to a maximum approximate depth of 4.00m bgl to accommodate the retaining wall and the building foundations. Placement of fill was typically undertaken in the central part of the site but was typically less than 1.0m in thickness.

Enabling works were restricted by large mature trees around the boundary of the site, particularly in the south east, where it was essential that the root zones of the trees remained undisturbed and no cutting or filling operations were undertaken within these areas.

4.2 Base of Excavation Survey / As Built Survey

Individual base of excavation surveys of specific areas are presented in Appendix A along with an 'as built' survey following the placement and compaction of fill (where applicable) and construction of soft and hard landscaping.

4.3 Provision of a Clean Cover System to New Soft Landscaped Area

In areas of new soft landscaping and where made ground soils remain in situ, a clean cover system was constructed and comprised a geotextile marker layer below a minimum of 300mm of topsoil / subsoil.

Where the earthworks consisted of a reduced level dig that exposed natural ground, a clean cover system was not required, and the finished development levels were achieved by placing a minimum of 100mm of topsoil merely to act as a growing medium. The locations where made ground soils were excavated and removed in their entirety in areas of new soft landscaping are shown in orange within Figure 4-1. Confirmation of the removal of made ground and exposure of underlying natural clean soils is included within an email and a marked up sketch from GallifordTry, included in Appendix B.

In some areas, no remedial earthworks were possible given the presence of semi-mature, mature trees or dense vegetation (to be retained). A clean cover system was not installed within these areas.

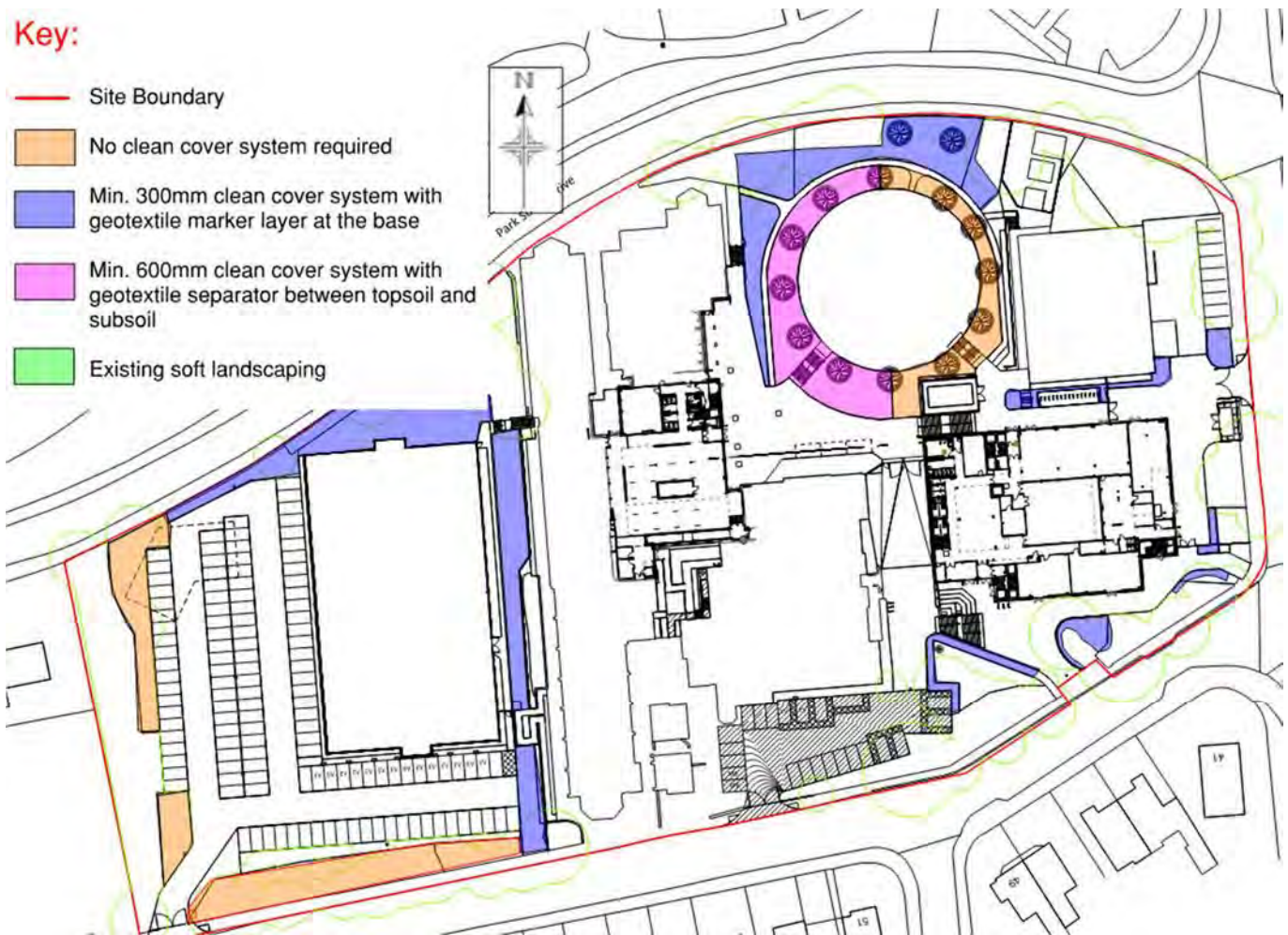


Figure 4-1: Location of Clean Cover System

In areas where topsoil has been placed directly above made ground soils or engineered fill, a geotextile separator has been used at the base of the clean cover system, followed by the placement of at least 300mm of topsoil. These areas are highlighted in blue in Figure 4-1 Further detail on the chemical suitability and testing of the imported topsoil used within the clean cover system is included in Section 4.6.

In one part of the site, shown in pink in Figure 4-1, a minimum 600mm thick clean cover system was installed with the geotextile marker layer separating the clean topsoil and clean subsoil to prevent intermixing. Confirmation of the suitability of the material is included in see section 4.6. A geotextile separator was not placed at the base of the subsoil of the 600mm clean cover system as the thickness of clean topsoil and clean subsoil was considered to be sufficient to prevent any mixing of soils in the cover system through bioturbation.

A specification data sheet of the geotextile used as a separator at the base of topsoil is included within Appendix C.

4.4 Ground Gas

Cundall's detailed Remediation and Verification Strategy was reviewed by Specialist Mechanical Engineer's Dalkia to assess the viability of the installation of gas monitors in both the infill building and the existing school building. As part of the development of the scheme design, Dalkia was responsible for the detailed design of the specialist monitoring system and the location of the gas alarms within the existing and infill building to ensure the design complied with the requirements of the Detailed Remediation and Verification Strategy.

The gas monitors that were installed by the Contractor (further detail included in the proceeding sections) comprised Medem AGDS-M monitors that are able to detect concentrations of carbon dioxide, methane and oxygen. The

installation instructions, that includes the main features of the gas monitors and information of the Medium UK Warranty along with commissioning report that includes a service interval and the testing date is included in Appendix F.

4.4.1 Infill Building

The gas monitors were installed in a plant room in the north east and in store cupboards and an ICT hub in the south west of the infill building. The approximate location of the gas monitors is included on an as built mark-up drawing provided by GallifordTry on 30/09/2025. The as built is included within Appendix F.

4.4.2 Existing Building

Prior to the demolition works and construction of the infill building, a walkover survey was undertaken by Dalkia to inspect the rooms where gas monitors were proposed and to determine whether they met the brief of 'non-ventilated, enclosed spaces' and therefore required fixed monitors. Two rooms in the existing building were considered to require fixed as monitors and these included for a store room immediately south of the infill structure and a plant room to the north east. The Contractor confirmed that gas monitors were not considered to be required in the other rooms as they did not comply with the brief of '*non naturally ventilated enclosed spaces*' for the following reasons:

- The WC immediately adjoining the infill to the south west is fitted with extract fans and therefore provides ventilation.
- The long, slender building referenced as 'C03' on Drawing NE8659-CDL-XX-XX-DR-GE-60801 included in Cundall's Remediation Strategy (Reference 7, Section 1.4) has been demolished and is no longer present.
- The library immediately south east includes windows in the roof to provide adequate ventilation.

4.4.3 Main Building

The required ground gas protection score of 2.5 has been achieved within the main building in the south east by adopting a ground bearing floor slab (0.5 points) and installing a suitable ground gas membrane (2 points), which was verified by an independent third party consultant.

Confirmation of the ground bearing floor slab is included on Drawing NE8659-CCS-XX-00-DR-S-31002.

Individual ground gas membrane verification reports produced by a third party (Geoshield Ltd) confirm that the ground gas membrane was installed and verified in accordance with BS8485. A verification certificate (Dated 20 January 2023) was produced following completion of the verification process and is included within Appendix E. The individual verification reports are available upon request from the Contractor.

4.5 Water Supply Pipes

The Contractor has confirmed that barrier pipe was used within the development and the relevant correspondence is presented in Appendix B. A photograph of the pipe used on site is included in Figure 4-2.

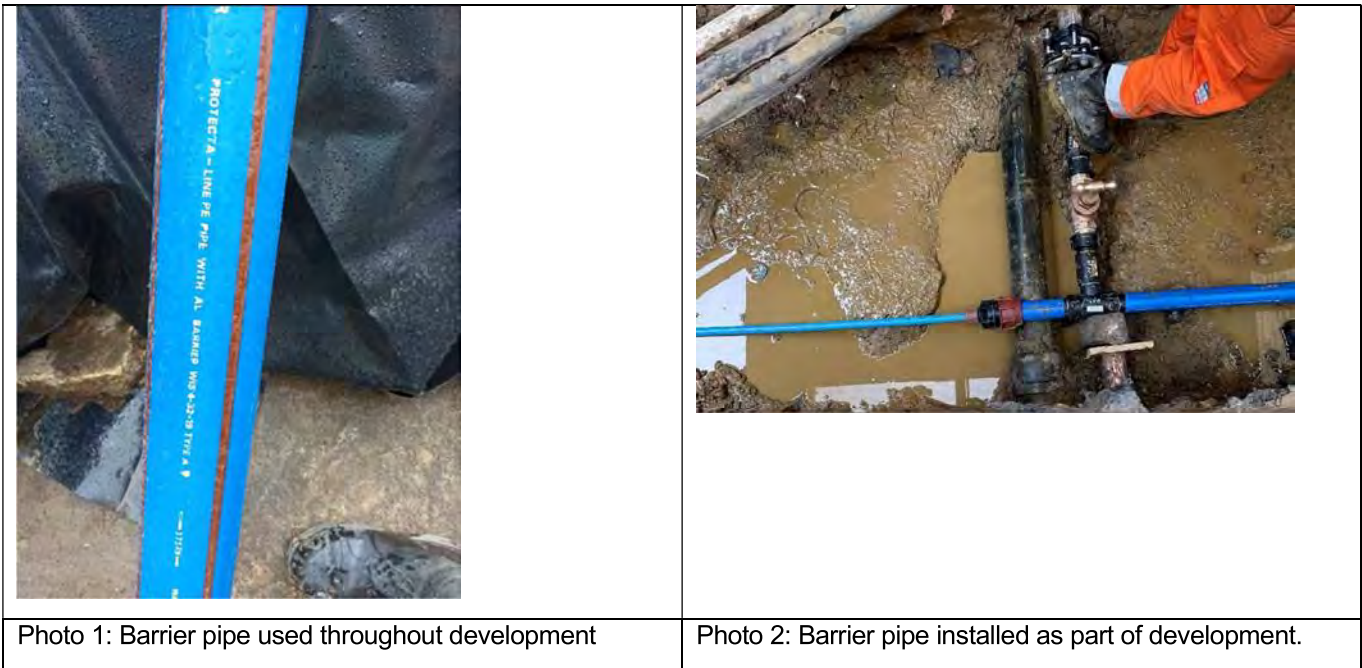


Figure 4-2: Barrier Pipe used for water supply pipes on site

4.6 Material Control

4.6.1 Site Won Aggregate / Soils

Approximately 600m³ of site won hard material was processed on site following the demolition of part of the school building. Approximately 200m³ of this was processed to form a Class 6N fill and approximately 400m³ of material was processed to form a Class 1B. The material was all generated from the same, site won concrete and the Class 6N was placed directly below the new, infill building and the Class 1B graded material was placed in the north east, below the new circular landscape feature.

Twelve representative samples of the processed aggregate were recovered by a suitably experienced geoenvironmental engineer and subject to the chemical testing in accordance with Cundall's Remediation and Verification Strategy.

The chemical testing results generally comply with the requirements of the Strategy although marginally elevated concentrations of total TPH range (1800mg/kg and 1100mg/kg) exceed the agreed threshold limits of 1000mg/kg. The 1000mg/kg threshold was based on the potential for material to classify as hazardous waste when material is generated for off-site disposal. However, given that the material has been generated on site, processed and has been re classified as a product suitable for reuse based on its engineering end use, the material will no longer classify as a waste and will not be generated in future arisings as the material was placed below the building footprint. The results have therefore been compared to the 'Commercial' threshold criteria to make an assessment in terms of the risk to human health.

The results are included in Laboratory Certificate 24-14733-2 and are presented in Appendix D.

Class 1B material was generated during the works and placed and compacted to build up levels in the north east of the site, below the circular landscaped area.

4.6.2 Imported Topsoil

Approximately 100m³ of topsoil was imported from FastSource in June 2022 and placed within the western part of the site and was subjected to chemical testing in accordance with Cundall's Remediation and Verification Strategy.

Six representative samples were recovered by a suitably experienced geoenvironmental engineer and submitted to a UKAS accredited laboratory. The results are included in laboratory certificate 22-13177 and are presented in Appendix D.

Approximately 50m³ of topsoil was imported from Barnsdale Bar Quarry in February 2024 and placed within the soft landscaping areas surrounding the MUGA pitch. Three representative samples were recovered by a suitably experienced geoenvironmental engineer from the topsoil and subject to the chemical testing in accordance with Cundall's Remediation and Verification Strategy.

The chemical testing results comply with the requirements of the Strategy and are therefore considered acceptable. The results are included in Laboratory Certificate 24-03459 and are presented in Appendix D.

A further 50m³ of subsoil was imported from 'Barnsdale Bar Quarry' and placed around the MUGA pitch. Three representative samples were recovered by a suitably experienced geoenvironmental engineer and submitted to a UKAS accredited laboratory. The results are included in laboratory certificate 24-03459 and are presented in Appendix D.

A further 100m³ of topsoil was imported from 'Freeland Horticulture Limited' and to the east of the MUGA and south of the development. Three representative samples were recovered by a suitably experienced geoenvironmental engineer and submitted to a UKAS accredited laboratory. The results are included in laboratory certificate 23-17758 and are presented in Appendix D.

To complete the eastern part of the development, a further two sources of topsoil were imported in 2025 with volumes totalling 280m³ and 120m³ respectively. Six representative samples were recovered by a suitably experienced geoenvironmental engineer from both sources and submitted to a UKAS accredited laboratory. The results are included in laboratory certificate 25-07754 and 25-20695-1 and are presented in Appendix D.

All of the chemical testing results comply with the requirements of Cundall's Remediation and Verification Strategy and are deemed acceptable.

4.6.3 Imported Aggregate

Approximately 2500m³ of virgin quarried aggregate was imported to site from Ashwood Dale Quarry, owned and operated by Breedon Southern and was placed below the MUGA sports pitches. Four representative samples were recovered from site and scheduled for testing in accordance with the Cundall Remediation and Verification Strategy. The results of the chemical testing are included laboratory certificate 24-01081 and are presented in Appendix D.

Approximately 1000m³ of virgin quarried aggregate was imported to site from Swindon Quarry, owned and operated by Tarmac Trading Limited, and placed behind the retaining wall. Four representative samples were recovered from site and scheduled for testing in accordance with the Cundall Remediation and Verification Strategy. The results of the chemical testing are included laboratory certificate 23-15427 and are presented in Appendix D.

A third source of imported aggregate comprised recycled aggregate that was imported from Carr Hill Quarry. Approximately 90m³ of stone (Class 6F5) was imported as fill to be placed below hard surfacing and three representative samples were recovered and scheduled for testing in accordance with the Cundall Remediation and Verification Strategy. The results of the testing are included in laboratory certificate 25-09026 (sample reference SP01 only) and laboratory certificate J309599 included in Appendix D. All chemical testing results demonstrate that the material complies with the requirements of Cundall's Remediation and Verification Strategy and are deemed acceptable.

4.7 Unforeseen Contamination

The Principal Contractor confirmed that during the course of the preparatory earthworks, no unforeseen ground conditions were encountered. The relevant correspondence is included within Appendix B.

4.8 Variations to the Strategy

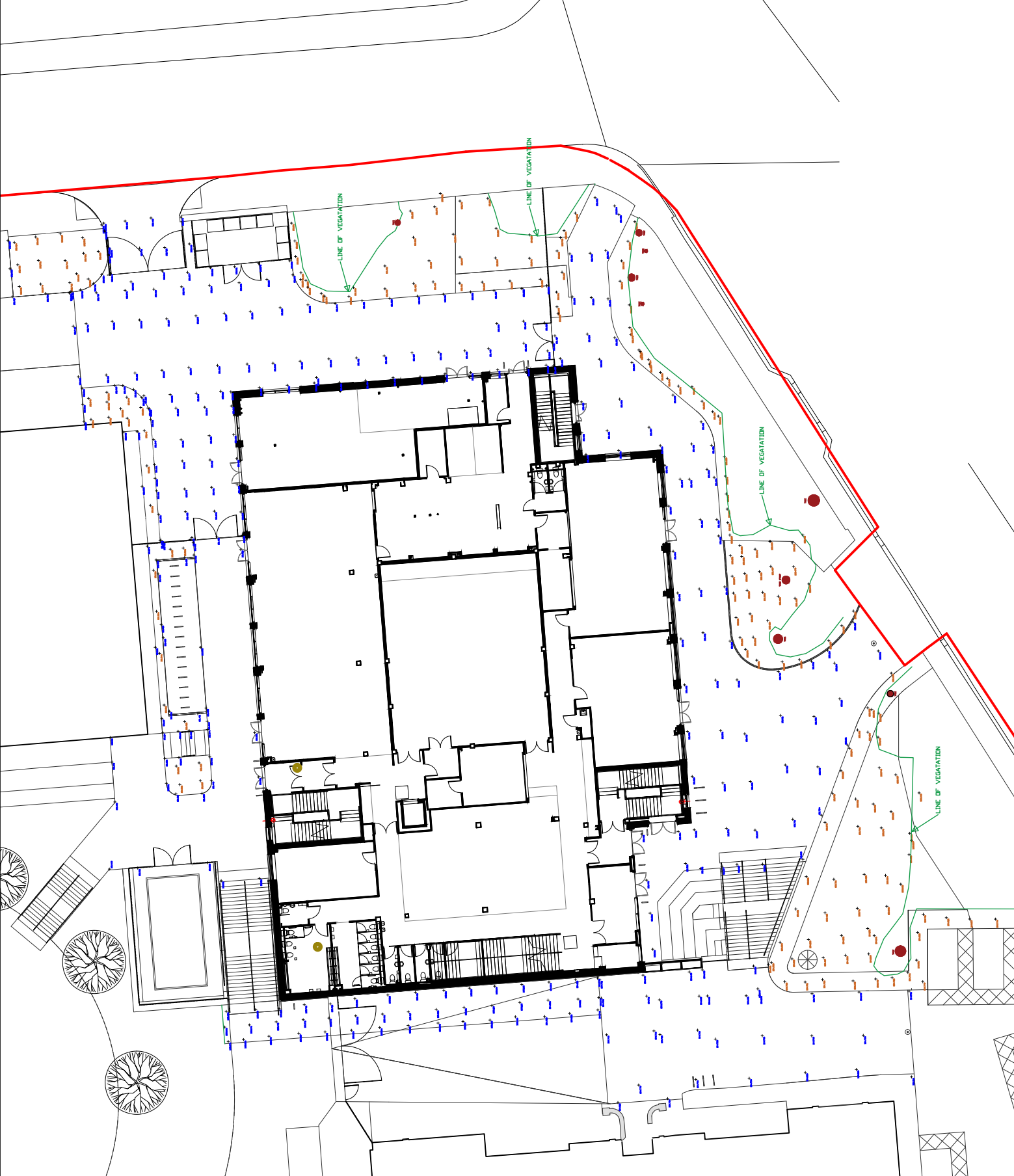
Within the western part of the circular feature, positioned in the north east of the site a thicker, 600mm clean cover system was installed as a result of placing soils to reach the desired formation level. The 600mm thickness of cover in this area is considered to be sufficient to prevent soil mixing without using a geotextile separator layer. So this was omitted in this area.

Appendices

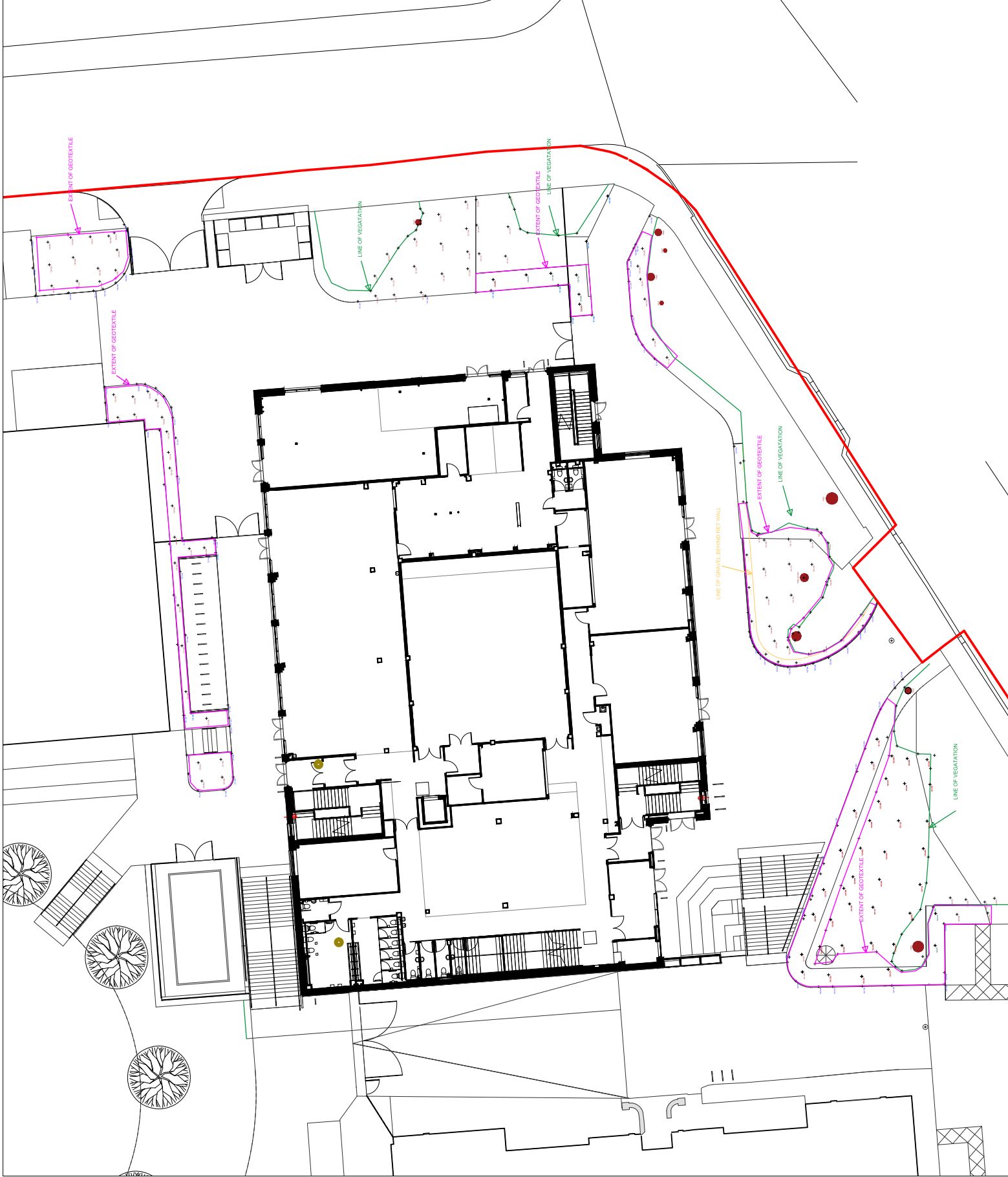
Appendices

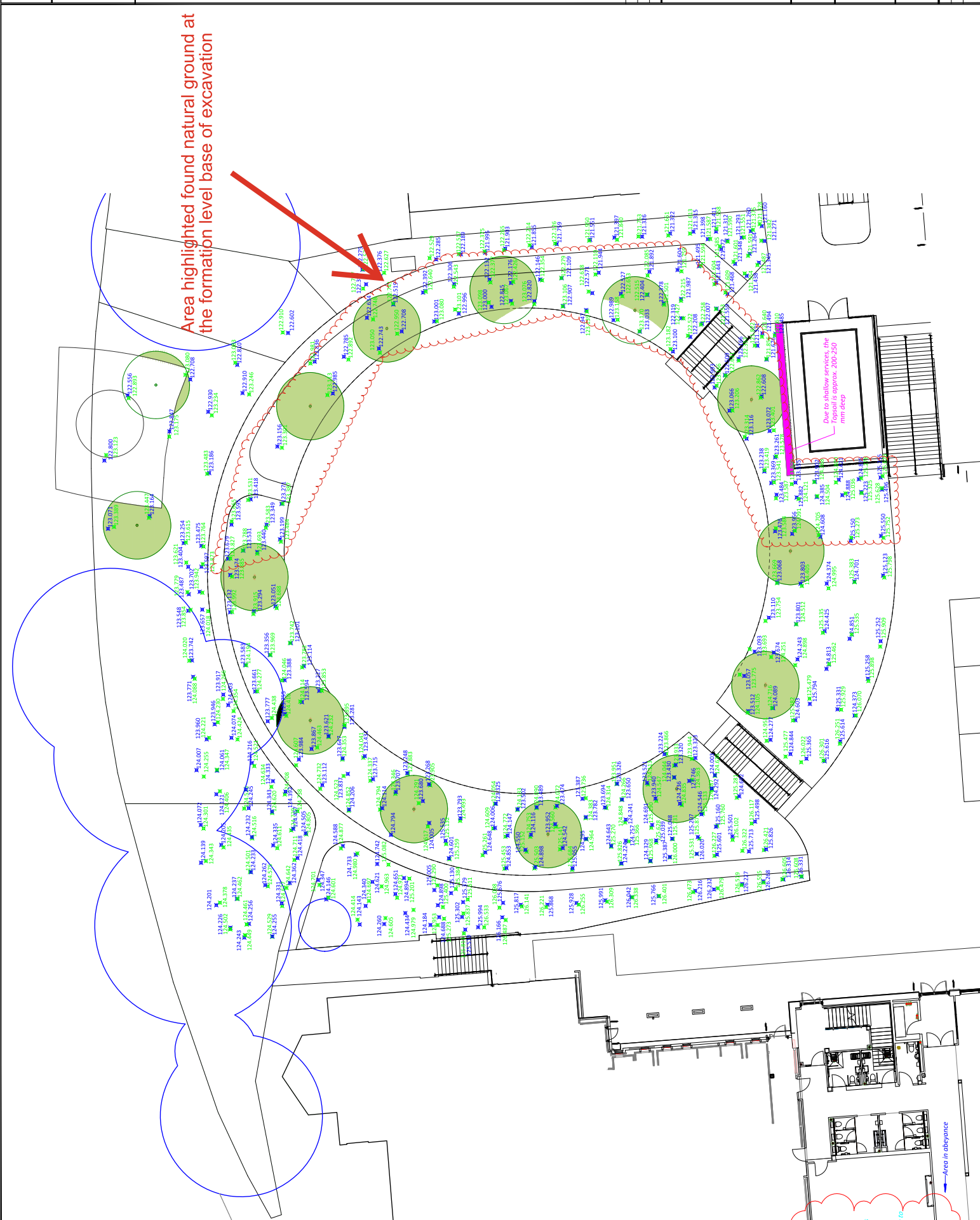
Appendix A Base of Excavation and As Built Survey

<div>Notes</div> <div><div>+0.000</div>Hard Landscaping Levels</div> <div><div>+0.000</div>Topsoil Levels</div>			<div>shanco</div>		<div>Site Address</div> <div>Galliford Try Greenhead College Greenhead Road Huddersfield, HD1 4ES</div>		<div>Drawing Title</div> <div>Remediation As-Built Survey</div>		<div>Surveyed By</div> <div>JM</div>	<div>Date</div> <div>25/08/23</div>
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<div>Notes</div> <div><div>+0.000</div>Hard Landscaping Levels</div> <div><div>+0.000</div>As-Dug Levels</div>		<div>shanco</div>		<div>Site Address</div> <div>Galliford Try</div> <div>Greenhead College</div> <div>Greenhead Road</div> <div>Huddersfield,</div> <div>HD1 4ES</div>		<div>Drawing Title</div> <div>Remediation As-Dug Survey</div>		<div>Surveyed By</div> <div>JM</div>	<div>Date</div> <div>28/08/23</div>
--	--	-------------------	--	---	--	---	--	--------------------------------------	-------------------------------------





Direction of North



NOTES

Topsoil Level
Formation Level

00.000
00.000

B 19/09/2025 GB Topsoil Survey --

A 24/07/2025 GB Topsoil Survey --

Rev Date Drawn Description Check

Unit 7
Isabella Road
Garnon
L25 2DY

T: 0800 024 8714
E: info@shanco.co.uk
W: www.shanco.co.uk

Client

GALIFORD TRY

Site

GREENHEAD COLLEGE
HUDDERSFIELD

Title

Topsoil Survey MUGA

Surveyed
Chk.

GB

Drawn
Date

GB

19/09/2025

Sheet Size
Scale

1:200

Revision
Revision

AT

B



Appendix B Correspondence

Chris Lazenby

From: Aaron Stanaway (Galliford Try) <Aaron.Stanaway@gallifordtry.co.uk>
Sent: 12 July 2022 14:28
To: Chris Lazenby
Cc: Mark Dean (Galliford Try)
Subject: Greenhead - Topsoil Confirmation
Attachments: PHOTO-2022-06-29-12-25-48.jpg; PDS033_Standard_Geotextiles.pdf; Topsoil Mark-Up.pdf

Hi Chris,

Further to the call, please accept this email as confirmation from GT that the topsoil in the car park area was placed on top of natural ground.

In the area to the south-east (see attached photo), where made ground was present, a geotextile membrane was laid before the topsoil. For information on the membrane, please see the datasheet attached.

Thanks for your time,

Aaron Stanaway

Design Co-ordinator

Aaron.Stanaway@gallifordtry.co.uk

T: 07923 254 901

Galliford Try Building - North East & Yorkshire
Lumina, Park Approach
Thorpe Park, West Yorkshire LS15 8ZB
www.gallifordtry.co.uk



Galli

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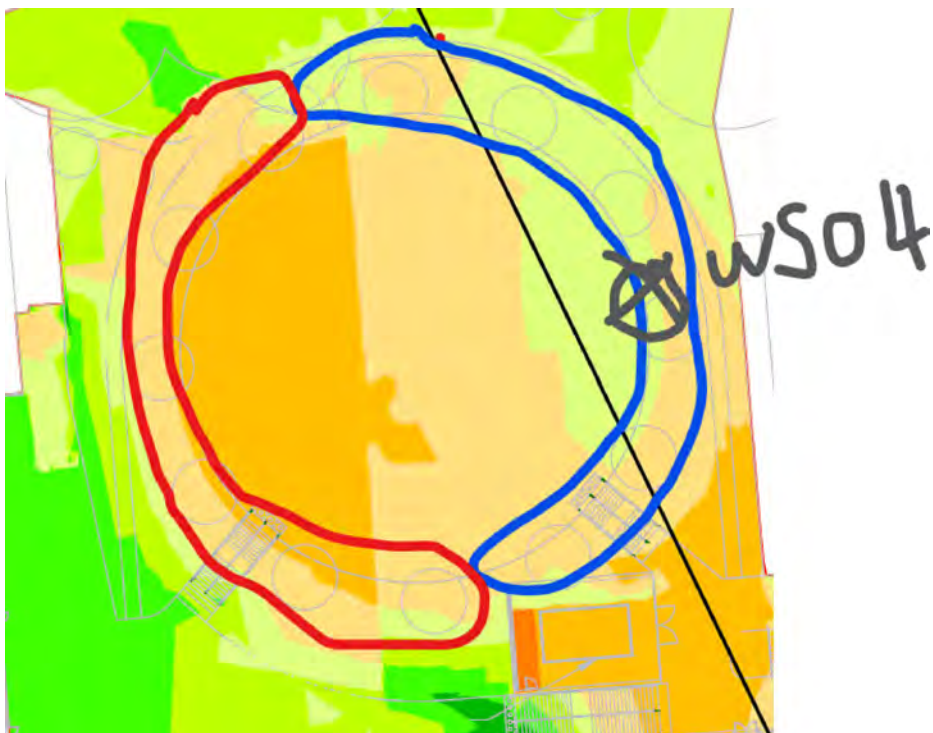
Chris Lazenby

From: Jack Broomhead (Galliford Try) <Jack.Broomhead@gallifordtry.co.uk>
Sent: 03 October 2025 11:59
To: Chris Lazenby
Cc: Rebecca Cole (Galliford Try)
Subject: Re: Level of excavation - Greenhead College
Attachments: Topsoil Survey 02.10.25 Mark up.pdf

Hi Chris

Just to confirm, the ground was consistent with ws04 and when we prepared the east section and it was formed at a level where natural ground was encountered prior to installing any topsoil. Please note – in this area we also installed a geotextile layer prior to the 100mm top soil, which again was 50mm more growing medium than what was required as per the landscaping specification and requirements.

Should you require anything further, please let me know.





Borehole Log

Project Name: Greenhead College, Huddersfield	Project No. UK20.5113b	Co-ords: -199563.56 - 7103645.74
Location: Greenhead College, Huddersfield, HD1 4ES	Level: 122.47	
Client: Mace Group	Dates: 20/10/2020 - 20/10/2020	

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.10			0.10	122.37		BITUMINOUS HARDSTANDING
		0.30			0.30	122.17		MADE GROUND. Dark grey/black coarse sandy GRAVEL with sand fragments.
		0.40 - 0.50	ES	HVP=117				Firm to stiff orange/brown slight sandy gravelly CLAY with grey r
		0.80 - 1.00	D	HVP=130 HVP=120 HVP=122 HVP=115 HVP=104 HVP=138 HVP=128				
		1.70 - 1.80	ES	HVP=133 HVP=122				
		1.80 - 2.00	D	HVP=121				
		2.30		HVP=140				
				50 (25 for 20mm/50 for 85mm)	2.30	120.17		End of borehole at 2.3

Jack Broomhead
Senior Project Manager

Jack.broomhead@gallifordtry.co.uk
M: +447719 954286

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Lumina, Park Approach
Leeds, West Yorkshire LS15 8GB
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Chris Lazenby

From: Mark Dean (Galliford Try) <Mark.Dean@gallifordtry.co.uk>
Sent: 08 June 2023 15:09
To: Chris Lazenby
Cc: Will McKaig (Galliford Try); Jack Broomhead (Galliford Try); Mark Wright (Galliford Try)
Subject: Greenhead College - Verification (013)

Chris,

GT confirm there were no unexpected ground conditions (i.e. areas of potential contamination) were identified during the excavation of made ground.

Kind Regards

Mark Dean

Senior Design Manager

Mark.Dean@gallifordtry.co.uk

T: 07706357412

Galliford Try Building - North East & Yorkshire
Galliford Try House, Pontefract Road
Normanton, West Yorkshire WF6 1RN
www.gallifordtry.co.uk



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Chris Lazenby

From: Aaron Stanaway (Galliford Try) <Aaron.Stanaway@gallifordtry.co.uk>
Sent: 12 July 2022 16:14
To: Chris Lazenby
Cc: Mark Dean (Galliford Try); Jack Broomhead (Galliford Try)
Subject: Greenhead - Ground Conditions

Hi Chris,

Please accept this email as confirmation from GT that no unexpected ground conditions were identified during the excavation of made ground. This should close out item 013 on the RFI schedule.

Thank you,

Aaron Stanaway

Design Co-ordinator

Aaron.Stanaway@gallifordtry.co.uk

T: 07923 254 901

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Lumina, Park Approach
Thorpe Park, West Yorkshire LS15 8ZB
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Galliford Try

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Chris Lazenby

From: Aaron Stanaway (Galliford Try) <Aaron.Stanaway@gallifordtry.co.uk>
Sent: 12 July 2022 16:10
To: Chris Lazenby
Cc: Mark Dean (Galliford Try); Jack Broomhead (Galliford Try)
Subject: Greenhead -

Hi Chris,

Please accept this email as confirmation that barrier pipe has been utilised for the water supply pipe. This should close off item 011 on the RFI schedule.

Thank you for your time,

Aaron Stanaway

Design Co-ordinator

Aaron.Stanaway@gallifordtry.co.uk

T: 07923 254 901

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Lumina, Park Approach
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Kirklees Council
Planning and Development Service
PO Box 1720
Huddersfield
HD1 9EL

Enquiries to: Nick Hirst

Kate Limbert,
Avison Young
6th floor
1, City Square
Leeds
LS1 2AL

Kirklees Direct
Tel: 01484 221000
Email: nick.hirst@kirklees.gov.uk

Date: 14-Nov-2023
Our Ref: 2023/92667

Dear Madam,

**Application for Approval of Details Reserved by Condition
Town and Country Planning Act 1990
Planning (Listed Buildings and Conservation Areas) Act 1990**

Discharge of condition 8 (validation report) of previous permission 2021/93674 for partial redevelopment of Greenhead College including demolition and making good, erection of 2 and 4 storey buildings, reconfiguration of parking and access arrangements, reconfiguration of sports provision and other associated external works (within a Conservation Area)

Greenhead College, Greenhead Road, Huddersfield, HD1 4ES

Application Number: 2023/92667

I write with reference to your application to discharge the conditions for the above development as submitted on 06-Sep-2023.

Condition 8 (validation report)

You have submitted the following documents pursuant to condition 8:

- Remediation Verification Report authored by Cundall, dated 1st September 2023 (ref: NE8659-CDL-ZZ-XX-RP-GE-60202 – P01)
- Verification Reports (no. 001 – 013), authored by Geoshield, dated July 2022 – November 2022.
- Imported materials documentation by FastSource, one of two, received 06.11.2023
- Imported materials documentation by FastSource, two of two, received 06.11.2023

These documents relate to the first phase of the development only, with the phases identified in section 1.3 (page 3) of the Remediation Verification Report authored by Cundall. I can confirm that the submitted details are acceptable for phase 1 (only).



Kirklees Council
Planning and Development Service
PO Box 1720
Huddersfield
HD1 9EL

Regarding the later phase(s), please note the following requirements of condition 8:

Each phase of the development shall only be brought into use when the remediation measures have been completed for that part of the site in accordance with the approved Remediation Strategy or the approved revised Remediation Strategy and a Validation Report in respect of those remediation measures has been approved in writing by the Local Planning Authority. Where validation has been submitted and approved in stages for different areas of the whole site, a Final Validation Summary Report shall be submitted to and approved in writing by the Local Planning Authority within three months of the development works being completed.

Yours faithfully,

Mathias Franklin,
Head of Planning and Development

Chris Lazenby

From: Chris Lazenby
Sent: 09 October 2025 08:42
To: Chris Lazenby
Subject: FW: Greenhead College - Remediation Verification Reporting

Chris Lazenby
Principal Geotechnical Engineer
Cundall

4th Floor, Partnership House, Regent Farm Road, Gosforth, Newcastle upon Tyne, NE3 3AF, United Kingdom
D +44 191 246 7115
T +44 191 213 1515
M +44 7887 555751
www.cundall.com | [People](#) | [Ideas](#) | [Projects](#) | [Instagram](#) | [Linkedin](#) | [Join](#)

From: James Leggitt <James.Leggitt@dalkia.co.uk>
Sent: 07 October 2025 16:07
To: Rebecca Cole (Galliford Try) <Rebecca.Cole@Gallifordtry.co.uk>; Daniel Ball <Daniel.Ball@dalkia.co.uk>
Cc: Mark Roberts (Galliford Try) <mark.roberts2@gallifordtry.co.uk>; Martin Watmough (Galliford Try) <Martin.Watmough@gallifordtry.co.uk>; Jack Broomhead (Galliford Try) <Jack.Broomhead@gallifordtry.co.uk>
Subject: RE: Greenhead College - Remediation Verification Reporting

CAUTION-EXTERNAL EMAIL: This message originated outside of our organisation. **Do not click on links, open attachments, or scan QR codes** unless you recognise the sender and know the content is safe **DO NOT ENTER YOUR USER ID AND PASSWORD.**

Hi Rebecca

When I spoke to Medem who both supply/install the units their technical support confirmed to me that only in unventilated areas are the units required due to the potential of gases building up in unoccupied rooms.

Any room with grills/ventilation are exempt from this as the build up would dissipate.

Kind Regards,

James



Together to Net Zero.

James Leggitt MIET
Project Manager

+44 (0) 7824 561694

Web: www.dalkia.co.uk

james.leggitt@dalkia.co.uk

Linkedin: [@dalkia-uk](#)

Lock House, 2nd Floor, 2 Castle Meadow Road, Nottingham, NG2 1AG

Dalkia Engineering Ltd. Registered in England No. 00443522. Registered Office: Lock House, 2nd floor, 2 Castle Meadow Road, Nottingham NG2 1AG

From: Rebecca Cole (Galliford Try) <Rebecca.Cole@Gallifordtry.co.uk>
Sent: 07 October 2025 15:59
To: James Leggitt <James.Leggitt@dalkia.co.uk>; Daniel Ball <Daniel.Ball@dalkia.co.uk>
Cc: Mark Roberts (Galliford Try) <mark.roberts2@gallifordtry.co.uk>; Martin Watmough (Galliford Try)

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Chris Lazenby

From: Rebecca Cole (Galliford Try) <Rebecca.Cole@Gallifordtry.co.uk>
Sent: 18 September 2025 11:21
To: Chris Lazenby
Cc: Jack Broomhead (Galliford Try); Martin Watmough (Galliford Try)
Subject: Greenhead College - Cundall RFI

Hi Chris,

Further to the call, GT confirm there were no unexpected ground conditions (ie. Areas of potential contamination) identified during the excavation following demolition of the Infill building.

No unexpected ground conditions were discovered during the external works associated with the courtyard infill building. This should close RFI 012

Regards

Rebecca Cole

Design Manager

Rebecca.Cole@Gallifordtry.co.uk

M: +44 7719 910343

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Lumina, Park Approach
Leeds, West Yorkshire LS15 8GB
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Appendix C Geotextile Specification

PDS033 Issue 11—May 2022

DESCRIPTION:

Nonwoven geotextile manufactured from UV stabilised, high tenacity, virgin polypropylene fibres that have been both mechanically and thermally bonded to provide a highly permeable yet durable separation and filtration layer.

APPLICATIONS:

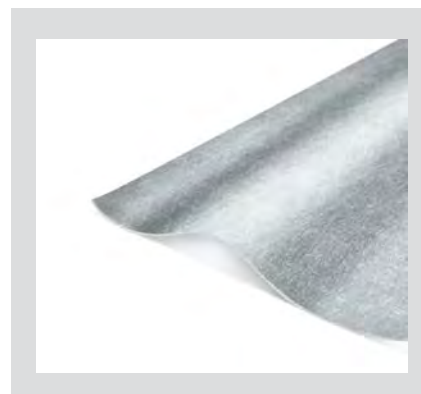
With over 50 years of unrivalled expertise and experience, Terram standard geotextiles are the original nonwoven geotextiles for separation and filtration applications.

Typical uses include the prevention of intermixing of sub-base and subgrade layers, drainage and bedding materials. Terram filters/separators are used extensively in the construction of:

- Paved and unpaved roads
- Railways
- Car parks and hardstandings
- Cycleways and footpaths
- Sustainable Drainage Systems (SuDS)

FEATURES & BENEFITS:

- Manufactured from inert high tenacity virgin polypropylene fibres giving excellent long term durability in all soil types.
- High static and dynamic puncture resistance ensures a low risk of damage during construction.
- Random orientated web with isotropic properties provide the same strength, permeability and filtration in all directions.
- High elongation at break maintains separation and filtration function under load particularly in soft and variable ground conditions.



APPROVAL:

Network Rail PADS certificate numbers; T1000 057/100703, T2000 57/100705, T3000 57/100706 (4.5m wide x 100m long rolls) and T4000 057/100709 (4.5m wide x 50m long rolls).



INTENDED USE/FUNCTION:



INTENDED APPLICATION:



			Mean Value								
PROPERTIES	Test Method	Unit	T700	T1000	T1000 Orange	T1300	T1500	T2000	T3000	T4000	T4500
MECHANICAL	BS8661 classification profile			1	1	1	2	3	3	3	3
Tensile Strength	EN ISO 10319	kN/m	6	8	8	10	12.5	14.5	18	22	30
Tensile Elongation	EN ISO 10319	%	60	60	60	60	60	60	60	60	60
CBR Puncture Resistance	EN ISO 12236	N	1050	1500	1500	2000	2250	2750	3250	4300	5350
Cone Drop	EN ISO 13433	mm	42	38	38	34	32	26	24	22	14
HYDRAULIC											
Pore Size - Mean AOS	EN ISO 12956	µm	95	90	90	65	65	65	60	60	60
Permeability—(H50)	EN ISO 11058	l/m²s	100	90	90	65	65	55	50	30	30
DURABILITY											
Weathering (UV Exposure)	EN 12224	Days	30	30	30	30	30	30	30	30	30
Combined ageing (Oxidation, temperature & moisture)	EN ISO 13438	Service Life (Years)	50	100	100	100	100	100	100	100	100
MATERIAL DIMENSIONS											
Standard Roll Length		m	150	100	100	100	100	100	100	50	50
Standard Roll Width		m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Maximum Roll Width		m	6	6	6	6	6	6	6	6	6
Gross Roll Weight (Nominal)		kg	40	54	54	70	78	94	112	74	90

PACKAGING & IDENTIFICATION STORAGE

Terram Standard Geotextiles are supplied on cardboard cores and wrapped in Polyethylene sheeting with identification labels in accordance with ISO 10320.

The rolls of geotextile shall be stored on stable/ level ground and stacked not more than five rolls high and no other materials shall be stacked on top. The rolls can be stored outdoors when packaged, but should be protected from exposure to UV. All materials should be stored in accordance with good health and safety practice and in accordance with local laws. For additional information please refer to Terram Geotextiles MSDS.

QUALITY

Terram Standard Geotextiles are supplied having met internal quality requirements in accordance with our Quality Management system which is certified to BS EN ISO 9001:2015.

NOTES

Reported values are arithmetic mean values unless otherwise stated. For further details on physical parameters please refer to the individual Declaration of Performance certificates available for download from www.terram.com

Reported values related to durability testing are generally based on the lowest grade product within a family.

A Nominal value indicates that the value is not part of the performance specification and is provided for guidance only.

Gross roll weight is based on standard roll dimensions and is provided is for lifting guidance only, it does not form part of quality control procedures.

ADDITIONAL INFORMATION

Refer to the Terram Jointing Methods (downloadable from www.terram.com) for when simple overlaps are required for subsequent and adjacent roll lengths. However, pegging, sewing, stapling or gluing can also be used depending upon the application, the sub-grade conditions, the loading, the convenience and the cost.

These figures relate to standard product weights and roll sizes. Other weights, sizes and colours may be available on request. For further information please contact Terram Technical Support.

How else can we help? Get in touch with us

+44 (0) 1621 874200 info@terram.com www.terram.com

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TERRAM
Geosynthetics you can trust

A brand of **Berry**

Appendix D Material Reuse & Import



Certificate of Analysis

Certificate Number 22-13177

Issued: 19-Jul-22

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 22-13177

Client Reference D10377

Order No PO26739-D10377

Contract Title Greenhead College

Description 6 Soil samples.

Date Received 12-Jul-22

Date Started 12-Jul-22

Date Completed 19-Jul-22

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

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

Approved By

A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 22-13177

Client Ref D10377

Contract Title Greenhead College

Sample ID	Depth	Lab No	Completed	Matrix Description
Sample 1	0.1	2031259	19/07/2022	Brown gravelly, sandy CLAY including some rootlets
Sample 2	0.1	2031260	19/07/2022	Brown gravelly, sandy CLAY including some rootlets
Sample 3	0.1	2031261	19/07/2022	Brown gravelly, sandy CLAY including some rootlets
Sample 4	0.1	2031262	19/07/2022	Brown gravelly, sandy CLAY
Sample 5	0.1	2031263	19/07/2022	Brown gravelly, sandy CLAY
Sample 6	0.1	2031264	19/07/2022	Brown gravelly, sandy CLAY including some rootlets

Summary of Chemical Analysis

Soil Samples

Our Ref 22-13177

Client Ref D10377

Contract Title Greenhead College

Lab No	2031259	2031260	2031261	2031262	2031263	2031264
.Sample ID	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Depth	0.10	0.10	0.10	0.10	0.10	0.10
Other ID						
Sample Type	ES	ES	ES	ES	ES	ES
Sampling Date	07/07/2022	07/07/2022	07/07/2022	07/07/2022	07/07/2022	07/07/2022
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	13	9.1	6.0	13	13	11
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.3	0.3	0.3	0.4	0.3
Chromium	DETSC 2301#	0.15	mg/kg	16	12	11	16	17	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	39	26	29	36	34	29
Lead	DETSC 2301#	0.3	mg/kg	53	56	41	79	91	63
Mercury	DETSC 2325#	0.05	mg/kg	0.13	0.12	0.10	0.16	0.23	0.12
Nickel	DETSC 2301#	1	mg/kg	14	9.7	7.8	12	12	10
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.8	0.6	< 0.5
Zinc	DETSC 2301#	1	mg/kg	95	58	67	68	69	50
Inorganics									
pH	DETSC 2008#		pH	7.1	7.3	7.7	7.2	6.9	7.6
Organic matter	DETSC 2002#	0.1	%	6.1	5.8	11	5.7	5.4	6.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	96	79	170	42	39	51
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	15	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	15	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	1.0	1.7	0.5	1.4	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	4.6	12	< 0.6	4.1	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	7.0	1.6	< 1.4	14	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	13	16	< 10	20	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	13	31	< 10	20	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.27	0.07	0.46	0.15	0.08	0.34
Anthracene	DETSC 3303	0.03	mg/kg	0.05	< 0.03	0.08	< 0.03	< 0.03	0.07
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.37	0.13	1.3	0.26	0.16	0.82
Pyrene	DETSC 3303#	0.03	mg/kg	0.32	0.11	1.1	0.24	0.15	0.69

Summary of Chemical Analysis Soil Samples

Our Ref 22-13177

Client Ref D10377

Contract Title Greenhead College

Lab No	2031259	2031260	2031261	2031262	2031263	2031264
Sample ID	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Depth	0.10	0.10	0.10	0.10	0.10	0.10
Other ID						
Sample Type	ES	ES	ES	ES	ES	ES
Sampling Date	07/07/2022	07/07/2022	07/07/2022	07/07/2022	07/07/2022	07/07/2022
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.12	0.04	0.49	0.10	0.06	0.28
Chrysene	DETSC 3303	0.03	mg/kg	0.21	0.09	0.78	0.16	0.12	0.40
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.21	0.09	0.68	0.15	0.13	0.38
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.37	0.06	0.04	0.17
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.13	0.05	0.52	0.08	0.07	0.28
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.04	0.28	0.06	0.05	0.16
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.10	< 0.03	< 0.03	0.07
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.08	0.04	0.35	0.07	0.05	0.22
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 1.60	< 0.57	< 5.64	< 1.07	< 0.75	< 3.27

Summary of Asbestos Analysis Soil Samples

Our Ref 22-13177

Client Ref D10377

Contract Title Greenhead College

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2031259	Sample 1 0.10	SOIL	NAD	none	Darryl Fletcher
2031260	Sample 2 0.10	SOIL	NAD	none	Darryl Fletcher
2031261	Sample 3 0.10	SOIL	NAD	none	Darryl Fletcher
2031262	Sample 4 0.10	SOIL	NAD	none	Darryl Fletcher
2031263	Sample 5 0.10	SOIL	NAD	none	Darryl Fletcher
2031264	Sample 6 0.10	SOIL	NAD	none	Darryl Fletcher

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

Information in Support of the Analytical Results

Our Ref 22-13177
 Client Ref D10377
 Contract Greenhead College

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2031259	Sample 1 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		
2031260	Sample 2 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		
2031261	Sample 3 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		
2031262	Sample 4 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		
2031263	Sample 5 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		
2031264	Sample 6 0.10 SOIL	07/07/22	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2024	Sulphide	mg/kg	10	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	Air Dried	No	Yes	Yes
DETSC2123	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report



Certificate of Analysis

Certificate Number 23-15427

Issued: 07-Jul-23

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 23-15427

Client Reference D30047

Order No PO0476

Contract Title Greenhead College

Description 4 Soil samples.

Date Received 29-Jun-23

Date Started 29-Jun-23

Date Completed 07-Jul-23

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

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

Approved By

A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 23-15427

Client Ref D30047

Contract Title Greenhead College

Sample ID	Lab No	Completed	Matrix Description
GT1	2194540	07/07/2023	Brown very gravelly SAND
GT2	2194541	07/07/2023	Brown very gravelly SAND
GT3	2194542	07/07/2023	Brown very gravelly SAND
GT4	2194543	07/07/2023	Brown very gravelly SAND

Summary of Chemical Analysis

Soil Samples

Our Ref 23-15427

Client Ref D30047

Contract Title Greenhead College

Lab No	2194540	2194541	2194542	2194543
Sample ID	GT1	GT2	GT3	GT4
Depth				
Other ID				
Sample Type	ES	ES	ES	ES
Sampling Date	27/06/2023	27/06/2023	27/06/2023	27/06/2023
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	1.6	5.9	2.6	2.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.3	0.4
Chromium	DETSC 2301#	0.15	mg/kg	1.0	4.0	1.9	1.0
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	3.8	7.3	3.7	5.8
Lead	DETSC 2301#	0.3	mg/kg	1.6	2.7	2.4	2.9
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
Nickel	DETSC 2301#	1	mg/kg	1.7	5.0	2.2	1.8
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	11	25	28	23
Inorganics							
pH	DETSC 2008#		pH	9.2	9.8	9.3	10.1
Organic matter	DETSC 2002#	0.1	%	1.2	4.0	0.5	0.6
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	57	340	100	96
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	1.9
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	3.4	8.7
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	45	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	48	11
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	3.1	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	5.3	2.2
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	16	14
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	35	6.9
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	59	23
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	110	34
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03

Summary of Chemical Analysis Soil Samples

Our Ref 23-15427

Client Ref D30047

Contract Title Greenhead College

Lab No	2194540	2194541	2194542	2194543
Sample ID	GT1	GT2	GT3	GT4
Depth				
Other ID				
Sample Type	ES	ES	ES	ES
Sampling Date	27/06/2023	27/06/2023	27/06/2023	27/06/2023
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.10	< 0.03	< 0.03	0.15
Anthracene	DETSC 3303	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.30	0.04	< 0.03	0.11
Pyrene	DETSC 3303#	0.03	mg/kg	0.44	0.04	< 0.03	0.09
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.19	< 0.03	< 0.03	0.05
Chrysene	DETSC 3303	0.03	mg/kg	0.21	< 0.03	< 0.03	0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.26	0.03	< 0.03	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.10	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.21	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.11	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.11	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	2.1	0.11	< 0.10	0.48

Summary of Asbestos Analysis Soil Samples

Our Ref 23-15427

Client Ref D30047

Contract Title Greenhead College

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2194540	GT1	SOIL	NAD	none	Robertas Ciparis
2194541	GT2	SOIL	NAD	none	Robertas Ciparis
2194542	GT3	SOIL	NAD	none	Robertas Ciparis
2194543	GT4	SOIL	NAD	none	Robertas Ciparis

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

Information in Support of the Analytical Results

Our Ref 23-15427
 Client Ref D30047
 Contract Greenhead College

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2194540	GT1 SOIL	27/06/23	GJ 250ml, GJ 60ml, PT 1L		
2194541	GT2 SOIL	27/06/23	GJ 250ml, GJ 60ml, PT 1L		
2194542	GT3 SOIL	27/06/23	GJ 250ml, GJ 60ml, PT 1L		
2194543	GT4 SOIL	27/06/23	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report



Certificate of Analysis

Certificate Number 23-17758

Issued: 17-Aug-23

Client SOCOTEC UK Ltd
29 Rufford Court
Hardwick Grange
Warrington
WA1 4RF

Our Reference 23-17758

Client Reference 51070871

Order No 204709WAR

Contract Title Shanco Contracts Ltd Greenhead College Huddersfield

Description 3 Soil samples.

Date Received 25-Jul-23

Date Started 25-Jul-23

Date Completed 17-Aug-23

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

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

Approved By

A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 23-17758

Client Ref 51070871

Contract Title Shanco Contracts Ltd Greenhead College Huddersfield

Lab No	2208582	2208583	2208584
Sample ID	55118125	55118126	55118127
Depth			
Other ID	TS1	TS2	TS3
Sample Type	SOIL	SOIL	SOIL
Sampling Date	21/07/2023	21/07/2023	21/07/2023
Sampling Time	n/s	n/s	n/s

Test	Method	LOD	Units			
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	8.1	7.1	8.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.3	1.3	1.4
Cadmium	DETSC 2301#	0.1	mg/kg	1.0	0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	9.4	10	9.8
Copper	DETSC 2301#	0.2	mg/kg	20	15	17
Lead	DETSC 2301#	0.3	mg/kg	39	29	34
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	10	9.5	11
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	66	55	64
Inorganics						
pH	DETSC 2008#		pH	8.0	8.0	7.9
Organic matter	DETSC 2002#	0.1	%	4.9	3.4	3.1
PAHs						
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.1	0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	0.1	0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.1	< 0.1	0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.2	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.3	0.1	0.6
Pyrene	DETSC 3301	0.1	mg/kg	0.4	0.3	0.6
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.1	< 0.1	0.2
Chrysene	DETSC 3301	0.1	mg/kg	0.2	< 0.1	0.4
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.5
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.8	0.7	0.4
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.2	0.2	0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.6	0.4	0.5
PAH 16 Total	DETSC 3301	1.6	mg/kg	3.1	2.1	4.3

Summary of Asbestos Analysis Soil Samples

Our Ref 23-17758

Client Ref 51070871

Contract Title Shanco Contracts Ltd Greenhead College Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2208582	55118125 TS1	SOIL	NAD	none	Robertas Ciparis
2208583	55118126 TS2	SOIL	NAD	none	Robertas Ciparis
2208584	55118127 TS3	SOIL	NAD	none	Robertas Ciparis

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

Information in Support of the Analytical Results

Our Ref 23-17758
 Client Ref 51070871
 Contract Shanco Contracts Ltd Greenhead College Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2208582	55118125 SOIL	21/07/23	GJ 250ml, GJ 60ml, PT 1L x2		
2208583	55118126 SOIL	21/07/23	GJ 250ml, GJ 60ml, PT 1L x2		
2208584	55118127 SOIL	21/07/23	GJ 250ml, GJ 60ml, PT 1L x2		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

End of Report



Certificate of Analysis

Certificate Number 24-01081

Issued: 25-Jan-24

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 24-01081

Client Reference D30047

Order No PO3430-D30047

Contract Title GREENHEAD COLLEGE, H'FIELD

Description 4 Soil samples.

Date Received 19-Jan-24

Date Started 19-Jan-24

Date Completed 25-Jan-24

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

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

Approved By

A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 24-01081

Client Ref D30047

Contract Title GREENHEAD COLLEGE, H'FIELD

Sample ID	Lab No	Completed	Matrix Description
ES1	2288233	25/01/2024	Brown very gravelly SAND
ES2	2288234	25/01/2024	Brown very gravelly SAND
ES3	2288235	25/01/2024	Brown very gravelly SAND
ES4	2288236	25/01/2024	Brown very gravelly SAND

Summary of Chemical Analysis

Soil Samples

Our Ref 24-01081

Client Ref D30047

Contract Title GREENHEAD COLLEGE, H'FIELD

Lab No	2288233	2288234	2288235	2288236
Sample ID	ES1	ES2	ES3	ES4
Depth				
Other ID				
Sample Type	ES	ES	ES	ES
Sampling Date	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	0.8	0.5	0.5	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	1.3	0.5	1.4	1.2
Chromium	DETSC 2301#	0.15	mg/kg	1.7	1.8	1.6	1.4
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	3.1	2.5	4.1	2.1
Lead	DETSC 2301#	0.3	mg/kg	5.0	1.6	10	3.0
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	2.5	1.4	3.1	< 1.0
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	16	13	28	11
Inorganics							
pH	DETSC 2008#		pH	8.3	8.7	8.7	8.7
Organic matter	DETSC 2002#	0.1	%	0.5	0.5	0.6	0.3
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	12	18	14	12
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03

Summary of Chemical Analysis Soil Samples

Our Ref 24-01081

Client Ref D30047

Contract Title GREENHEAD COLLEGE, H'FIELD

Lab No	2288233	2288234	2288235	2288236
Sample ID	ES1	ES2	ES3	ES4
Depth				
Other ID				
Sample Type	ES	ES	ES	ES
Sampling Date	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Asbestos Analysis Soil Samples

Our Ref 24-01081

Client Ref D30047

Contract Title GREENHEAD COLLEGE, H'FIELD

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2288233	ES1	SOIL	NAD	none	Pierce Booth
2288234	ES2	SOIL	NAD	none	Pierce Booth
2288235	ES3	SOIL	NAD	none	Pierce Booth
2288236	ES4	SOIL	NAD	none	Pierce Booth

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

Information in Support of the Analytical Results

Our Ref 24-01081
 Client Ref D30047
 Contract GREENHEAD COLLEGE, H'FIELD

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2288233	ES1 SOIL	16/01/24	GJ 250ml, GJ 60ml, PT 1L		
2288234	ES2 SOIL	16/01/24	GJ 250ml, GJ 60ml, PT 1L		
2288235	ES3 SOIL	16/01/24	GJ 250ml, GJ 60ml, PT 1L		
2288236	ES4 SOIL	16/01/24	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report



Certificate of Analysis

Certificate Number 24-03459

Issued: 27-Feb-24

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 24-03459

Client Reference D30047

Order No PO3901

Contract Title GREENHEAD COLLEGE

Description 6 Soil samples.

Date Received 19-Feb-24

Date Started 19-Feb-24

Date Completed 27-Feb-24

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

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

Approved By

A handwritten signature in black ink, appearing to read "K. Bridgewood".

Kirk Bridgewood
General Manager





Summary of Chemical Analysis

Matrix Descriptions

Our Ref 24-03459

Client Ref D30047

Contract Title GREENHEAD COLLEGE

Sample ID	Depth	Lab No	Completed	Matrix Description
HP1 Topsoil	0.00-0.10	2301484	27/02/2024	Brown gravelly, clayey SAND
HP2 Topsoil	0.00-0.10	2301485	27/02/2024	Brown gravelly, clayey SAND
HP3 Topsoil	0.00-0.10	2301486	27/02/2024	Brown gravelly, clayey SAND
HP1 Subsoil	0.1	2301487	27/02/2024	Brown SAND
HP2 Subsoil	0.1	2301488	27/02/2024	Brown SAND
HP3 Subsoil	0.1	2301489	27/02/2024	Brown SAND

Summary of Chemical Analysis

Soil Samples

Our Ref 24-03459

Client Ref D30047

Contract Title GREENHEAD COLLEGE

Lab No	2301484	2301485	2301486	2301487	2301488	2301489
Sample ID	HP1 Topsoil	HP2 Topsoil	HP3 Topsoil	HP1 Subsoil	HP2 Subsoil	HP3 Subsoil
Depth	0.00-0.10	0.00-0.10	0.00-0.10	0.10	0.10	0.10
Other ID						
Sample Type	ES	ES	ES	ES	ES	ES
Sampling Date	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024
Sampling Time	1200	1200	1200	1200	1200	1200

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	2.1	2.2	1.7	1.2	1.0	1.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.3	0.1	0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	5.5	6.3	4.5	4.3	4.0	4.2
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	16	15	13	11	10	11
Lead	DETSC 2301#	0.3	mg/kg	15	15	12	3.6	3.2	4.0
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	5.8	5.7	4.7	4.4	4.2	4.2
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	37	41	38	19	26	21
Inorganics									
pH	DETSC 2008#		pH	8.5	8.4	8.5	8.5	8.5	8.7
Organic matter	DETSC 2002#	0.1	%	4.7	5.5	4.7	0.3	0.2	0.1
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	54	55	53	11	< 10	10
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	0.03	< 0.03	< 0.03	< 0.03

Summary of Chemical Analysis

Soil Samples

Our Ref 24-03459

Client Ref D30047

Contract Title GREENHEAD COLLEGE

Lab No	2301484	2301485	2301486	2301487	2301488	2301489
Sample ID	HP1 Topsoil	HP2 Topsoil	HP3 Topsoil	HP1 Subsoil	HP2 Subsoil	HP3 Subsoil
Depth	0.00-0.10	0.00-0.10	0.00-0.10	0.10	0.10	0.10
Other ID						
Sample Type	ES	ES	ES	ES	ES	ES
Sampling Date	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024
Sampling Time	1200	1200	1200	1200	1200	1200

Test	Method	LOD	Units						
Pyrene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Asbestos Analysis Soil Samples

Our Ref 24-03459

Client Ref D30047

Contract Title GREENHEAD COLLEGE

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2301484	HP1 Topsoil 0.00-0.10	SOIL	NAD	none	Shannon Hope
2301485	HP2 Topsoil 0.00-0.10	SOIL	NAD	none	Shannon Hope
2301486	HP3 Topsoil 0.00-0.10	SOIL	NAD	none	Shannon Hope
2301487	HP1 Subsoil 0.10	SOIL	NAD	none	Shannon Hope
2301488	HP2 Subsoil 0.10	SOIL	NAD	none	Shannon Hope
2301489	HP3 Subsoil 0.10	SOIL	NAD	none	Shannon Hope

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

Information in Support of the Analytical Results

Our Ref 24-03459
 Client Ref D30047
 Contract GREENHEAD COLLEGE

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2301484	HP1 Topsoil 0.00-0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		
2301485	HP2 Topsoil 0.00-0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		
2301486	HP3 Topsoil 0.00-0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		
2301487	HP1 Subsoil 0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		
2301488	HP2 Subsoil 0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		
2301489	HP3 Subsoil 0.10 SOIL	14/02/24	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

End of Report



Certificate of Analysis

Certificate Number 24-14733-2

Issued: 09-Aug-24

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 24-14733-2

Client Reference ~ D30047

Order No ~ PO6059

Contract Title ~ Greenhead College, H'field

Description 13 Soil samples.

Date Received 17-Jul-24

Date Started 17-Jul-24

Date Completed 09-Aug-24

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

Notes This report supersedes 24-14733-1; Sample info updated at client request

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

Approved By

Kirk Bridgewood
General Manager



Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

Page 1 of 11

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Sample ID	Other ID	Lab No	Completed	Matrix Description
SP 1 ES 1	Class 1B	2365447	24/07/2024	Brown sandy,, clayey and GRAVEL including odd rootlets and odd rootlets and some wood (Possible made ground - brick) (Possible made ground - plastic) (Possible made ground - glass) (sample matrix outside MCERTS scope of accreditation)
SP 1 ES 2	Class 1B	2365448	24/07/2024	Brown very gravelly, sandy CLAY including odd rootlets and odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 3	Class 1B	2365449	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 4	Class 1B	2365450	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 5	Class 1B	2365451	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 6	Class 1B	2365452	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 7	Class 1B	2365453	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 8	Class 1B	2365454	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 9	Class 1B	2365455	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 10	Class 1B	2365456	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 11	Class 1B	2365457	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 1 ES 12	Class 1B	2365458	24/07/2024	Brown very gravelly, sandy, sandy CLAY including odd rootlets and some wood (Possible made ground - plastic) (Possible made ground - plastic) (Possible made ground - brick)
SP 2 ES 1	Class 6N	2365459	24/07/2024	Light brown very sandy, sandy, slightly clayey GRAVEL (Possible made ground - brick) (sample matrix outside MCERTS scope of accreditation)

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Lab No	2365447	2365448	2365449	2365450	2365451	2365452	2365453
Sample ID ~	SP 1 ES 1	SP 1 ES 2	SP 1 ES 3	SP 1 ES 4	SP 1 ES 5	SP 1 ES 6	SP 1 ES 7
Depth ~							
Other ID ~	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B
Sample Type ~	ES	ES	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	3.9	3.7	9.8	6.3	4.9	6.0	3.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.1	0.2	0.2	0.4	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	7.5	11	13	11	12	11	8.9
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	12	10	23	17	14	32	13
Lead	DETSC 2301#	0.3	mg/kg	11	10	22	12	13	22	11
Mercury	DETSC 2325#	0.05	mg/kg	0.12	< 0.05	0.12	0.08	0.06	0.20	0.08
Nickel	DETSC 2301#	1	mg/kg	8.5	9.4	11	9.4	11	10	8.3
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	35	39	83	63	86	100	51
Inorganics										
pH	DETSC 2008#		pH	12.2	11.1	11.5	12.2	11.8	11.6	11.6
Organic matter	DETSC 2002#	0.1	%	9.0	7.9	2.0	2.7	1.9	3.3	6.7
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	380	1600	1600	1400	910	1600	1700
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	2.3	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	2.1	< 1.5	< 1.5	< 1.5	13	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	140	32	130	88	310	220	180
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	93	16	86	70	220	130	130
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	240	48	220	160	540	350	300
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	140	32	130	88	320	220	180
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	7.0	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	15	1.2	1.4	2.9	3.3	2.6	2.1
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	34	16	29	35	54	40	34
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	190	80	190	160	650	380	300
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	120	64	140	120	500	290	280
Aromatic C5-C35	DETSC 3072*	10	mg/kg	240	97	220	200	710	420	340
Aromatic C10-C44	DETSC 3072*	10	mg/kg	370	160	360	320	1200	710	610
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	390	130	350	290	1000	650	510
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	600	210	580	480	1800	1100	920
TPH (C6-C40)	DETSC 3311*	10	mg/kg							
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Lab No	2365447	2365448	2365449	2365450	2365451	2365452	2365453
Sample ID ~	SP 1 ES 1	SP 1 ES 2	SP 1 ES 3	SP 1 ES 4	SP 1 ES 5	SP 1 ES 6	SP 1 ES 7
Depth ~							
Other ID ~	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B
Sample Type ~	ES	ES	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.06	0.05	0.04	0.05	0.04	0.05	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.09	0.06	0.06	0.06	0.05	0.09	0.12
Fluorene	DETSC 3303	0.03	mg/kg	0.07	0.05	0.05	0.05	0.04	0.07	0.07
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.79	0.40	0.72	0.86	0.45	0.82	1.4
Anthracene	DETSC 3303	0.03	mg/kg	0.18	0.12	0.15	0.18	0.09	0.22	0.22
Fluoranthene	DETSC 3303#	0.03	mg/kg	1.0	0.53	0.93	1.4	0.62	1.2	1.5
Pyrene	DETSC 3303#	0.03	mg/kg	0.89	0.47	0.80	1.1	0.52	1.0	1.2
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.57	0.31	0.70	0.97	0.36	0.74	1.1
Chrysene	DETSC 3303	0.03	mg/kg	0.44	0.22	0.57	0.70	0.29	0.58	0.80
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.66	0.40	1.1	1.2	0.45	0.90	1.4
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.23	0.12	0.33	0.36	0.13	0.25	0.40
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.56	0.32	0.86	0.93	0.34	0.65	1.0
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.20	0.12	0.31	0.35	0.12	0.26	0.41
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.05	0.04	0.10	0.12	0.04	0.11	0.19
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.24	0.14	0.37	0.38	0.14	0.29	0.44
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	6.1	3.3	7.1	8.7	3.7	7.2	10

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Lab No	2365454	2365455	2365456	2365457	2365458	2365459
Sample ID ~	SP 1 ES 8	SP 1 ES 9	SP 1 ES 10	SP 1 ES 11	SP 1 ES 12	SP 2 ES 1
Depth ~						
Other ID ~	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 6N
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.7	7.0	5.0	7.5	4.9	2.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.2	0.1	0.3	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	25	13	10	13	11	7.3
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	22	27	11	21	18	8.2
Lead	DETSC 2301#	0.3	mg/kg	53	24	8.9	26	24	9.4
Mercury	DETSC 2325#	0.05	mg/kg	0.23	0.22	0.11	0.30	0.12	< 0.05
Nickel	DETSC 2301#	1	mg/kg	10	11	8.7	11	9.0	5.6
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	91	120	44	160	71	57
Inorganics									
pH	DETSC 2008#		pH	11.4	11.4	12.3	11.7	11.6	12.4
Organic matter	DETSC 2002#	0.1	%	4.0	3.7	0.7	2.1	6.8	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	1600	1700	1200	1600	1700	< 10
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	1.8	8.0	< 1.5	< 1.5	< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	190	260	68	190	110	
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	130	160	52	160	59	
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	330	430	120	350	170	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	200	270	68	190	110	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	2.7	3.3	1.8	2.0	2.2	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	37	42	28	32	39	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	300	310	150	350	360	
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	260	250	150	260	250	
Aromatic C5-C35	DETSC 3072*	10	mg/kg	340	350	180	390	400	
Aromatic C10-C44	DETSC 3072*	10	mg/kg	600	600	330	650	650	
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	540	620	240	580	510	
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	930	1000	450	990	820	
TPH (C6-C40)	DETSC 3311*	10	mg/kg						< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Lab No	2365454	2365455	2365456	2365457	2365458	2365459
Sample ID ~	SP 1 ES 8	SP 1 ES 9	SP 1 ES 10	SP 1 ES 11	SP 1 ES 12	SP 2 ES 1
Depth ~						
Other ID ~	Class 1B	Class 1B	Class 1B	Class 1B	Class 1B	Class 6N
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024	15/07/2024
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	0.06	0.06	0.04	0.04	0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.08	0.06	0.08	0.05	0.08	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	0.07	0.04	0.06	0.04	0.08	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.76	0.29	0.86	0.89	0.99	0.20
Anthracene	DETSC 3303	0.03	mg/kg	0.19	0.07	0.18	0.12	0.23	0.05
Fluoranthene	DETSC 3303#	0.03	mg/kg	1.1	0.38	1.1	1.0	1.4	0.29
Pyrene	DETSC 3303#	0.03	mg/kg	0.96	0.32	0.96	0.80	1.2	0.27
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.82	0.23	0.69	0.61	0.64	0.17
Chrysene	DETSC 3303	0.03	mg/kg	0.60	0.18	0.55	0.50	0.55	0.14
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	1.0	0.29	0.68	0.69	0.58	0.17
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.29	0.08	0.18	0.21	0.16	0.05
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.73	0.19	0.45	0.42	0.40	0.13
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.31	0.09	0.21	0.23	0.19	0.06
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.12	0.04	0.10	0.09	0.08	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.31	0.10	0.24	0.24	0.21	0.06
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	7.4	2.4	6.4	5.9	6.8	1.6

Summary of Asbestos Analysis Soil Samples

Our Ref 24-14733-2

Client Ref ~ D30047

Contract Title ~ Greenhead College, H'field

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2365447	SP 1 ES 1 Class 1B	SOIL	NAD	none	Pierce Booth
2365448	SP 1 ES 2 Class 1B	SOIL	NAD	none	Pierce Booth
2365449	SP 1 ES 3 Class 1B	SOIL	NAD	none	Pierce Booth
2365450	SP 1 ES 4 Class 1B	SOIL	NAD	none	Pierce Booth
2365451	SP 1 ES 5 Class 1B	SOIL	NAD	none	Pierce Booth
2365452	SP 1 ES 6 Class 1B	SOIL	NAD	none	Pierce Booth
2365453	SP 1 ES 7 Class 1B	SOIL	NAD	none	Pierce Booth
2365454	SP 1 ES 8 Class 1B	SOIL	NAD	none	Pierce Booth
2365455	SP 1 ES 9 Class 1B	SOIL	NAD	none	Pierce Booth
2365456	SP 1 ES 10 Class 1B	SOIL	NAD	none	Pierce Booth
2365457	SP 1 ES 11 Class 1B	SOIL	NAD	none	Pierce Booth
2365458	SP 1 ES 12 Class 1B	SOIL	NAD	none	Pierce Booth
2365459	SP 2 ES 1 Class 6N	SOIL	NAD	none	Pierce Booth

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

Information in Support of the Analytical Results

Our Ref 24-14733-2
 Client Ref ~ D30047
 Contract ~ Greenhead College, H'field

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2365447	SP 1 ES 1 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365448	SP 1 ES 2 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365449	SP 1 ES 3 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365450	SP 1 ES 4 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365451	SP 1 ES 5 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365452	SP 1 ES 6 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365453	SP 1 ES 7 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365454	SP 1 ES 8 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365455	SP 1 ES 9 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365456	SP 1 ES 10 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365457	SP 1 ES 11 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365458	SP 1 ES 12 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		
2365459	SP 2 ES 1 SOIL	15/07/24	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETSC 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETSC 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETSC 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETSC 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETSC 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETSC 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETSC 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETSC 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETSC 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETSC 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETSC 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETSC 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETSC 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETSC 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETSC 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETSC 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETSC 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETSC 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETSC 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETSC 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
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Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-07754

Issued: 17-Apr-25

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 25-07754

Client Reference ~ D30047

Order No ~ PO10664

Contract Title ~ Greenhead College, Huddersfield

Description 6 Soil samples.

Date Received 09-Apr-25

Date Started 09-Apr-25

Date Completed 17-Apr-25

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

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

Approved By



Reyhan Irfan
Operations Manager



Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Tel: 01207 582333 • email: info@dets.co.uk • normecdets.com

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 25-07754

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Sample ID	Lab No	Completed	Matrix Description
FH TOPSOIL 1	2491383	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
FH TOPSOIL 2	2491384	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
FH TOPSOIL 3	2491385	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
FH TOPSOIL 4	2491386	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
FH TOPSOIL 5	2491387	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
FH TOPSOIL 6	2491388	17/04/2025	Dark brown very gravelly, sandy CLAY including odd rootlets

Summary of Chemical Analysis Soil Samples

Our Ref 25-07754

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	2491383	2491384	2491385	2491386	2491387	2491388
Sample ID ~	FH TOPSOIL 1	FH TOPSOIL 2	FH TOPSOIL 3	FH TOPSOIL 4	FH TOPSOIL 5	FH TOPSOIL 6
Depth ~						
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	6.1	8.6	6.1	7.5	7.3	7.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.2	0.2	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	8.5	12	8.6	10	8.7	11
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	44	20	50	17	15	16
Lead	DETSC 2301#	0.3	mg/kg	20	26	17	28	18	20
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	9.7	13	9.3	11	9.9	12
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	57	73	51	67	54	60
Inorganics									
pH	DETSC 2008#		pH	7.5	7.7	8.1	7.9	8.3	8.0
Organic matter	DETSC 2002#	0.1	%	7.4	4.4	5.9	4.7	4.1	< 0.1
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	77	110	120	150	150	130
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >EC10-EC12	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50
Aliphatic >EC12-EC16	DETSC 3521#	1.2	mg/kg	< 1.20	< 1.20	< 1.20	< 1.20	< 1.20	< 1.20
Aliphatic >EC16-EC21	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50	< 1.50
Aliphatic >EC21-EC35	DETSC 3521#	3.4	mg/kg	< 3.40	4.66	< 3.40	< 3.40	< 3.40	< 3.40
Aliphatic C5-C35	DETSC 3521*	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >EC10-EC12	DETSC 3521#	0.9	mg/kg	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90
Aromatic >EC12-EC16	DETSC 3521#	0.5	mg/kg	0.87	1.01	0.90	< 0.50	0.71	0.70
Aromatic >EC16-EC21	DETSC 3521#	0.6	mg/kg	3.61	2.75	2.59	2.17	2.08	2.52
Aromatic >EC21-EC35	DETSC 3521#	1.4	mg/kg	26.96	26.14	27.70	21.03	21.85	26.54
Aromatic C5-C35	DETSC 3521*	10	mg/kg	31.45	29.89	31.19	23.21	24.63	29.75
TPH Ali/Aro Total C5-C35	DETSC 3521*	10	mg/kg	31.45	29.89	31.19	23.21	24.63	29.75
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.05	0.09	0.08	< 0.03	0.04	0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.20	0.23	0.21	0.16	0.17	0.17

Summary of Chemical Analysis Soil Samples

Our Ref 25-07754

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	2491383	2491384	2491385	2491386	2491387	2491388
Sample ID ~	FH TOPSOIL 1	FH TOPSOIL 2	FH TOPSOIL 3	FH TOPSOIL 4	FH TOPSOIL 5	FH TOPSOIL 6
Depth ~						
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025	07/04/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Pyrene	DETSC 3303#	0.03	mg/kg	0.16	0.18	0.16	0.13	0.13	0.13
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.08	0.09	0.08	0.09	0.07	0.07
Chrysene	DETSC 3303	0.03	mg/kg	0.07	0.09	0.07	0.08	0.06	0.06
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.10	0.11	0.10	0.12	0.09	0.09
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.03	0.04	0.03	0.05	0.03	0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.05	0.06	0.06	0.08	0.05	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.03	0.03	0.04	0.04	0.03	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.03	0.04	0.04	0.05	0.03	0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.71	0.93	0.80	0.78	0.61	0.56

Summary of Asbestos Analysis Soil Samples

Our Ref 25-07754

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2491383	FH TOPSOIL 1	SOIL	NAD	none	Vicky Convery
2491384	FH TOPSOIL 2	SOIL	NAD	none	Vicky Convery
2491385	FH TOPSOIL 3	SOIL	NAD	none	Vicky Convery
2491386	FH TOPSOIL 4	SOIL	NAD	none	Vicky Convery
2491387	FH TOPSOIL 5	SOIL	NAD	none	Vicky Convery
2491388	FH TOPSOIL 6	SOIL	NAD	none	Vicky Convery

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

Information in Support of the Analytical Results

Our Ref 25-07754
 Client Ref ~ D30047
 Contract ~ Greenhead College, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2491383	FH TOPSOIL 1 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		
2491384	FH TOPSOIL 2 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		
2491385	FH TOPSOIL 3 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		
2491386	FH TOPSOIL 4 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		
2491387	FH TOPSOIL 5 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		
2491388	FH TOPSOIL 6 SOIL	07/04/25	GJ 250ml, GJ 60ml, PG		

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

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

Soil Analysis Notes

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

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETS 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
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Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-09026

Issued: 07-May-25

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 25-09026

Client Reference ~ D30047

Order No ~ PO10926

Contract Title ~ Greenhead College, Huddersfield

Description 7 Soil samples, 7 Leachate prepared by DETS samples.

Date Received 24-Apr-25

Date Started 24-Apr-25

Date Completed 07-May-25

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

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

Approved By



John Coffey
Quality Manager



Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info@dets.co.uk • normecdets.com

Summary of Chemical Analysis

Matrix Descriptions

Our Ref 25-09026

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Sample ID	Lab No	Completed	Matrix Description
SP01	2498526	07/05/2025	Dark brown very gravelly, sandy CLAY (Made ground - brick)
HDP01	2498527	07/05/2025	Dark brown very gravelly, sandy CLAY (Possible made ground - brick)
HDP02	2498528	07/05/2025	Dark brown very gravelly, sandy CLAY including odd rootlets (Made ground - brick)
HDP03	2498529	07/05/2025	Dark brown very gravelly, sandy CLAY including odd rootlets
HDP04	2498530	07/05/2025	Dark brown very gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
HDP05	2498531	07/05/2025	Dark brown very gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)
HDP06	2498532	07/05/2025	Dark brown very gravelly, sandy CLAY including odd rootlets (Possible made ground - brick)

Summary of Chemical Analysis

Soil Samples

Our Ref 25-09026

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	2498526	2498527	2498528	2498529	2498530	2498531	2498532
Sample ID ~	SP01	HDP01	HDP02	HDP03	HDP04	HDP05	HDP06
Depth ~							
Other ID ~							
Sample Type ~	ES	ES	ES	ES	ES	ES	ES
Sampling Date ~	22/04/2025	22/04/2025	22/04/2025	22/04/2025	22/04/2025	22/04/2025	22/04/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Preparation										
Moisture Content	DETSC 1004	0.1	%	6.8	11	6.3	14	11	8.9	12
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	5.2	3.0	5.5	4.8	6.9	9.2	8.0
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.1	0.3	0.2	9.0	9.1	10
Chromium	DETSC 2301#	0.15	mg/kg	14	18	16	11	64	67	120
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	17	13	19	17	100	88	100
Lead	DETSC 2301#	0.3	mg/kg	9.1	11	24	19	130	120	130
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	0.12	0.13	0.12
Nickel	DETSC 2301#	1	mg/kg	11	9.0	9.5	8.3	8.4	12	9.5
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	37	34	44	47	510	490	550
Inorganics										
pH	DETSC 2008#		pH	8.2	11.6	10.5	11.7	11.0	11.6	10.9
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sulphate Aqueous Extract as SO ₄ (2:1)	DETSC 2076#	10	mg/l	530	290	240	260	800	220	740
Petroleum Hydrocarbons										
EPH >C10-C40	DETSC 3521#	10	mg/kg							565.9
EPH >C6-C40	DETSC 3521*	10	mg/kg	408.4	99.48	1440	< 10.00	703.7	1518	565.9
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	0.08	< 0.03	0.09	0.55	0.69
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.19	0.03	0.19	< 0.03	0.05	0.11	0.11
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.16	0.17	1.1	< 0.03	0.40	2.1	1.2
Fluorene	DETSC 3303	0.03	mg/kg	0.07	0.13	0.86	< 0.03	0.27	1.2	1.2
Phenanthrene	DETSC 3303#	0.03	mg/kg	2.8	1.1	8.0	0.31	2.8	6.7	8.0
Anthracene	DETSC 3303	0.03	mg/kg	1.1	0.33	3.1	0.08	0.79	2.1	2.8
Fluoranthene	DETSC 3303#	0.03	mg/kg	19	1.9	16	0.52	4.1	9.0	13
Pyrene	DETSC 3303#	0.03	mg/kg	23	1.6	14	0.45	3.8	8.1	11
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	9.2	0.68	4.9	0.18	1.8	3.5	4.8
Chrysene	DETSC 3303	0.03	mg/kg	6.8	0.57	5.0	0.15	1.5	3.5	3.1
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	12	0.74	5.5	0.18	2.1	4.3	6.8
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	4.3	0.27	1.8	0.07	0.78	1.5	2.6
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	9.3	0.60	4.6	0.13	1.8	3.5	5.7
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	3.5	0.22	2.1	0.05	0.84	1.8	2.5
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	1.1	0.07	0.63	< 0.03	0.25	0.50	0.75
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	4.2	0.28	2.7	0.07	1.1	2.4	3.2
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	97	8.6	70	2.2	23	51	67
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id SP01

Sample Numbers 2498526 2498533

Date Analysed 02/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.8	3	5	6
DETSC 2003# Loss On Ignition	%	5.3	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	410.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	97.0	100	n/a	n/a
DETSC 2008# pH	pH Units	8.2	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	3.1	0.03	0.5	2	25
DETSC 2306 Barium as Ba	77	0.8	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.49	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.4	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	11	0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.16	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	10	0.1	0.06	0.7	5
DETSC 2306 Selenium as Se	1.6	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	180	1.8	4	50	200
DETSC 2055 Chloride as Cl	1500	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	370	3.7	10	150	500
DETSC 2055 Sulphate as SO4	110000	1100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	200000	2000	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

Additional Information	
DETSC 2008 pH	8.7
DETSC 2009 Conductivity uS/cm	279.0
* Temperature*	18.0

Mass of Sample Kg	0.097
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.893
Volume of Eluate VE1	0.86

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP01

Sample Numbers 2498527 2498534

Date Analysed 02/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.6	3	5	6
DETSC 2003# Loss On Ignition	%	3.5	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	100.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	11.6	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	3.7	0.04	0.5	2	25
DETSC 2306 Barium as Ba	18	0.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	340	3.4	0.5	10	70
DETSC 2306 Copper as Cu	6.8	0.07	2	50	100
DETSC 2306 Mercury as Hg	0.032	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	9.9	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.56	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	3.1	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	2.2	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7.4	0.07	4	50	200
DETSC 2055 Chloride as Cl	3500	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	250	2.5	10	150	500
DETSC 2055 Sulphate as SO4	110000	1100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	330000	3300	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5500	55	500	800	1000

Additional Information	
DETSC 2008 pH	10.6
DETSC 2009 Conductivity uS/cm	468.0
* Temperature*	19.0

Mass of Sample Kg	0.102
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.888
Volume of Eluate VE1	0.87

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP02

Sample Numbers 2498528 2498535

Date Analysed 06/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.2	3	5	6
DETSC 2003# Loss On Ignition	%	2.6	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	1400.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	200.0	100	n/a	n/a
DETSC 2008# pH	pH Units	10.5	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	3.1	0.03	0.5	2	25
DETSC 2306 Barium as Ba	45	0.5	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	390	3.9	0.5	10	70
DETSC 2306 Copper as Cu	5.4	0.05	2	50	100
DETSC 2306 Mercury as Hg	0.022	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	8.6	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.7	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	4.9	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	1.4	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	1.7	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	44	0.44	4	50	200
DETSC 2055 Chloride as Cl	4000	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	330	3.3	10	150	500
DETSC 2055 Sulphate as SO4	38000	380	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	210000	2100	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	6800	68	500	800	1000

Additional Information	
DETSC 2008 pH	10.1
DETSC 2009 Conductivity uS/cm	299.0
* Temperature*	18.0

Mass of Sample Kg	0.096
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.894
Volume of Eluate VE1	0.86

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP03

Sample Numbers 2498529 2498536

Date Analysed 02/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.6	3	5	6
DETSC 2003# Loss On Ignition	%	4.2	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	4.6	100	n/a	n/a
DETSC 2008# pH	pH Units	11.7	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	5.5	0.06	0.5	2	25
DETSC 2306 Barium as Ba	15	0.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	11	0.1	0.5	10	70
DETSC 2306 Copper as Cu	13	0.13	2	50	100
DETSC 2306 Mercury as Hg	0.025	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	5.8	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.9	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	< 0.090	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	4.2	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	2.7	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	10	0.1	4	50	200
DETSC 2055 Chloride as Cl	3400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	420	4.2	10	150	500
DETSC 2055 Sulphate as SO4	90000	900	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	250000	2500	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	6800	68	500	800	1000

Additional Information	
DETSC 2008 pH	10.5
DETSC 2009 Conductivity uS/cm	351.0
* Temperature*	18.0

Mass of Sample Kg	0.105
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.885
Volume of Eluate VE1	0.83

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP04

Sample Numbers 2498530 2498537

Date Analysed 02/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.7	3	5	6
DETSC 2003# Loss On Ignition	%	4.8	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	700.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	4.8	100	n/a	n/a
DETSC 2008# pH	pH Units	11.0	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	7.2	0.07	0.5	2	25
DETSC 2306 Barium as Ba	57	0.6	20	100	300
DETSC 2306 Cadmium as Cd	0.056	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	12	0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.5	0.04	2	50	100
DETSC 2306 Mercury as Hg	0.025	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	10	0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.82	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	190	1.9	0.06	0.7	5
DETSC 2306 Selenium as Se	1.2	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	9.2	0.09	4	50	200
DETSC 2055 Chloride as Cl	12000	120	800	15,000	25,000
DETSC 2055* Fluoride as F	580	5.8	10	150	500
DETSC 2055 Sulphate as SO4	100000	1000	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	210000	2100	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

Additional Information	
DETSC 2008 pH	8.7
DETSC 2009 Conductivity uS/cm	296.0
* Temperature*	19.0

Mass of Sample Kg	0.101
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.889
Volume of Eluate VE1	0.85

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP05

Sample Numbers 2498531 2498538

Date Analysed 06/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.9	3	5	6
DETSC 2003# Loss On Ignition	%	3.9	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	1500.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	12.0	100	n/a	n/a
DETSC 2008# pH	pH Units	11.6	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	8.2	0.08	0.5	2	25
DETSC 2306 Barium as Ba	48	0.5	20	100	300
DETSC 2306 Cadmium as Cd	0.059	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	26	0.3	0.5	10	70
DETSC 2306 Copper as Cu	4.8	0.05	2	50	100
DETSC 2306 Mercury as Hg	0.016	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	8.6	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.82	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	120	1.2	0.06	0.7	5
DETSC 2306 Selenium as Se	1	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	11	0.11	4	50	200
DETSC 2055 Chloride as Cl	20000	200	800	15,000	25,000
DETSC 2055* Fluoride as F	420	4.2	10	150	500
DETSC 2055 Sulphate as SO4	39000	390	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	150000	1500	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

Additional Information	
DETSC 2008 pH	9.1
DETSC 2009 Conductivity uS/cm	220.0
* Temperature*	18.0

Mass of Sample Kg	0.099
Mass of dry Sample Kg	0.090

Stage 1	
Volume of Leachant L2	0.891
Volume of Eluate VE1	0.86

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

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

WASTE ACCEPTANCE CRITERIA TESTING v20.25.02.03

Our Ref 25-09026

Client Ref D30047

Contract Title Greenhead College, Huddersfield

Sample Id HDP06

Sample Numbers 2498532 2498539

Date Analysed 07/05/2025

Test Results On Waste			WAC Limit Values		
Determinand and Method Reference	Units	Result	Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.8	3	5	6
DETSC 2003# Loss On Ignition	%	4.4	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3521* Mineral Oil >C10-C40 + Clean Up	mg/kg	570.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	67.0	100	n/a	n/a
DETSC 2008# pH	pH Units	10.9	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate			WAC Limit Values		
Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached mg/kg	Limit values for LS10 Leachate		
	10:1	LS10	Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	12	0.12	0.5	2	25
DETSC 2306 Barium as Ba	56	0.6	20	100	300
DETSC 2306 Cadmium as Cd	0.41	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	110	1.1	0.5	10	70
DETSC 2306 Copper as Cu	11	0.11	2	50	100
DETSC 2306 Mercury as Hg	0.029	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	14	0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	3.4	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	220	2.2	0.06	0.7	5
DETSC 2306 Selenium as Se	1	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	32	0.32	4	50	200
DETSC 2055 Chloride as Cl	4700	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	630	6.3	10	150	500
DETSC 2055 Sulphate as SO4	52000	520	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	150000	1500	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

Additional Information	
DETSC 2008 pH	8.1
DETSC 2009 Conductivity uS/cm	211.0
* Temperature*	18.0

Mass of Sample Kg	0.102
Mass of dry Sample Kg	0.090

Stage 1

Volume of Leachant L2	0.888
Volume of Eluate VE1	0.86

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

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

Summary of Asbestos Analysis Soil Samples

Our Ref 25-09026

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2498526	SP01	SOIL	NAD	none	Michael Kay
2498527	HDP01	SOIL	NAD	none	Michael Kay
2498528	HDP02	SOIL	NAD	none	Michael Kay
2498529	HDP03	SOIL	NAD	none	Michael Kay
2498530	HDP04	SOIL	NAD	none	Michael Kay
2498531	HDP05	SOIL	NAD	none	Michael Kay
2498532	HDP06	SOIL	NAD	none	Michael Kay

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

Information in Support of the Analytical Results

Our Ref 25-09026
 Client Ref ~ D30047
 Contract ~ Greenhead College, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	time exceeded for tests	Incorrect container for tests	Headspace in container for tests
2498526	SP01 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498527	HDP01 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498528	HDP02 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498529	HDP03 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498530	HDP04 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498531	HDP05 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498532	HDP06 SOIL	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			BTEX /C5-10
2498533	SP01 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498534	HDP01 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498535	HDP02 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498536	HDP03 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498537	HDP04 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498538	HDP05 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y
2498539	HDP06 LEACHATE	22/04/25	GJ 250ml, GJ 60ml ((Headspace)), PT 1L x2			Y

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETS 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETS 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETS 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
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Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-20695-1

Issued: 17-Sep-25

Client Dunelm Geotechnical & Environmental Ltd
Foundation House
St. John's Road
Meadowfield
Durham
DH7 8TZ

Our Reference 25-20695-1

Client Reference ~ D30047

Order No ~ PO13148

Contract Title ~ Greenhead College, Huddersfield

Description 6 Soil samples.

Date Received 05-Sep-25

Date Started 05-Sep-25

Date Completed 17-Sep-25

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

Notes This report supersedes 25-20695; additional testing carried out

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

Approved By



Reyhan Irfan
Operations Manager



Summary of Chemical Analysis

Matrix Descriptions

Our Ref 25-20695-1

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Sample ID	Lab No	Completed	Matrix Description
TS 01	2564562	15/09/2025	Brown SAND
TS 02	2564563	15/09/2025	Brown SAND
TS 03	2564564	15/09/2025	Brown SAND
TS 04	2564565	15/09/2025	Brown SAND
TS 05	2564566	15/09/2025	Brown SAND
TS 06	2564567	15/09/2025	Brown SAND

Summary of Chemical Analysis

Soil Samples

Our Ref 25-20695-1

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	2564562	2564563	2564564	2564565	2564566	2564567
Sample ID ~	TS 01	TS 02	TS 03	TS 04	TS 05	TS 06
Depth ~						
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	03/09/2025	03/09/2025	03/09/2025	03/09/2025	03/09/2025	03/09/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	3.2	1.8	1.9	5.1	5.2	4.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.1	0.1	0.2	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	7.6	5.4	5.0	7.3	7.8	6.9
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	18	12	13	14	16	13
Lead	DETSC 2301#	0.3	mg/kg	28	14	11	19	20	19
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	7.9	5.1	5.2	8.9	9.6	8.9
Selenium	DETSC 2301#	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5	0.6	0.6
Zinc	DETSC 2301#	1	mg/kg	58	40	38	48	49	47
Inorganics									
pH	DETSC 2008#		pH	8.3	8.1	8.4	8.1	7.7	7.9
Organic matter	DETSC 2002#	0.1	%	2.9	3.1	3.7	4.9	5.5	4.8
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	67	96	71	130	170	140
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C40	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic C5-C40	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aliphatic C5-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C40	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C40	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro C5-C40	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10

Summary of Chemical Analysis

Soil Samples

Our Ref 25-20695-1

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	2564562	2564563	2564564	2564565	2564566	2564567
Sample ID ~	TS 01	TS 02	TS 03	TS 04	TS 05	TS 06
Depth ~						
Other ID ~						
Sample Type ~	ES	ES	ES	ES	ES	ES
Sampling Date ~	03/09/2025	03/09/2025	03/09/2025	03/09/2025	03/09/2025	03/09/2025
Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
TPH Ali/Aro C5-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.05	0.09	0.07	< 0.03	< 0.03	0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.18	0.14	0.13	0.12	0.16	0.18
Pyrene	DETSC 3303#	0.03	mg/kg	0.14	0.11	0.10	0.08	0.12	0.13
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.10	0.04	0.05	0.05	0.08	0.08
Chrysene	DETSC 3303	0.03	mg/kg	0.11	0.04	0.05	0.06	0.09	0.08
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.13	0.05	0.05	0.06	0.09	0.10
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	< 0.03	< 0.03	0.04	0.04
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	< 0.03	< 0.03	0.04	0.06
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	< 0.03	< 0.03	0.04	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03	0.04
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.92	0.46	0.45	0.37	0.65	0.74

Summary of Asbestos Analysis

Soil Samples

Our Ref 25-20695-1

Client Ref ~ D30047

Contract Title ~ Greenhead College, Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2564562	TS 01	SOIL	NAD	none	Steven Lambert
2564563	TS 02	SOIL	NAD	none	Steven Lambert
2564564	TS 03	SOIL	NAD	none	Steven Lambert
2564565	TS 04	SOIL	NAD	none	Steven Lambert
2564566	TS 05	SOIL	NAD	none	Steven Lambert
2564567	TS 06	SOIL	NAD	none	Steven Lambert

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

Information in Support of the Analytical Results

Our Ref 25-20695-1

Client Ref ~ D30047

Contract ~ Greenhead College, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2564562	TS 01 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		
2564563	TS 02 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		
2564564	TS 03 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		
2564565	TS 04 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		
2564566	TS 05 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		
2564567	TS 06 SOIL	03/09/25	GJ 250ml, GJ 60ml, PT 1L		

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

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

Soil Analysis Notes

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

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

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

Disposal

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

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

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETS 2002	Organic matter	%	0.1	Air Dried	No	Yes	Yes
DETS 2003	Loss on ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 2008	pH	pH Units	1	Air Dried	No	Yes	Yes
DETS 2076	Sulphate Aqueous Extract as SO ₄	mg/l	10	Air Dried	No	Yes	Yes
DETS 2084	Total Organic Carbon	%	0.5	Air Dried	No	Yes	Yes
DETS 2119	Ammoniacal Nitrogen as N	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2130	Cyanide free	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Cyanide total	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2130	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2130	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 2301	Arsenic	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Barium	mg/kg	1.5	Air Dried	No	Yes	Yes
DETS 2301	Beryllium	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Cadmium Available	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cadmium	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 2301	Cobalt	mg/kg	0.7	Air Dried	No	Yes	Yes
DETS 2301	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 2301	Copper	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2301	Manganese	mg/kg	20	Air Dried	No	Yes	Yes
DETS 2301	Molybdenum	mg/kg	0.4	Air Dried	No	Yes	Yes
DETS 2301	Nickel	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2301	Lead	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 2301	Selenium	mg/kg	0.5	Air Dried	No	Yes	Yes
DETS 2301	Zinc	mg/kg	1	Air Dried	No	Yes	Yes
DETS 2311	Boron (water soluble)	mg/kg	0.2	Air Dried	No	Yes	Yes
DETS 2321	Total Sulphate as SO ₄	%	0.01	Air Dried	No	Yes	Yes
DETS 2325	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 3049	Sulphur (free)	mg/kg	0.75	As Received	No	Yes	Yes
DETS 3072	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETS 3072	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETS 3072	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETS 3072	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETS 3072	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETS 3072	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETS 3072	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes
DETS 3303	Acenaphthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Acenaphthylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(a)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(b)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(k)fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Benzo(g,h,i)perylene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Dibenzo(a,h)anthracene	mg/kg	0.03	As Received	No	Yes	Yes
DETS 3303	Fluoranthene	mg/kg	0.03	As Received	No	Yes	Yes

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
DETSC 3303	Indeno(1,2,3-c,d)pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Naphthalene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Phenanthrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3303	Pyrene	mg/kg	0.03	As Received	No	Yes	Yes
DETSC 3311	C10-C24 Diesel Range Organics (DRO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	C24-C40 Lube Oil Range Organics (LORO)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3311	EPH (C10-C40)	mg/kg	10	As Received	No	Yes	Yes
DETSC 3321	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	m+p Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3321	o Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 28 + PCB 31	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 52	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 101	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 118	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 153	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 138	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB 180	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3401	PCB Total	mg/kg	0.01	As Received	No	Yes	Yes
DETSC 3521	Ali/Aro C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C12	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C12-C16	mg/kg	1.2	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C16-C21	mg/kg	1.5	As Received	No	Yes	Yes
DETSC 3521	Aliphatic C21-C35	mg/kg	3.4	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C12	mg/kg	0.9	As Received	No	Yes	Yes
DETSC 3521	Aromatic C10-C35	mg/kg	10	As Received	No	Yes	Yes
DETSC 3521	Aromatic C12-C16	mg/kg	0.5	As Received	No	Yes	Yes
DETSC 3521	Aromatic C16-C21	mg/kg	0.6	As Received	No	Yes	Yes
DETSC 3521	Aromatic C21-C35	mg/kg	1.4	As Received	No	Yes	Yes

Method details are shown only for those determinands listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

Appendix A - Details of Analysis

Method	Parameter	Units	Limit of Detection	Sample Preparation	Sub-Contracted	UKAS	MCERTS
--------	-----------	-------	--------------------	--------------------	----------------	------	--------

Key:

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

* -not accredited.

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

\$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report



Test Report

Report No.: J309599/2

Date of Issue: 15-May-2025

Client IGNE

Client Address: Unit 1, Mitchells Enterprise Centre,
Bradberry Balk Lane, Wombwell,
Barnsley, S73 8HR

Contact(s): Ryan Hobson

Project Carr Hill, Quarry

Estimate Ref. E189465

Date Received: 28-Apr-2025

Order No.: PN00218

Date Instructed: 28-Apr-2025

No. of Samples: 2

Turnaround (Wkdays): 10

Results Due: 12-May-2025

Date Approved: 15-May-2025

Approved By: Rob Brown

A handwritten signature in black ink, appearing to read 'Rob Brown', with a long horizontal stroke extending to the right.

Details: Technical Director

Testing indicated with an * is currently outside of our scope of accreditation

Results - Soil



Project: Carr Hill Quarry

Client: IGNE						
Quotation No.: E189465	TTL PLC Sample ID.:				P0000917/1	P0000917/2
TTL Job Number: J309599	Sample Location:				Sample 1	Sample 2
	Sample Type:				SOIL	SOIL
Date sampled:					28/04/25	28/04/25
Determinand	Accred.	SOP	Units	LOD		
Arsenic	N		mg/kg	0.5	9.4	8.2
Cadmium	N		mg/kg	0.1	<0.1	<0.1
Chromium	N		mg/kg	0.5	28	34
Copper	N		mg/kg	0.5	18	22
Mercury	N		mg/kg	0.05	<0.05	<0.05
Nickel	N		mg/kg	0.5	21	19
Lead	N		mg/kg	0.5	43	52
Selenium	N		mg/kg	0.25	<0.25	<0.25
Zinc	N		mg/kg	0.5	93	81
Chromium (Hexavalent)	N		mg/kg	0.5	<0.5	0.03
BTEX (Total)	N		mg/kg	0.01	<0.01	<0.01
Total TPH >C10-C40	N		mg/kg	10	47.8	18
Naphthalene	N		mg/kg	0.01	0.12	0.13
Acenaphthylene	N		mg/kg	0.01	0.04	0.02
Acenaphthene	N		mg/kg	0.01	0.21	0.13
Fluorene	N		mg/kg	0.01	0.16	0.13
Phenanthrene	N		mg/kg	0.01	1.18	1.08
Anthracene	N		mg/kg	0.01	0.25	0.27
Fluoranthene	N		mg/kg	0.01	0.77	1.39
Pyrene	N		mg/kg	0.01	0.73	1.16
Benzo[a]anthracene	N		mg/kg	0.01	0.42	0.57
Chrysene	N		mg/kg	0.01	0.42	0.6
Benzo[b]fluoranthene	N		mg/kg	0.01	0.51	1.07
Benzo[k]fluoranthene	N		mg/kg	0.01	0.71	0.86
Benzo[a]pyrene	N		mg/kg	0.01	0.39	0.6
Indeo[1,2,3-c,d]anthracene	N		mg/kg	0.01	0.31	0.43
Dibenzo[A,H]anthracene	N		mg/kg	0.01	0.31	0.43
Benzo[g,h,i]perylene	N		mg/kg	0.01	0.26	0.39
Total Of 16 PAH's	N		mg/kg	2	6.79	9.26

Appendix E Gas Verification Records



GEOSHIELD Verification Report



PROJECT REFERENCE: GEO102848

REPORT NUMBER: 001 REPORT DATE: 20/07/2022

PROJECT: Galiford Try Building

PROJECT ADDRESS: Greenhead College

Huddersfield

HD1 4ES

MEMBRANE SPECIFICATION: Gas membrane to specification BS8485 2015

Verified in accordance with CIRIA 735.

Visqueen Standard Gas Barrier Visqueen Liquid Gas Barrier

Visqueen HP Primer

Visqueen Gas Resistant Self Adhesive Membrane

Visqueen Ultimate Geoseal

Visqueen Double Sided Butyl Tape

Visuqeen GR DPC



Verification Certificate

Date: 20 January 2023

Galliford Try Building North & East Yorkshire

Greenhead Sixth Form College
Huddersfield
HD1 4ES

The documentation in this handover package shows that the installation of the Gas Membrane and ancillaries was installed to specification.

Verified in accordance with BS 8485:2015+A1:2019 and CIRIA 735.

All areas were verified, and remediation issues corrected.

Paul Colbeck
Director of Site Services





Verification Certificate

Date: 20 January 2023

Galliford Try Building North & East Yorkshire

Greenhead Sixth Form College
Huddersfield
HD1 4ES

The documentation in this handover package shows that the installation of the Gas Membrane and ancillaries was installed to specification.

Verified in accordance with BS 8485:2015+A1:2019 and CIRIA 735.

All areas were verified, and remediation issues corrected.

Paul Colbeck
Director of Site Services



Chris Lazenby

From: Val Pociunas <estimator@geoshield.co.uk>
Sent: 03 March 2023 14:31
To: Chris Lazenby
Subject: RE: Visqueen Gas Membrane - datasheet
Attachments: Visqueen_Gas_Barrier_datasheet (7).pdf

Chris,

It was myself you've spoken to

Long story short – Visqueen Gas Barrier complies with Radon protection requirements. Please see below / attached

Technical Datasheet - Product



Technical support: +44 (0) 333 2
Date Published: 22/09/2021

Visqueen Gas Barrier

Features and benefits

- BBA certified - third party accreditation
- Complies with BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Flexible - easy to detail and install on site
- Multi functional - also acts as a radon and damp proof membrane
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Gas Barrier is a multi-layer reinforced polyethylene gas barrier with a 20 micron aluminium foil. The barrier is blue on the upper surface and silver on the reverse. The product is supplied in single wound rolls (not folded), 2m x 50m.

Approvals and standards

- Third party accreditation (BBA 13/5069)
- Conforms to the specification requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 and Amber 2 applications
- Conforms to the specification requirements of BR 211:2015
- CE Mark EN 13967:2017
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

Usage

Visqueen Gas Barrier is suitable for use in all types of buildings to prevent the ingress of harmful levels of ground gases e.g. methane, carbon dioxide and radon.

The barrier can be positioned above or below a solid concrete ground floor slab or above a precast suspended concrete

Many Thanks & Kind Regards

Val Pociunas
Estimator
GeoShield Limited
Head Office 0113 3208639
Accounts 0113 3208195
On-site Services 0113 3208828

Mobile 07391 855249
Web: www.geoshield.co.uk
Email: estimator@geoshield.co.uk



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From: Chris Lazenby <c.lazenby@cundall.com>
Sent: 03 March 2023 14:19
To: Val Pociunas <estimator@geoshield.co.uk>
Subject: Visqueen Gas Membrane - datasheet

You don't often get email from c.lazenby@cundall.com. [Learn why this is important](#)

Good Afternoon,

I spoke to an engineer earlier today regarding a Visqueen Standard Gas Barrier membrane installed on the Greenhead College site in West Yorkshire. Apologies, but I haven't written any contact details down!... Our Client has been asked if the gas protection measures installed as part of the construction also mitigate against the risk of radon gases penetrating the development. The engineer confirmed verbally that the 1600 gauge DPC membrane installed was satisfactory and meets the requirement for mitigating against basic radon protection. Please can you confirm this is correct and provide us with a datasheet or specification document that confirms this information, so we can go back to Building Control who are asking the question?

Regards
Chris Lazenby
Senior Engineer
Cundall

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Visqueen Gas Barrier

Features and benefits

- BBA certified - third party accreditation
- Complies with BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Flexible - easy to detail and install on site
- Multi functional - also acts as a radon and damp proof membrane
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Gas Barrier is a multi-layer reinforced polyethylene gas barrier with a 20 micron aluminium foil. The barrier is coloured blue on the upper surface and silver on the reverse. The product is supplied in single wound rolls (not folded), 2m x 50m.

Approvals and standards

- Third party accreditation (BBA 13/5069)
- Conforms to the specification requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 and Amber 2 applications
- Conforms to the specification requirements of BR 211:2015
- CE Mark EN 13967:2017
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

Usage

Visqueen Gas Barrier is suitable for use in all types of buildings to prevent the ingress of harmful levels of ground gases e.g. methane, carbon dioxide and radon.

The barrier can be positioned above or below a solid concrete ground floor slab or above a precast suspended segmental ground floor system, e.g. beam and block floor.

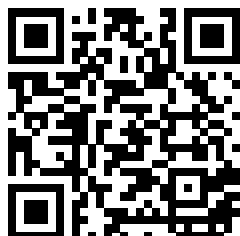
The barrier can also be used as a high performance radon membrane and/or damp proof membrane.

The product is not intended for use where there is a risk of hydrostatic pressure.

System components

- VisqueenPro Double Sided Jointing Tape, 50mm x 10m
- Visqueen Gas Resistant Foil Lap Tape, 75mm x 50m
- Visqueen GR Lap Tape, 150mm x 10m
- Visqueen Ultimate Top Hat Units
- Visqueen Preformed Units
- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m
- Visqueen TreadGUARD 300, 2m x 75m
- Visqueen TreadGUARD 1500, 1m x 2m

Find your local stockist





NEW
VISQUEEN CLASS B FR
 VAPOUR CHECK

- Visqueen Class B FR Vapour Check is a fire resistant AVCL (air and vapour control layer)
- Surpasses all national Building Regulations and Standards for air and vapour control layers
- Fire classification B - s1, d0
- Competitive, efficient and fully tested system (including tapes) for fire resistance

NEW ANOTHER FIRE PROTECTION
 PRODUCT FROM VISQUEEN

To discover the Visqueen difference visit
www.visqueen.com or call us on +44 (0) 333 202 6800





Visqueen Gas Barrier

Storage and handling

Visqueen Gas Barrier should be stored horizontally, under cover in its original packaging.

Care should be taken when handling the product in line with current manual handling regulations.

Preparation

Visqueen Gas Barrier should be installed on a smooth continuous surface e.g. grouted beam and block floor, a compacted blinding layer e.g. 50mm thick sand blinding, or smooth concrete blinding. The substrate should be free from irregularities such as voids or protrusions.

The barrier can be cut with a sharp retractable safety knife or robust scissors.

When installing the membrane in demanding site conditions, use Visqueen GR Lap Tape in place of Visqueen Gas Resistant Foil Lap Tape.

Installation

Visqueen Gas Barrier should be loose laid on the substrate with the blue side up so as to avoid sunlight glare.

The barrier should be clean and dry at the time of jointing. It should be overlapped by at least 150mm, bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Gas Resistant Foil Lap Tape.

Alternatively lap joints can be heat welded to achieve an effective seal. Welded lap joints can be less than 150mm provided the joint integrity is not compromised.

Airtight seals should be formed around all service entry points. Visqueen Preformed Top Hat Units should be used for sealing service entry pipes. The base of the top hat and the upstand should be bonded using Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Gas Resistant Foil Lap Tape. The upstand should be secured with the supplied jubilee clip.

Forming an effective barrier to gases may give rise to complex three-dimensional detailing where, it is recommended Visqueen Preformed Units are used e.g. corners. Alternatively Visqueen Pro Detailing Strip can be used to seal awkward junctions.

If the barrier is punctured or perforated a patch of the same material should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Gas Resistant Foil Lap Tape. Alternatively a patch can be formed using Visqueen Pro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane. The membrane should be covered by a protective layer immediately after installation to prevent damage from following trades, ultraviolet light, etc. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier the wire reinforcements and spacers must be prevented from puncturing the barrier. Where there is a high risk of potential damage, the barrier should be covered with Visqueen TreadGuard protection, screed, or other approved protection material before positioning the reinforcement.

Usable temperature range

It is recommended that Visqueen Gas Barrier and all associated system components should not be installed below 5°C.

Additional information

When used in accordance BS8485:2015 + A1:2019 a subfloor ventilation system or pressure relief maybe required
Where hydrocarbon or VOC contamination is present use Visqueen Ultimate VOC or HC Blok gas protection systems
To assist build sequencing, Visqueen GR DPC is available for gas protection through the wall constructions
For suspended beam and block floor detailing see GB-01
Visqueen Preformed Top Hat Units should be used at service pipe penetrations see GB-51
For internal and external corners Visqueen Ultimate Preformed Units should be used see PFU-553
To seal around steel columns use Visqueen Pro Detailing Strip see GB-52
For additional detailing information, contact Visqueen Technical Services +44 (0) 333 202 6800

The information in this datasheet was correct at the time of publication. It is the user's responsibility to obtain the latest version of the datasheet as it is updated on a regular basis. The information contained in the latest datasheet supersedes all previously published editions.

Visqueen Gas Barrier

Property	Test method	Units	Compliance criteria	Result
Dimensions	EN 1848-2	m		2 x 50
Overall thickness including scrim mesh	EN 1849-2	mm	+/-10%	0.52
Mass	EN 1849-2	g/m ²	-0%/+5%	400
Tensile strength - MD	EN 12311	N	MLV	350
Tensile strength - CD	EN 12311	N	MLV	350
Tensile elongation - MD	EN 12311	%	MLV	20
Tensile elongation - CD	EN 12311	%	MLV	21
Joint strength	EN 12317-2	N	MLV	332
Watertightness 2kPa	EN 1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	mm	MDV	150
Dart impact	BS 2782	g	MDV	731
Low temperature flexibility	EN 495-5	°C	MDV	-40
Durability against ageing	EN 1296 and EN 1928	-	Pass/Fail	Pass
Durability chemical resistance	EN 1847	-	Pass/Fail	Pass
Resistance to tearing (nail shank) CD	EN 12310-1	N	MDV	358
Resistance to tearing (nail shank) MD	EN 12310-1	N	MDV	368
Resistance to static loading	EN 12730	kg	MLV	20
Water vapour transmission - resistance	EN 1931	MNs/g	MDV	7000
Water vapour transmission - permeability	EN 1931	g/m ² /d	MDV	0.03
Visible defects	EN 1850 -2	-	Pass/Fail	Pass
Reaction to fire	EN 13501-1	Class	MDV	F
BS 8485:2015 + A1:2019 testing requirements				
Mass	EN 1849-2	g/m ²	Average >370	400
Methane permeability	ISO 15105-1	mls/m ² /d/atm	Pass/Fail	<0.15
Puncture CBR	BS EN ISO 12236	N	MDV	1114
Tensiles yield strength MD	ASTM D4885-01	kN/m	MDV	12.5
Tensiles yield strength CD	ASTM D4885-02	kN/m	MDV	7.3
Resistance to static loading	EN 12730	kg	>MLV	20
Yield elongation CD	ASTM D4885-04	%	MDV	19
Tear resistance - trouser method A - MD	BS ISO 34-1	kN/m	MDV	48.2
Tear resistance - trouser method A - CD	BS ISO 34-1	kN/m	MDV	44.8
Tear resistance - angle method B - MD	BS ISO 34-1	N	MDV	53.5
Tear resistance - angle method B - CD	BS ISO 34-1	N	MDV	60.6

Health and safety information

Refer to the Visqueen Gas Barrier material safety datasheet (MSDS).

Visqueen Gas Barrier

About Visqueen

The Visqueen name has long been recognised as one of the leading manufacturers of high quality advanced membrane technologies and design based solutions by specifiers, distributors, builders merchants and contractors throughout the UK and Europe.

For further guidance on the Visqueen services shown below, please refer to the relevant section of the Visqueen website (www.visqueen.com) or contact Visqueen Technical Services on +44 (0) 333 202 6800 or enquiries@visqueen.com

Complete Range, Complete Solution



Visqueen Technical Support

Visqueen combine an extensive product portfolio with industry leading levels of service and support which includes guidance over the phone, bespoke CAD drawings to help with complex detailing, electronic NBS specifications and access to a dedicated team of highly knowledgeable and experienced field based Technical Support Managers.

Visqueen Technical Support is available to all our customers including architects, specifiers, distributors, builders merchants, contractors and end users. All of our technical team have been awarded the industry recognised qualification Certificated Surveyor in Structural Waterproofing (CSSW).

Visqueen CPD Seminars

The Visqueen Continuing Professional Development (CPD) Seminars provide up-to-date information on changes within Building Regulations/Building Standards and nationally recognised industry guidance affecting damp proofing, water vapour control, hazardous ground gas protection and below ground structural waterproofing.

The one hour seminars have been produced for design specialists within the construction sector and are delivered by our team of Technical Support Managers.

Visqueen PI designs and special projects

From initial design to the completed project, Visqueen are with you every step of the way. Whether it be hazardous ground gas protection and/or below ground waterproofing protection employing barrier, structurally integral or drained systems, Visqueen can offer professional indemnity (PI) insurance for bespoke Visqueen design solutions.

Visqueen Technical Support Managers work with all stakeholders to provide cost effective Visqueen solutions offering complete peace of mind throughout the construction phase and beyond.

Visqueen Training Academy

Based at our manufacturing facility in Derbyshire, the Visqueen Training Academy is available to support Visqueen customers throughout the UK by providing a wide range of both theory and practical skills related training.

Courses include one day product awareness training for our distributors and builders merchants to help them in their day-to-day jobs, through to intensive three day courses giving detailed hands-on training in the practical skills required for safe and robust product installation.



GEOSHIELD Verification Report



MEMBRANE SPECIFICATION:

DESIGN DETAILS:

NE8659-CDL-ZZ-XX-RP-GE-60200 Phase 2 Assessment Rev A (1)

NE8659-CDL-ZZ-XX-RP-GE-60200 Phase 2 Assessment Rev A (1)

NE8659-CDL-ZZ-XX-RP-GE-60200 Phase 2 Assessment Rev A (1)

NE8659-CDL-ZZ-XX-RP-GE-60200 Phase 2 Assessment Rev A (1)

NE8659-CCS-XX-XX-DR-S-30023 - RETAINING WALL

_External Envelope Section Detail - Typical Brickwork Base at Ground Bearing Slab

Edge Column Location_A5 Construction_C1_0

GB-26_concrete_slab_edge_gas_waterproofing

GB-51 service pipe top hat

GB-52_steel_column_sealing

NE8659-CCS-XX-ZZ-DR-S-86001

NE8659-RYD-01-00-DR-A-4005-S3-P1-External Envelope Plan Detail -

NE8659-RYD-01-00-DR-A-4012-S3-P1-External Envelope Plan Detail -

NE8659-RYD-01-00-DR-A-4104_External Envelope Section Detail - Typical



GEOSHIELD

Verification Report



MEMBRANE SPECIFICATION:

DESIGN DETAILS:

NE8659-RYD-01-00-DR-A-4107-A-C2-External Envelope Section Detail - Lift Pit and

Shaft Base Gr 1

NE8659-RYD-01-00-DR-A-4108_External Envelope Section Detail - Typical Pipe

Pipe Penetration Through Ground Bearing Slab_A5 Construction_C1_0

NE8659-RYD-01-00-DR-A-4110-A-C1-External Envelope Section Detail - Typical

Retaining Wall Base

NE8659-RYD-01-00-DR-A-4111-A-C1-External Envelope Section Detail - Typical

Retaining Wall Head

NE8659-RYD-01-00-DR-A-4117 - Siphonic Details Main Build



GEOSHIELD Verification Report



VERIFICATION OFFICER: Finlay Todd

VERIFICATION COMPANY: GeoShield Limited

Icon Business Centre

4100 Park Approach

Thorpe Park

Leeds

CONTACT NUMBER: 07502343063

EMAIL ADDRESS: Ftodd@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:

☐

NO:

☐



GEOSHIELD Verification Report



CLIENT DETAILS

CLIENT CONTACT:	Jack Broomhead
CONTACTS ROLE:	Senior Project Manager
MOBILE PHONE:	07719 954 286
EMAIL ADDRESS:	Jack.broomhead@gallifordtry.co.uk



CLIENT CONTACT:	
CONTACTS ROLE:	
MOBILE PHONE:	
EMAIL ADDRESS	
NOTES:	
NOTES:	
NOTES:	



GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

APPLICATOR NAME:

COMPANY:

APPLICATOR TEL:

APPLICATOR EMAIL:

NOTES:

NOTES:

NOTES:

NOTES:



GEOSHIELD Verification Report



AREA SURVEYED: Retaining Wall Kicker (highlighted section)

SITE CONDITIONS:

WEATHER: Sunny

TEMPERATURE: 28c

MEMBRANE TEMPERATURE:

RELATIVE HUMIDITY:

TIME: 10:45-12:30

REPORT NUMBER: 001

DATE: 20/07/2022

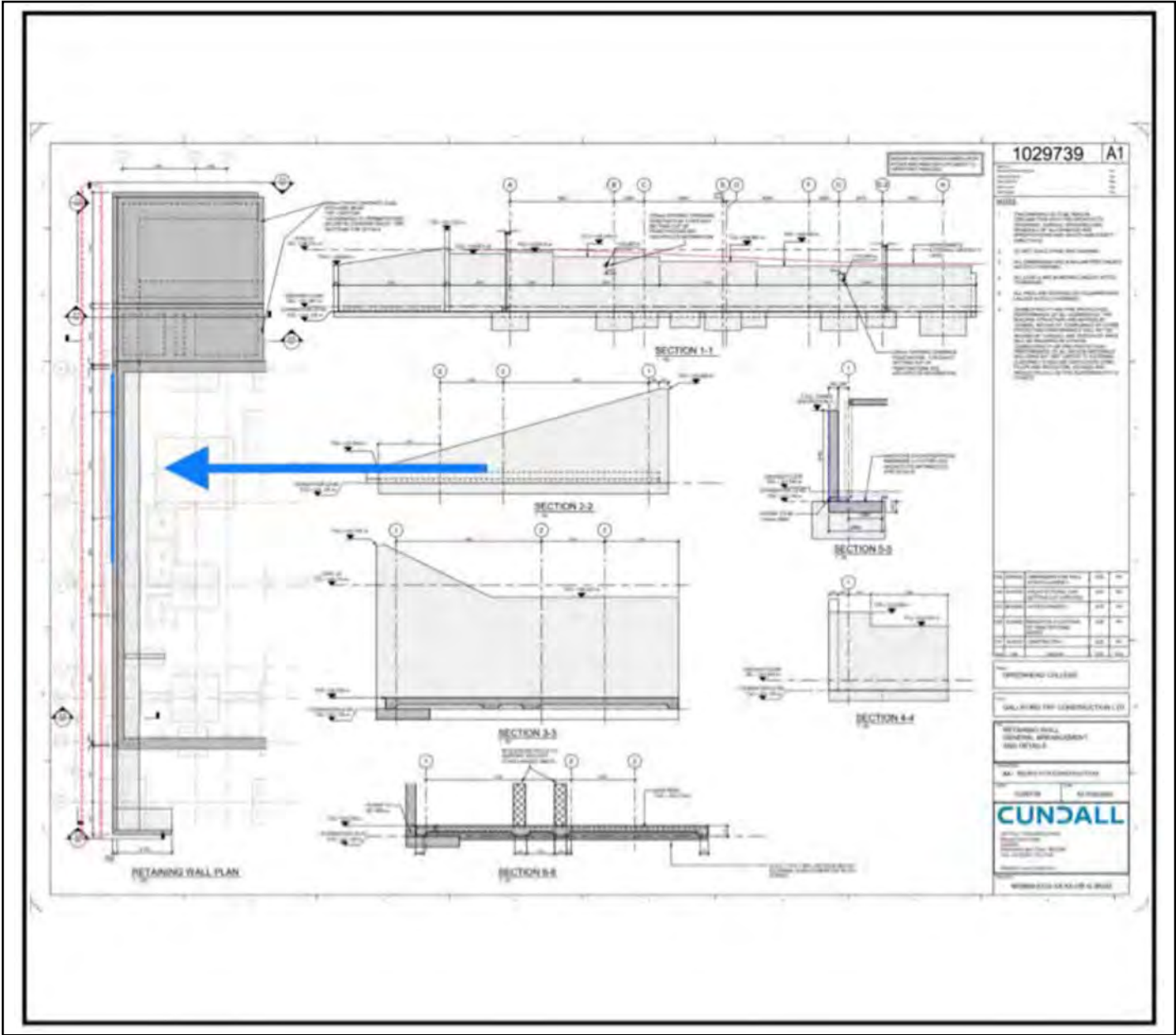
ACCOMPANIED



GEOSHIELD Verification Report



VERIFICATION LAYOUT



Overview of verified area



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OVERVIEW PHOTOGRAPHS



Overview of verified area





GEOSHIELD Verification Report



OVERVIEW PHOTOGRAPHS



Overview of verified area



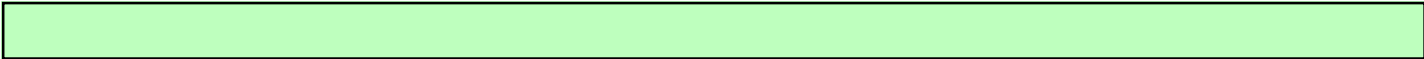
GEOSHIELD Verification Report



LIMITATIONS

SURVEY AREA: Retaining Wall Kicker

RESTRICTIONS AND LIMITATIONS: Rebar is present in the kicker rising vertically from the concrete. This caused major problems when trying to accurately verify the space between the rebar. All other areas this was not a problem.





GEOSHIELD Verification Report



VERIFICATION ITEM ONE

LOCATION/GRID LINE: Retaining Wall Kicker

NOTES: Dielectric Testing

A visual inspection was first carried out to make sure a good coverage had been achieved and no water was on the wall. The dielectric test was then carried out on the retaining wall kicker. Some small pinholes were found during the testing, indicated by



the machine beeping, some were then picked up visually. Where they were not visible a larger area was then remediated.