VALIDATION REPORT

Site:	Jersey Street, Ancoats
References:	15-798-R5-1
Date:	29 May 2025
Client:	Civic Engineers

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QUALITY ASSURANCE

Report references	15-798-R5-1

REV REF	DESCRIPTION	DATE
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1826-01-CIV-XX-XX-D-C-10001 - Low permeability barrier

1826-01-CIV-XX-XX-D-G-20101- Catchment areas

1. INTRODUCTION

1.1. BACKGROUND

This report details the remediation and enabling works operations that were undertaken by Alined Construction under the part time supervision of E3P to facilitate the preparation of an area of public open space on land located to the north of Jersey Street and west of Wadeford Close, Ancoats, Manchester.

E3P was appointed by Civic Engineers as an independent Geoenvironmental Consultant for the site remediation, preparation/enabling and validation works and the subsequent production of a suitably detailed report to ensure the satisfaction of the relevant planning conditions and geotechnical engineering requirements.

1.2. SITE DETAILS

Site Address	Ancoats Green, Wadeford Close, Manchester M4 6LP
National Grid Reference	E 385223, N 398954
Planning Reference	136141/VO/2023

All acronyms used within this report are defined in the glossary presented in APPENDIX II.

A site location plan is presented in APPENDIX III as Drawing 15-789-001.

1.3. PLANNING APPLICATION

Manchester City Council has granted planning permission (Ref No. 136141/VO/2023) for 'Public realm improvements and associated works across three, character areas including Ancoats Green (Area A), Prussia Street Arm Greenway (Area B) and Jersey Green (Area C)'.

1.4. REDEVELOPMENT PLAN

The proposals within planning application ref: 136141/VO/2023 involve public realm improvements and associated works across 3-character areas including Ancoats Green (Phase 1), Prussia Street Arm Greenway (Phase 2B) and Jersey Green (Phase 2A).

The application site is bound by Portugal Street to the north, Wadeford Close to the east, and the Rochdale Canal to the south in Ancoats, Manchester.

Figure 1.1 indicates the proposed development layout master plan which is included as Drawing 15-798-002 in APPENDIX III.

Figure 1.1 Snapshot of Proposed Development Master Plan

1.5. REDEVELOPMENT PLAN - ANCOATS GREEN

The proposals for Ancoats Green (Phase 1) comprise soft landscaping improvements, hard landscaping works including provision of a formal play area, and installation of Sustainable Urban Drainage Systems (SuDS).

Figure 1.2 indicates the proposed development layout. For the avoidance of doubt, this remediation strategy refers to the area highlighted yellow (Phase 1 – Ancoats Green) and this area is herein referred to as 'the site'.

Figure 1.2 Proposed Development Plan

KEY
Site Boundary
Phase 1 Ancoats Green
Indicative implementation date: January 2024 – September 2024
Phase 2A Jersey Green
Indicative implementation date: May 2026 – November 2026
Phase 2B Prussia Greenway
Indicative implementation date: March 2027 – December 2027

1.6. SUMMARY OF REMEDIATION AND ENABLING WORKS

The proposed remediation activities were detailed within the E3P Remediation and Enabling Works Strategy (15-798-R4-3; dated January 2025) and supplementary supporting documents provided by E3P.

This report has been prepared to document the completion of all necessary land remediation and enabling works and to record the presence of any variation in ground conditions or previously unidentified sources of potential contamination, environmental impact or potential nuisance to the wider environment.

The Remediation and Enabling Works elements are summarised below:

- RE-1 – Pre-commencement Regulatory Compliance
- RE-2 – Independent Validation and Site Supervision
- RE-3 – Environment and Nuisance Control
- RE-4 – Risk to Infrastructure
- RE-5 – Site Clearance Operations
- RE-6 – Identification, Isolation and Treatment of Invasive Plants
- RE-7 – Excavation, Breaking and Processing of all Above and Below Ground Structures
- RE-8 – Importation of Materials for Use in Construction
- RE-9 – Installation of a Low-Permeability Barrier
- RE-10 – Installation of Positively Drained Hardstanding
- RE-11 – Preparation of Cover System
- RE-12 – Stockpile Arrangement
- RE-13 – Provision of Subsoil
- RE-14 – Provision of Topsoil
- RE-15 – Waste Soils Surplus to Requirements
- RE-16 – General Validation of Stockpiled Materials and Turnover Requirements

1.7. REGULATORY CORRESPONDENCE

1.7.1. ENVIRONMENTAL HEALTH OFFICER

Following receipt of comments from the Environmental Health Officer (EHO), additional details were provided to address concerns regarding the proposed cover systems within tree root protection zones at Ancoats Green (Planning Ref: 136141/VO/2023).

In consultation with the EHO, the remediation strategy was updated to confirm that, where appropriate, existing soils would be retained in-situ, supported by chemical testing data demonstrating compliance with Public Open Space (Park) Generic Assessment Criteria (GACs).

In the vicinity of POS8, where trace levels of asbestos fibres (<0.001%) were identified and excavation is constrained due to the presence of a tree root protection zone, a 100 mm clean topsoil and turf cover system was proposed as suitable mitigation.

This approach was discussed during a Microsoft Teams call between E3P and the EHO on 13th August 2024, followed by email correspondence. The approach was subsequently agreed in principle, with formal confirmation of approval provided by the EHO on 16th December 2024.

An updated Remediation Strategy incorporating the agreed measures was submitted for formal approval.

1.7.2. ENVIRONMENT AGENCY

E3P was provided with comments dated 01 October 2024 from the Environment Agency (EA) in relation to the discharge of conditions application (Ref: CDN/24/0518) for Conditions 7 (Drainage), 10 (Ground Conditions) and 11 (Drainage Infiltration) attached to planning permission reference 136141/VO/2023.

Following receipt of comments from the EA, dated 1st October 2024, additional remediation measures were proposed in response to concerns regarding the potential migration of impacted perched water which has been encountered within the infilled canal on-site. There was a potential for migration of perched water along the infilled canal in a southerly direction away from the site.

In consultation with the EA, the remediation strategy was updated to include the installation of a low permeability barrier across the southern site boundary, designed to prevent the off-site migration of perched water.

In addition, the installation of positively drained hardstanding was proposed in this area to reduce surface water infiltration and further mitigate the risk of contaminant mobilisation.

These revisions were agreed in principle with the EA (letter dated 2nd December 2024), and updated plans detailing the changes were subsequently submitted for formal approval.

2. REMEDIATION AND SITE ENABLING WORKS

The focus of the remediation and enabling works is to address the contaminant issues previously identified within the site investigations that presented an unacceptable risk to human health and controlled waters following the redevelopment of the site.

For completeness, each of these activities has been discussed below within the context of the actual remediation works that were undertaken on site.

The Remediation and enabling works commenced in June 2024 and were completed by April 2025.

2.1. RE-1 – PRE COMMENCEMENT REGULATORY COMPLIANCE

The site was granted planning permission for "public realm improvements". This was submitted under planning application number 136141/VO/2023 and approved.

Prior to the commencement of any works on-site, reports relating to the assessment of risk to contaminated land were submitted to the regulatory authorities to gain written approval.

During the works, E3P engaged with the regulatory authorities (Environmental Health Officer and Environment Agency) in order to address additional requirements where changes to the original Remediation Strategy were required. These have been discussed in more detail in Section 1.7.

2.2. RE-2 – INDEPENDENT VALIDATION AND SITE SUPERVISION

E3P completed part-time independent validation and site supervision between June 2024 and April 2025, to monitor progress, and sample materials in line with the remediation strategy.

Sampling of materials included the chemical analysis of stockpiled materials, imported materials, and site-derived topsoil materials for use in the proposed redevelopment of the site. Sampling and chemical analysis was completed in line with the sampling frequency outlined in the Contaminated Land Remediation Strategy.

The chemical sampling and laboratory results are discussed in the appropriate remediation points pertinent to their reason for analysis.

2.3. RE-3 – ENVIRONMENT AND NUISANCE CONTROL

During remediation, works were restricted to between 8:00am and 5:30pm. Heras fencing was erected around the site boundary. Access and parking were provided off Oldham Road.

2.4. RE-4 – RISK TO INFASTRUCTURE

Site works were completed in a manner that ensured no risk of disturbance to the adjacent infrastructure.

2.5. RE-5 – SITE CLEARANCE OPERATIONS

Initial groundworks included a site-wide strip of topsoil in areas of proposed redevelopment (walkways), with areas where mature trees and vegetation were to be retained remaining fenced off.

All vegetation was either stockpiled or alternatively removed from site in accordance with waste permitting regulations.

Site clearance operations were completed in areas outside of tree root protection zones, which were noted at the north, south, west, and localised areas in the east and central portions of the site.

Buffer zones with no disturbance to tree root areas were maintained throughout all works.

Photographs	Plate 1 - 2

2.6. RE-6 – IDENTIFICATION, ISOLATION, AND TREATMENT OF INVASIVE PLANTS

No invasive species were identified throughout the remedial works.

2.7. RE-7 – EXCAVATION, BREAKING, AND PROCESSING OF ALL ABOVE AND BELOW GROUND STRUCTURES

All obstructions, relict foundations, and artificially hard materials in areas of previous pathways were dug out with material subsequently stockpiled and removed from site.

2.8. RE-8 – IMPORTATION OF MATERIALS FOR USE IN CONSTRUCTION

All materials required for the construction of pathways and hardstanding areas were imported to the site as product, in full accordance with the approved proposals and design specifications. No site-won or recycled materials were used for these works. The imported products were verified to meet the necessary quality and compliance standards as set out in the design documentation.

Both topsoil and subsoil were imported to form a suitable clean cover system in areas of proposed landscaping. Three samples of imported topsoil and subsoil were obtained, based upon the appropriate soil sampling frequencies outlined in E3P report: 15-798-R4-3 – Contaminated Land Remediation Strategy, dated January 2025 to confirm the suitability of material for retention.

Chemical testing of both topsoil and subsoil materials was carried out, with results presented in Appendix VI. All samples were tested and compared against POS park general acceptance criteria, confirming suitability for use within the clean cover system.

Topsoil and Subsoil was supplied by Tarmac sourced from Crown Farm Quarry and was tested on-site and confirmed to be suitable prior to placement. Chemical analysis results are included within Appendix VI. Testing results provided by the supplier prior to importation are available on request.

Imported materials were obtained from a certified manufacturer and supplied as a commercially available product. As such, the importation did not require a Materials Management Plan (MMP).

Import tickets are available on request.

Chemical Testing	Eurofins Standard Report - 25-05089-1 TS101–TS103 & SS101–SS103
Photographs	Plate 7 – 10 (Imported sand and quarried stone)

2.9. RE-9 – INSTALLATION OF A LOW-PERMEABILITY BARRIER

The migration of mobile phase contaminants within perched groundwater laterally across the site is deemed to be limited due to the canal likely being lined with low permeability CLAY. An assessment of the potential for migration along the existing infilled canal arm has concluded that due to the presence

of a clay bund and concrete fill, any mobile contamination is highly unlikely to reach the Rochdale Canal to the south.

Following engagement with the EA, additional remediation works were deemed necessary to prevent the potential for further migration of impacted perched water south along the route of the infilled canal. The updated Remediation Strategy incorporated the installation of a low permeability barrier, in the form of a sheet pile wall, on the southern boundary of the Ancoats Green, intersecting the infilled canal to reduce the lateral migration along the infilled canal arm. This will reduce the movement of perched water within the Made Ground and also reduce the potential for migration of mobile phase contamination off-site.

The design for the low permeability barrier is included as drawing 1826-01-CIV-XX-XX-D-X-10001 within Appendix III. Technical data sheets for the materials used in the construction of the low permeability barrier are available on request.

Excavations were advanced within the proposed location of the sheet pile wall to understand the existing structures associated with the infilled canal. It was confirmed that the canal was lined with brick walls to the east and west. A sheet pile wall was installed across the infilled canal between the existing brick walls. The sheet pile wall was designed and installed in a proposed area of soft landscaping, ensuring it was placed both outside of tree root protection zones and approximately 3.00m away from the existing building to the west.

Site visits were completed to ensure installation was completed to the design specifications required to suitably mitigate the risk of mobilisation of contaminants through the former canal arm. The top of the pile set was placed approximately 0.30 m below the proposed ground level to ensure a suitable cover system/ growing medium was present in the footprint of the sheet pile wall.

Photographs	Plate 3 - 6

2.10. RE-10 – INSTALLATION OF POSITIVELY DRAINED HARDSTANDING

The proposals include positively drained hardstanding either permeable or non-permeable to reduce the permeation of rainwater by 30%. The current site has 100% rainwater permeation potential, which poses a risk in the area of the infilled canal at the Ancoats Green boundary where deep Made Ground is present, where leaching potential is increased.

Where positively drained hardstanding is installed, an impermeable lining collects the rainwater and takes it to sewers preventing rainwater permeation in high-risk areas. Where installed, it is the contractors responsibility to prepare the area to facilitate the installation during the development phase.

A proposed area of approximately 2971m^2 (29%) of positively drained hardstanding with no infiltration capacity, and approximately 117m^2 (1%) of positively drained lined raingardens is outlined in Drawing 1826-01-CIV-XX-XX-D-C-20101 within Appendix III. Additionally, an area of approximately 261m^2 (25%) positively draining impermeable paving is designed over the former infilled canal arm.

E3P were not present during the installation of positively drained hardstanding and is working off the understanding all infrastructure was designed and implemented by contractors in accordance with parameters outlined in Drawing 1826-01-CIV-XX-XX-D-C-20101.

Photographs	Plate 7 - 11

2.11. RE-11 – PREPARATION OF COVER SYSTEM

As per the Remediation Strategy, it was recommended that a chemically validated 450 mm clean cover system should be installed within areas of proposed landscaping. Figures 2.1 and 2.2 show the proposed soil plan. Where tree root protection zones are present, existing soils were not permitted to be excavated and replaced. E3P engaged with the EHO to confirm suitability of a variation of the Remediation Strategy, which included testing soils in-situ and installing 100 mm chemically validated topsoil. Correspondence with regulatory bodies is discussed in Section 1.7.

A series of hand-dug pits were advanced within areas of existing cover system to be retained to depths between 0.30–0.45 m bgl, and materials tested to confirm suitability. Samples were obtained from both topsoil (0.10m bgl) and subsoil (0.45 m bgl).

Asbestos was identified within one location (POS8) within an area of tree root protection, meaning no excavations of impacted materials could be completed. Correspondence with the EHO confirmed that due to the localised exceedance and low level (<0.001%), the installation of 100 mm clean cover system of suitable material was agreed above impacted materials to remove the potential for direct contact for future site users.

Within the remaining areas of site outside the tree root protection zones, a minimum 300 mm clean cover system utilising imported chemically validated subsoil and topsoil will be placed. Requirements for landscaping have also been incorporated, meaning some areas such as tree pits required a thicker, clean cover system.

Chemical analysis results are included within Appendix VI and a sampling location plan is included within Appendix III.

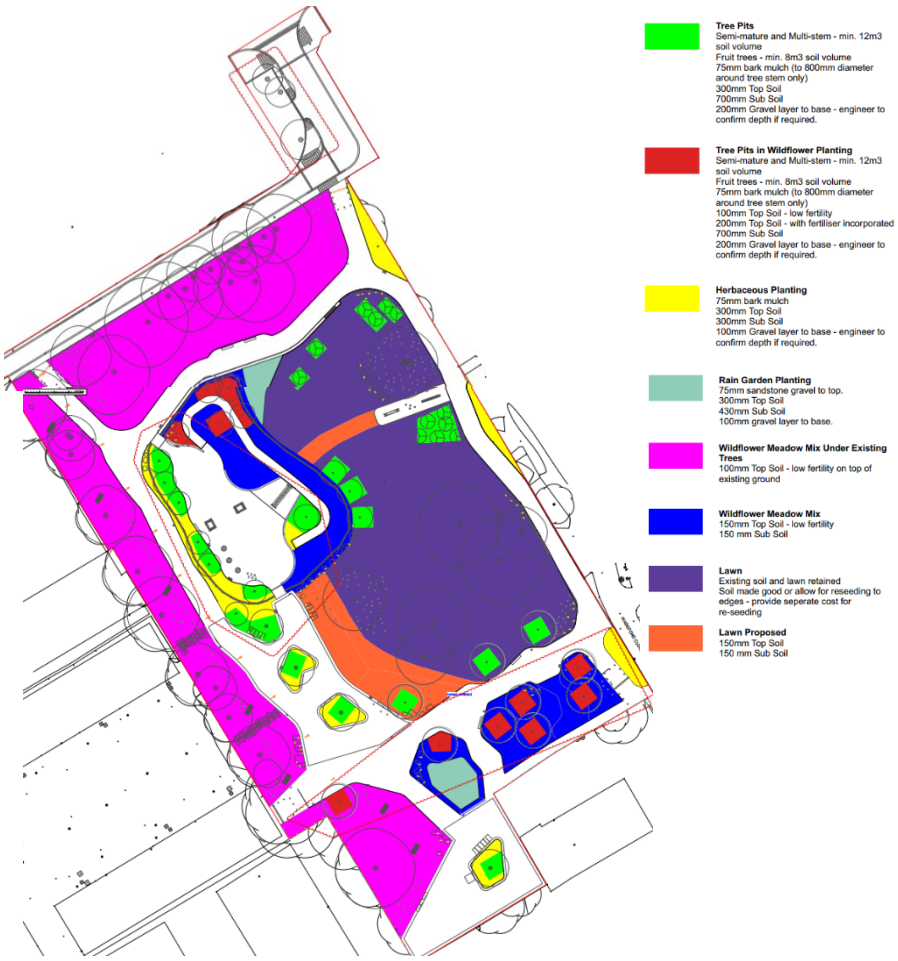


Figure 2.1 – Proposed Soil Plan

Chemical Testing	Eurofins Standard Report - 24-19169-1 - HPTS101-HPTS105 - HPSS101-HPSS105 Eurofins Standard Report - 24-24349-1 - POS1-TS – POS8-TS (Topsoil 0.10 m bgl) - POS1-SS – POS8-SS (Subsoil 0.45 m bgl)
Photographs	Plate 11 - 15

2.12. RE-12 – STOCKPILE ARRANGEMENT

Stockpiles of site-generated materials were kept at the northern and western sectors of the site in areas of proposed hardstanding, and soft landscaping during early phases of work (June–August 2024). Stockpiles of imported materials remained separate from site generated materials during the works, with sampling completed at appropriate frequencies.

All stockpiles intended for export off-site, including materials generated during removal and processing of above and below ground infrastructure were kept segregated to ensure no cross contamination of materials occurred.

Chemical Testing	Eurofins Standard Report - 24-41088-1 - TS101–TS108 Eurofins Standard Report - 24-19169-1 - TS106 – TS108
Photographs	Plate 2

2.13. RE-13 – PROVISION OF SUBSOIL

The site was previously used as a park, and as part of the site investigation, the existing in-situ subsoil was tested and found to be generally suitable for retention, provided further testing was carried out in line with the required sampling frequencies.

Due to the presence of Tree Root Protection Areas (TRPAs), full excavation wasn't possible in some parts of the site. To assess these areas properly, hand pits were dug within the TRPAs. Testing from these pits confirmed that the subsoil was suitable to remain in place, with one exception—area POS8. In this area, a very low level of asbestos (<0.001%) was detected. As a precaution, POS8 will be capped with 100 mm of clean cover to provide a suitable barrier.

All other retained subsoil areas will receive a minimum 300 mm clean cover system to ensure they meet the site's remediation requirements.

Where tree constraints were not an issue, manufactured subsoil was imported for within areas of landscaping and tree pits. The material was supplied by Tarmac sourced from Crown Farm Quarry and was tested on-site and confirmed to be suitable prior to placement. Chemical analysis results are included within Appendix VI. Testing results provided by the supplier prior to importation are available on request.

Chemical Testing	Eurofins Standard Report – 24-24349-1 - Site won – POS1-SS – POS8-SS (Subsoil 0.45 m bgl) Eurofins Standard Report – 25-05089-1 - Imported – SS101–SS103 Supplier Information: TOHA Report – TOHA/24/1276/2/SS - Crown Farm Subsoil

2.14. RE-14 – PROVISION OF TOPSOIL

As part of the site preparation works, the existing topsoil was stripped and stockpiled to allow for chemical testing to determine its suitability for reuse within the proposed clean cover system. Laboratory analysis of the stockpiled material identified the presence of asbestos and elevated levels of metals, making it unsuitable for reuse as part of the cover system. As a result, this material was removed from site for appropriate disposal.

In areas within Tree Root Protection Areas (TRPAs), full removal and replacement of topsoil was not feasible. Instead, hand pits were excavated to assess the condition of the topsoil in these zones. Testing confirmed that the topsoil in these areas could be safely retained, with the exception of area POS8, where a trace amount of asbestos (<0.001%) was detected. This area will be capped with a 100 mm layer of clean topsoil as a precautionary measure.

All other retained topsoil areas will be covered with a minimum 300 mm clean cover system to meet the site's remediation requirements.

Across the remainder of the site, imported manufactured topsoil was used to construct the clean cover system. The material was supplied by Tarmac sourced from Crown Farm Quarry and was tested on-site and confirmed to be suitable prior to placement. Chemical analysis results are included within Appendix VI. Testing results provided by the supplier prior to importation are available on request.

Chemical Testing	Eurofins Standard Report - 24-19169-1 - HPTS101-HPTS105 Eurofins Standard Report - 24-24349-1 - POS1-TS – POS8-TS (Topsoil 0.10 m bgl) Eurofins Standard Report - 25-05089-1 - Imported - TS101–TS103 Supplier Information: TOHA Report – TOHA/24/1518/SS - Crown Farm 4:3 Topsoil

2.15. RE-15 – WASTE SOILS SURPLUS TO REQUIREMENTS

Stockpiled topsoil which was deemed visually and chemically unsuitable for retention on site was removed by a suitably licenced waste contractor. Waste tickets are available on request.

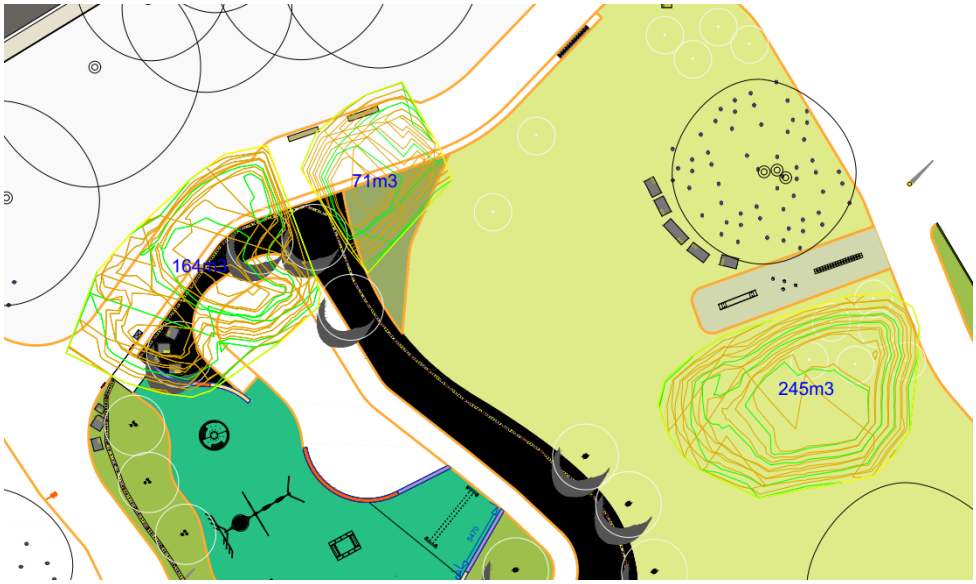
2.16. RE-16 – GENERAL VALIDATION OF STOCKPILED MATERIALS AND TURNOVER REQUIREMENTS

Enabling works included a topsoil strip within areas of the site outside the tree root protection areas. The topsoil was stockpiled towards the north and western boundaries to allow for chemical testing to determine its potential suitability for re-use on site. A total of 480m3 of topsoil was stockpiled. Locations of the stockpiled material is included in Figure 2.3.

Testing of the stockpiled topsoil deemed it unsuitable for re-use due to the presence of asbestos and elevated metals. The stockpiled material was subsequently removed off-site by a suitably licensed waste contractor. Waste transfer notes are available on request.

Where practical, soils remained in-situ and were not excavated due to the nature of the development therefore, with the exception of topsoil and imported materials, no other material was stockpiled on site.

Figure 2.3 – Stockpile plan of site-won topsoil



3. CONCLUSIONS

On completion of the validation works undertaken, E3P can confirm that all works were undertaken in strict accordance with the agreed Remediation Strategy and therefore would deem the site suitable for use as Public Open Space (POS).

E3P do not consider that any further work is necessary.

END OF REPORT

Appendix I: Limitations

GENERAL

This report and any associated works (together comprising the "Services") were compiled and carried out by E3P for the client (as present in Section 1) under the E3P “Terms of Business” or with those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.

Unless explicitly agreed otherwise, in writing, this report has been prepared under E3P Standard Terms and Business as included within our proposal to the Client.

Project-specific appointment documents may be agreed upon at our discretion and a charge may be levied for both the time to review and finalise appointment documents and also for associated changes to the appointment terms. E3P reserves the right to amend the fee should any changes to the appointment terms create an increased risk to E3P.

The report needs to be considered in light of the proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

PHASE 1 GEOENVIRONMENTAL AND PRELIMINARY RISK ASSESSMENTS

Coverage: This section covers reports with the following titles or combination of titles: Phase 1; Desktop Study; Geoenvironmental Assessment; Development Appraisal; Preliminary Environmental Risk Assessment; Constraints Report; Due Diligence Report; Geotechnical Development Review; Environmental Statement; Environmental Chapter; Baseline Environmental Assessment; Project Scope Summary Report (PSSR), Program Environmental Impact Report (PEIR), Geotechnical Development Risk Register; Agricultural Land Assessment; Mineral Safeguarding Assessment; Desk Top Coal Mining Risk Assessment; Hydrogeological Appraisal; Construction Environmental Management Plan; and Site Water Management Plan.

The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walkover inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects’ responses may not have been received from all parties. E3P cannot be held responsible for any disclosures that are provided post-production of our report and will not automatically update our report.

The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, E3P reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed. Actual risks can only be assessed following intrusive investigations of the site.

Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and does not constitute or replace full and proper surveys completed by suitably qualified and experienced specialists in these fields.

E3P does not warrant work/data undertaken/provided by others.

INTRUSIVE INVESTIGATION REPORTS

Coverage: The following report titles (or combination) may cover this category of work: Geoenvironmental Site Investigation; Geotechnical Assessment; GIR (Ground Investigation Reports); Preliminary Environmental and Geotechnical Risk Assessment; Preliminary Summary; Coal Mining Risk Assessment, Ground Gas Addendum; and Geotechnical Risk Register.

The investigation has been undertaken to provide information concerning either:

- The type and degree of contamination present at the site in order to allow a generic quantitative risk assessment to be undertaken; or
- Information on the soil properties present at the site to allow for geotechnical development constraints to be considered.

The scope of the investigation was selected on the basis of the specific development and land use scenario proposed by the Client and may be inappropriate to another form of development or scheme. If the development layout was not known at the time of the investigation the report findings may need revisiting once the development layout is confirmed.

Unless otherwise specified in the scope of works, any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.

For contamination purposes, the objectives of the investigation are limited to establishing the risks associated with potential contamination sources with the potential to cause harm to human health, building materials, the environment (including adjacent land), or controlled waters.

For geotechnical investigations, the purpose is to broadly consider potential development constraints associated with the physical property of the soils underlying the site within the context of the proposed future or continued use of the site, as stated within the report.

The amount of exploratory work, soil property testing and chemical testing undertaken has necessarily been restricted by various factors which may include accessibility, the presence of services; existing buildings; current site usage or short timescales. The exploratory holes completed assess only a small percentage of the area in relation to the overall size of the Site, and as such can only provide a general indication of conditions.

The number of sampling points and the methods of sampling and testing do not preclude the possible existence of contamination where concentrations may be significantly higher than those actually encountered or ground conditions that vary from those identified. In addition, there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation, and which have therefore not been taken into account in this report

The inspection, testing and monitoring records relate specifically to the investigation points and the timeframe that the works were undertaken. They will also be limited by the techniques employed. As part of this assessment, E3P has used reasonable skill and care to extrapolate conditions between these points based on assumptions to develop our interpretation and conclusions.

The assumption made in forming our conclusions is that the ground and groundwater conditions (both chemically and physically) are the same as have been encountered during the works undertaken at the specific points of investigation and at the time of the investigation.

Conditions can change between investigation points both spatially and over time and these interpretations should therefore be considered indicative. The assessment of extreme weather events and their impact on ground conditions is not within the scope of E3P's work

The risk assessment and opinions provided are based on currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of

any future changes or amendments to these values. Specific assumptions associated with the risk assessment process have been outlined within the body or associated appendix of the report.

Additional investigations may be required in order to satisfy relevant planning conditions or to resolve any engineering and environmental issues.

Where soil contamination concentrations recorded as part of this investigation are used for commentary on the potential waste classification of soils for disposal purposes, these should be classed as indicative only. Due consideration should be given to the variability of contaminant concentrations taken from targeted samples versus bulk excavated soils and the potential variability of contaminant concentrations between sampling locations. Where major waste disposal operations are considered, targeted waste classification investigations should be designed and the waste classification and any subsequent disposal option agreed upon with licenced subcontractors and/or the relevant regulators.

The results of the asbestos testing are factually reported, and interpretation is given as to how this relates to the previous use of the site, the types of ground encountered and site conceptualisation. This does not however constitute a formal asbestos assessment. These results should be treated cautiously and should not be relied upon to provide detailed and representative information on the delineation, type and extent of bulk ACMs and/or trace loose asbestos fibres within the soil matrix at the site.

If costs have been included in relation to additional site works, and/or site remediation works these must be considered as indicative only and must be confirmed by a qualified quantity surveyor.

EUROCODE 7: GEOTECHNICAL DESIGN

On 1st April 2010, BS EN 1997-1:2004 (Eurocode 7: Geotechnical Design – Part 1) became the mandatory baseline standard for geotechnical ground investigations.

In terms of geotechnical design for foundations, slopes, retaining walls and earthworks, EC7 sets guidance on design procedures including specific guidance on the numbers and spacings of boreholes for geotechnical design, there are limits to methods of ground investigation and the quality of data obtained and there are also prescriptive methods of assessing soil strengths and methods of design. Unless otherwise explicitly stated, the work has not been undertaken in accordance with EC7. A standard geotechnical interpretative report will not meet the requirements of the Geotechnical Design Report (GDR) under Eurocode 7. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. The report is likely to represent a Ground Investigation Report (GIR) under the Eurocode 7 guidance.

DETAILED QUANTITATIVE RISK ASSESSMENTS AND REMEDIATION AND ENABLING WORK STRATEGY REPORTS

These reports build upon previous report versions and associated notes. The scope of the investigation, further testing and monitoring and associated risk assessments were selected based on the specific development and land use scenario proposed by the Client and may not be appropriate to another form of development or scheme layout. The risk assessment and opinions provided are based on currently available approaches in the generation of Site-Specific Assessment Criteria relating to contamination concentrations and are not considered to represent a risk in a specific land use scenario to a specific receptor. No liability can be accepted for the retrospective effects of any future changes or amendments to these values, associated models or associated guidance.

The outputs of the Detailed Quantitative Risk Assessments are based upon the manipulation of standard risk assessment models. These are our interpretation of the risk assessment criteria.

Before adoption on-site, assessment criteria will need to be discussed and agreed upon with the Regulatory Authorities prior to adoption on site. The regulatory discussion and engagement process may result in an alternative interpretation being determined and agreed. The process and timescales associated with the Regulatory Authority engagement are not within the control of E3P. All costs and

programmes presented as a result of this process should be validated by a quantity surveyor and should be presumed to be indicative.

E3P does not accept liability for any subcontract work that has not been completed in strict accordance with an approved E3P Remediation and Enabling Works Strategy.

GEOTECHNICAL DESIGN REPORT (GDR)

The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. All the relevant information needs to be provided to allow for a GDR to be produced.

MONITORING (INCLUDING REMEDIATION MONITORING REPORTS AND BUILD PHASE MITIGATION)

These reports are factual and comprise monitoring, normally groundwater and ground gas and data provided by contractors as part of earthworks or remedial works.

The data is presented and will be compared with assessment criteria.

Appendix II: Glossary

ACM	Asbestos-containing material	MMP	Materials management plan
ADS	Acoustic design statement	ND	Not detected
AST	Above-ground storage tank	NDP	Nuclear density probe
BGS	British Geological Survey	NMP	Noise Management Plan
BSI	British Standards Institute	NPSE	Noise Policy Statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	NR	Not recorded
MRA	Mining Remediation Authority	PAH	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	PCB	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	PI	Plasticity index
CIRIA	Construction Industry Research Association	PID	Photo ionisation detector
CLEA	Contaminated land exposure assessment	POS	Public open space
CML	Council of Mortgage Lenders	PPE	Personnel protective equipment
CoC	Contaminants of concern	ProPG	Professional practice guidance
CSM	Conceptual site model	QA	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	SGV	Soil guideline value
DWS	Drinking water standard	SPH	Separate-phase hydrocarbon
EA	Environment Agency	SPT	Standard penetration test
EQS	Environmental quality standard	SVOC	Semi-volatile organic compound
FFL	Finished floor level	TPH	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	TPH CWG	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	UKWIR	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	UST	Underground storage tank
HCV	Health criteria value	VCC	Vibro-concrete column
ICSM	Initial conceptual site model	VOC	Volatile organic compound
LEL	Lower explosive limit	VRSC	Vibro-replacement stone columns
LMRL	Lower method reporting limit	VSC	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	WHO	World Health Organisation

MCV	Moisture condition value	**WRAP**	Waste and Resources Action Programme
MIBK	Methyl isobutyl ketone	**WTE**	Water table elevation
m	Metres	**ppm**	Parts per million
km	Kilometres	**mg/m^3**	Milligram per metre cubed
% v/v	Percent volume in air	**m bgl**	Metres below ground level
mb	Millibars (atmospheric pressure)	**m bcl**	Metre below cover level
l/hr	Litres per hour	**mAOD**	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	**kN/m^2**	Kilonewtons per metre squared
ppb	Parts per billion	**µm**	Micrometre
mg/kg	Milligrams per kilogram (parts per million)	**SSRT**	Site Specific Remediation Target
PSD	Particle Size Distribution	**DD**	Dry Density
CL:AIRE	Contaminated Land: Applications in Real Environments	**Mc**	Moisture Content
ρ	Bulk Density	**GPR**	Ground Penetrating Radar
NDP	Nuclear Density Probe	**FFL**	Finished Floor Level
LEL	Lower Explosive Limit	**UKWIR**	UK Water Industry Research
CIRIA	Construction Industry Research and Information Association	**LOD**	Limit of Detection
PFAS	Per- and Poly-Fluorinated Substances	**PFOA**	Perfluorooctanoic Acid

Appendix III: Drawings

Notes:	Client:	Job No:	Date:
	Civic Engineers	15-798	03.05.2024
		Drawing No: 002	Scale: NTS@ A3

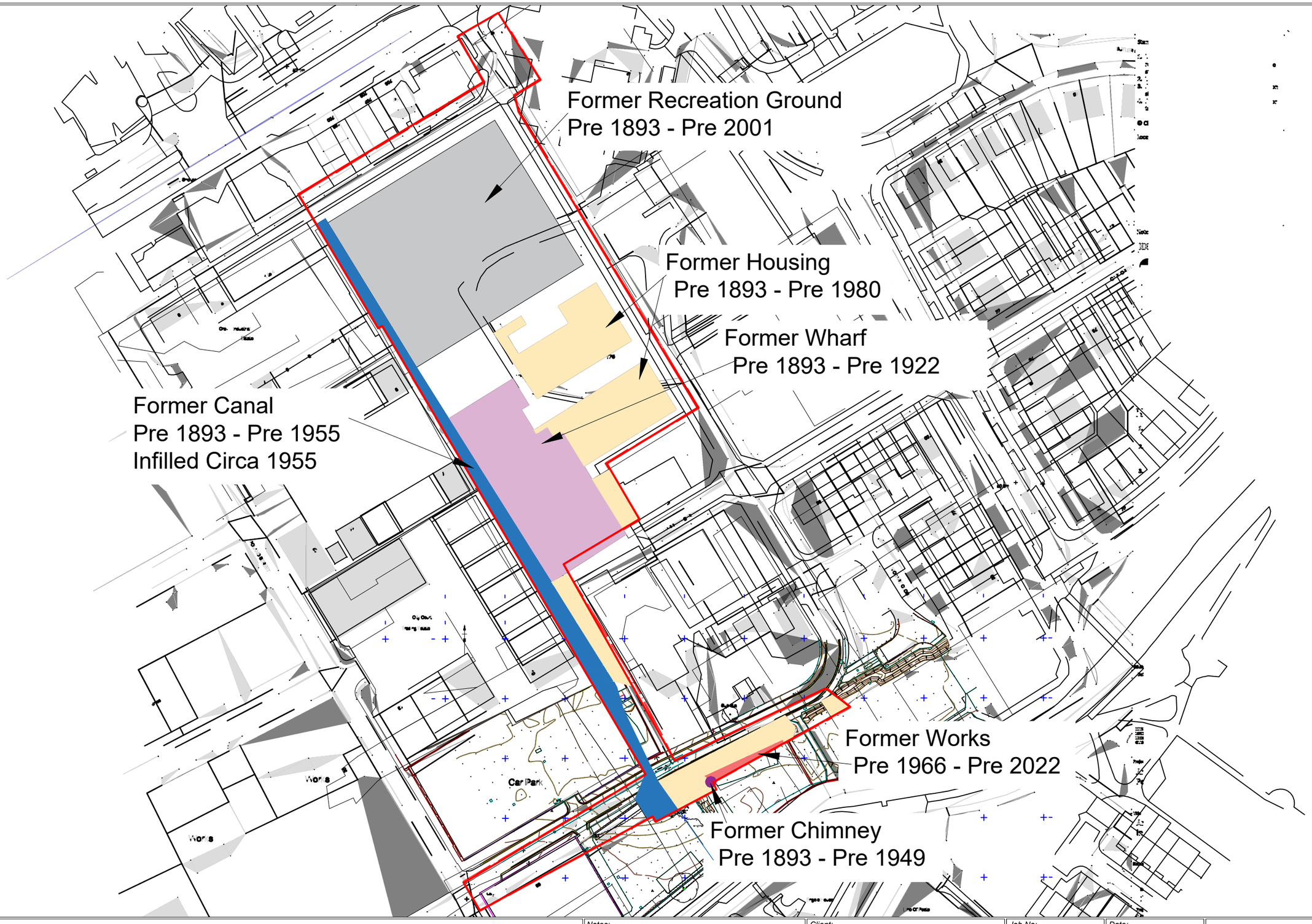
Phase	Issue	Date	Drawn	Checked
P1	REVB	03.05.2024	OW	NS
P1	REVA	10.05.2023	HM	RJW

Job Title: Jersey Street, Ancoats

Drawing Title: Proposed Development Plan

e3p
Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.



Site Features

- Former Canal
- Former Recreation Ground
- Former Chimney
- Former Housing
- Former Warf

Notes:

P1	REVA	09.01.2023	OW	HM
Phase	Issue	Date	Drawn	Checked

Client: Civic Engineers

Job No: 15-798

Date: 09.01.2023

Drawing No: 003

Scale: NTS@ A3

Job Title: Jersey Street, Ancoats

Drawing Title: Historical Features Plan

e3p
Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.

Location Symbols

- Approximate Hand Dug Pit Location (E3P June 2024)
- Approximate Stockpile Sample Location
- Approximate Stockpile Location (Topsoil)
- Approximate Hand Dug Pit Location (E3P July 2024)
- Area of The Tree Root Protection (Proposed area for retention of existing cover system)
- Area of Proposed 450mm Clean Cover Installation

Notes:

Phase	Issue	Date	Drawn	Checked
P1	REVF	30.07.2024	OW	NS
P1	REVE	15.07.2024	OW	NS
P1	REVD	18.07.2023	OW	NS
P1	REVC	20.06.2023	LM	ND
P1	REVB	24.01.2023	OW	HM
P1	REVA	06.01.2023	OW	HM

Client: Civic Engineers

Job No: 15-798

Date: 30.07.2024

Drawing No: 005

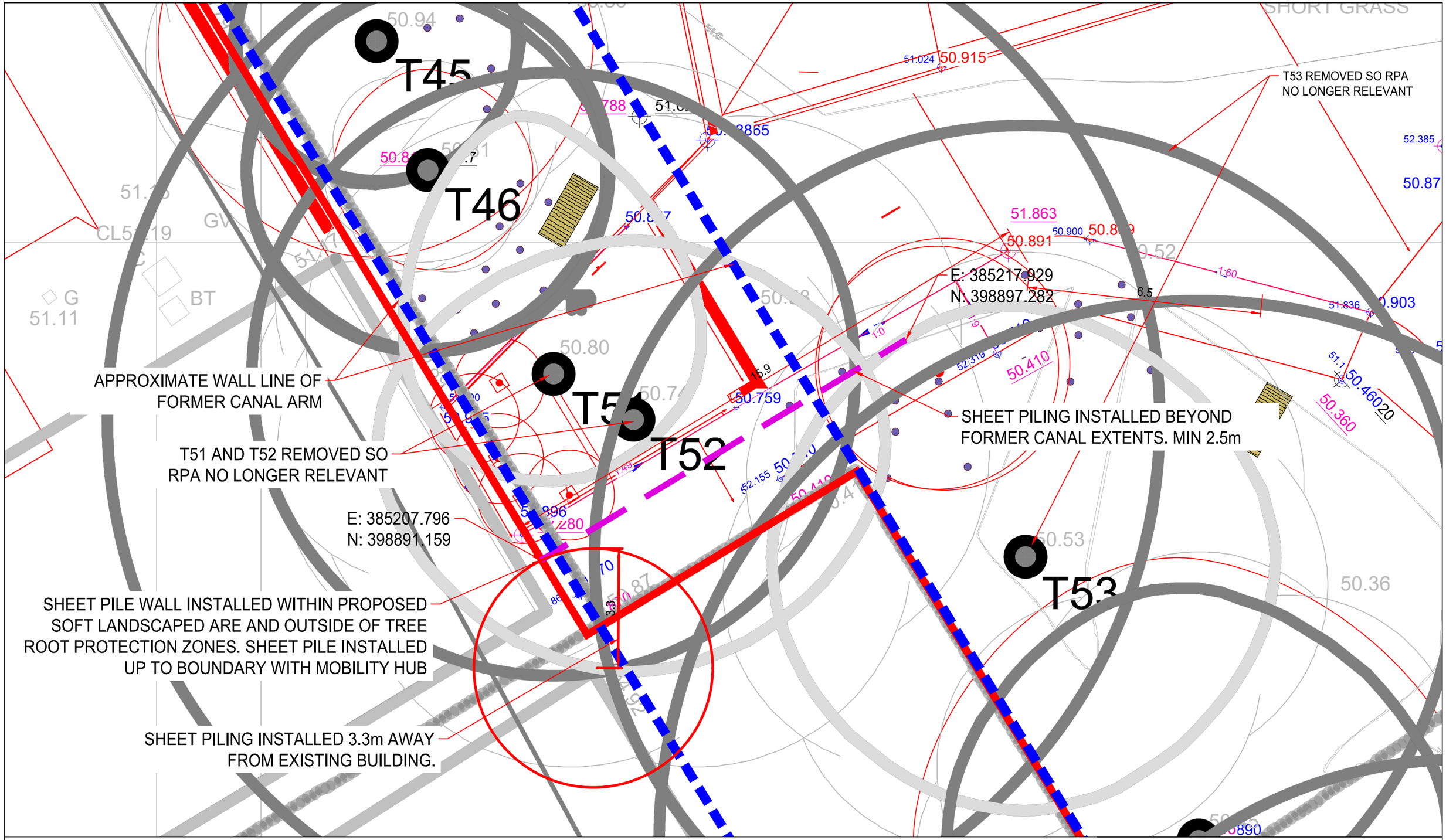
Scale: NTS@ A3

Job Title: Jersey Street, Ancoats

Drawing Title: Exploratory Hole Location Plan - Sampling Locations

e3p
Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.



KEY

SITE BOUNDARY

LOW PERMEABILITY BARRIER - SHEET PILE

NOTES

1. LOW PERMEABILITY BARRIER - SHEET PILES DRIVEN TO A MINIMUM DISTANCE OF 500mm INTO EXISTING CLAY SUBGRADE TO FORM LOW IMPERMEABILITY SEAL. RECOMMENDED SHEET PILE DEPTH AT LEAST 4.5 TO ACHIEVE EMBEDMENT.
2. TOP OF PILE SET AT LEAST 300mm BELOW PROPOSED GROUND LEVEL TO ALLOW FOR PLANTING MEDIUM OVER

DATE	REV	DESCRIPTION	DRAWN	CHKD
28.02.25	P01	INITIAL ISSUE	TC	CK

PROJECT
POLAND STREET, ANCOATS GREEN

TITLE
SHEET PILE LOW PERMEABILITY BARRIER GA

DRAWING STATUS	CE PROJECT No.	STATUS CODE	SCALE @ A3
INFORMATION	1826-01	-	1:100

DATE CREATED	DRAWN	CHECKED
FEB 25	TC	CK

DRAWING No. 1826-01-CIV-XX-XX-D-C-10001

REV P01

CIVIC ENGINEERS
civicengineers.com

FILE LOCATION PATH: P:\PROJECTS HOT\1826-01 POLAND STREET ZONE\BIM\01-WIP\DRAWINGS\1826-01-CIV-XX-XX-D-C-10001.DWG

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DATE	REV	DESCRIPTION	DRAWN	CHKD

Civic Engineers

MANCHESTER / LONDON / LEEDS /GLASGOW
www.civicengineers.com

PROJECT

TITLE

DRAWING STATUS	STATUS CODE

CE PROJECT No.	SCALE @ A3	DATE CREATED	DRAWN	CHECKED

DRAWING No.	REV

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SITE CATCHMENT AREAS SUMMARY

	CATCHMENT DESCRIPTION	AREA	COMMENTS
1	ANCOATS GREEN SITE AREA UNDER THIS DEVELOPMENT PHASE (EXCLUDES EXISTING PORTUGAL ST HIGHWAY)	9664m²	
2	RETAINED TREE ROOT PROTECTION ZONES (WITHIN SITE BOUNDARY). UNABLE TO REMEDIATE	3150m²	33% INFILTRATION POTENTIAL
3	EXISTING PERMEABLE AREA (GRASS)	5842m²	60% INFILTRATION POTENTIAL
4	EXISTING IMPERMEABLE AREAS (ASHPHALT PATHWAYS DRAIN TO SOFT LANDSCAPING - NO FORMAL DRAINAGE IDENTIFIED)	672m²	7% INFILTRATION POTENTIAL
5	RETAINED TREE ROOT PROTECTION ZONES (WITHIN SITE BOUNDARY). UNABLE TO REMEDIATE	3150m²	33% INFILTRATION POTENTIAL
6	PROPOSED PERMEABLE AREA (GRASS)	3606m²	37% INFILTRATION POTENTIAL
7	PROPOSED HARDSTANDING (POSITIVELY DRAINED)	2791m²	29% POSTIVELY DRAINED. NO INFILTRATION
8	POSITIVELY DRAINED LINED RAINGARDENS	117m²	1% POSITIVELY DRAINED. NO INFILTRATION

NOTES:
1. THEREFORE 30% REDUCTION IN INFILTRATION POTENTIAL
2. 33% UNABLE TO BE REMEDIATED DUE TO TREE PROTECTION ZONES
3. 37% WITH NO RESTRICTION TO INFILTRATION

CANAL ARM FOOTPRINT AREA SUMMARY

	CATCHMENT DESCRIPTION	AREA	COMMENTS
1	INDICATIVE INFILLED CANAL FOOTPRINT WITHIN FOOTPRINT OF ANCOATS GREEN BOUNDARY	1049m²	
2	EXISTING PERMEABLE GRASS OR SOFT LANDSCAPE AREA OVER INFILLED CANAL	423m²	40% INFILTRATION POTENTIAL
3	RETAINED TREE ROOT PROTECTION ZONE OVER INFILLED CANAL ARM	585m²	56% INFILTRATION POTENTIAL
4	EXISTING IMPERMEABLE AREA OVER INFILLED CANAL ARM	41m²	4% DRAINS TO SOFT. INFILTRATION POTENTIAL
5	PROPOSED PERMEABLE GRASS OR SOFT LANDSCAPE AREA OVER INFILLED CANAL	203m²	19% INFILTRATION POTENTIAL
6	RETAINED TREE ROOT PROTECTION ZONE OVER INFILLED CANAL ARM	585m²	56% INFILTRATION POTENTIAL
7	PROPOSED IMPERMEABLE AREA OVER INFILLED CANAL ARM	261m²	25% POSTIVELY DRAINED. NO INFILTRATION

NOTES:
1. FOOTPRINT OF CANAL INDICATIVE BASED ON HISTORICAL RECORDS
2. 25% REDUCTION IN INFILTRATION POTENTIAL
3. 56% UNABLE TO BE REMEDIATED DUE TO PRESENCE OF TREES

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

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KEY AND NOTES

- EXTENT OF WORKS BOUNDARY
- PROPOSED RAIN GARDEN WITH LINED SUB-BASE
- POROUS ASPHALT WITH LINED ATTENUATION SUBBASE
- PERMEABLE PLAY SURFACE WITH LINED ATTENUATION SUB-BASE
- IMPERMEABLE PAVING POSTIVELY DRAINED INTO DRAINAGE CHANNEL
- EXISTING HARDSTANDING (PATHS) DRAINS TO SOFT LANDSCAPE
- TREE ROOT PROTECTION ZONE
- INDICATIVE LINE OF INFILLED CANAL

DATE	REV	DESCRIPTION	DRAWN	CHKD
06.11.24	P01	ISSUED FOR INFORMATION	CK	CK

Civic Engineers
MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 1997
LEEDS 1 Saw Mill Street, Water Lane, Leeds, LS11 5WF. Tel: 0113 3055 130
GLASGOW 36 Virginia Street, Glasgow, G1 1TN. Tel: 0141 370 1329
www.civicengineers.com

PROJECT
POLAND STREET ZONE

TITLE
ANCOATS GREEN
INFILTRATION POTENTIAL ASSESSMENT

DRAWING STATUS	STATUS CODE
FOR APPROVAL	-

CE PROJECT No.	SCALE @ A0	DATE CREATED	DRAWN	CHECKED
1826-01	1:200	NOV'24	CK	CK

DRAWING No.	REV
1826-01-CIV-XX-XX-D-C-20101	P01

FILE LOCATION PATH: P:\PROJECTS\NOT\1826-01 POLAND STREET ZONE\BIM\01-WIP\DRAWINGS\1826-01-CIV-XX-XX-D-C-20101.DWG

Appendix IV: Remediation/Validation Criteria

Human Health Remediation Targets – Public Open Space Use

DETERMINAND	UNIT	POS AND 300 mm COVERSYSTEM	POS AND > 300 mm COVER SYSTEM	PATHWAY
Arsenic	mg/kg	79(iii)	170(iv)	1
Cadmium	mg/kg	120(iii)	532(iv)	1
Chromium (Hexavalent)	mg/kg	7.7(iii)	220(iv)	1
Lead	mg/kg	630(viii)	1300(viii)	1
Elemental Mercury	mg/kg	16(iii)	30(iv)	2
Nickel	mg/kg	230(iii)	800(iv)	1
Selenium	mg/kg	1100(iii)	1800(iv)	1
Copper	mg/kg	12000(iii)	44000(iv)	1
Zinc	mg/kg	81000(iii)	170000(iv)	1
Phenol	mg/kg	440(iii)(xi)	440(iv)(xi)	2
Naphthalene	mg/kg	1200(iv)(xi)	1200(iv)(xi)	2
Acenaphthylene	mg/kg	15000(iii)(xi)	29000(iv)(xi)	3
Acenaphthene	mg/kg	15000(iii)(xi)	29000(iv)(xi)	1
Fluorene	mg/kg	9900(iii)(xi)	20000(iv)(xi)	1
Phenanthrene	mg/kg	3100(iii)(xi)	6200(iv)(xi)	3
Anthracene	mg/kg	74000(iii)(xi)	150000(iv)(xi)	3
Fluoranthene	mg/kg	3100(iii)(xi)	6300(iv)(xi)	3
Pyrene	mg/kg	7400(iii)(xi)	15000(iv)(xi)	3
Benzo(a)Anthracene(	mg/kg	29(iii)(xi)	49(iv)(xi)	3
Chrysene	mg/kg	57(iii)(xi)	93(iv)(xi)	3
Benzo(b)Fluoranthene (iii)	mg/kg	7.1(iii)(xi)	13(iv)(xi)	3
Benzo(k)Fluoranthene (iii)	mg/kg	190(iii)(xi)	370(iv)(xi)	3
Benzo(a)Pyrene (vii)	mg/kg	5.7(iii)(xi)	11(iv)(xi)	3
Indeno(123-cd)Pyrene	mg/kg	82(iii)(xi)	150(iv)(xi)	3
Dibenzo(a,h)Anthracene	mg/kg	0.57(iii)(xi)	1.1(iv)(xi)	3
Benzo(ghi)Perylene	mg/kg	640(iii)(xi)	1400(iv)(xi)	3
TPH C5-C6 (aliphatic)	mg/kg	42(ii)(xi)	10000(xiv)(xi)	2
TPH C6-C8 (aliphatic)	mg/kg	100(ii)(xi)	10000(xiv)(xi)	2
TPH C8-C10 (aliphatic)	mg/kg	27(ii)(xi)	10000(xiv)(xi)	2
TPH C10-C12 (aliphatic)	mg/kg	130(ii)(xi)	10000(xiv)(xi)	2
TPH C12-C16 (aliphatic)	mg/kg	1000(xiv)(xi)	10000(xiv)(xi)	1
TPH C16-C35 (aliphatic)	mg/kg	1000(xiv)(xi)	10000(xiv)(xi)	1
TPH C5-C7 (aromatic)	mg/kg	370(ii)(xi)	10000(xiv)(xi)	2
TPH C7-C8 (aromatic)	mg/kg	860(ii)(xi)	10000(xiv)(xi)	2
TPH C8-C10 (aromatic)	mg/kg	47(ii)(xi)	10000(xiv)(xi)	2

DETERMINAND	UNIT	POS AND 300 mm COVERSYSTEM	POS AND > 300 mm COVER SYSTEM	PATHWAY
TPH C10-C12 (aromatic)	mg/kg	250(ii)(xi)	10000(xiv)(xi)	2
TPH C12-C16 (aromatic)	mg/kg	1800(ii)(xi)	10000(xiv)(xi)	1
TPH C16-C21 (aromatic)	mg/kg	1900(ii)(xi)	10000(xiv)(xi)	1
TPH C21-C35 (aromatic)	mg/kg	1900(ii)(xi)	10000(xiv)(xi)	1
Asbestos	Fibres Volume Weight	NFD	0.001	1

Notes 1

Asbestos will be screened visually on-site by a qualified environmental consultant and where potential ACM is identified representative samples will be subject to quantitative analysis of 5&volume by weight. Should any ACM be identified within the soil matrices, further detailed % assessment would be required when the reported laboratory result exceeds the limit of detection for the analytical method at 0.01% by volume (weight).

Notes 2

Excludes matrices where free product is observed;

Commercial Tier 1 GAC modelled to assume no exposure pathway; and,

No viable exposure pathway beneath hard standing and cover system.

Notes 3

Main Exposure Pathways: 1 = Soil Ingestion, 2 = Vapour Inhalation (indoor), 3 = Dermal Contact & Ingestion, 4 = Dust Inhalation.

Abbreviations: GAC = General Assessment Criteria, n = number of samples, MC = Maximum Concentration; NA – Not Applicable (no exceedance of assessment criteria); Loc of MC = Location of Exceedances

(iii)Value derived from LQM Suitable 4 Use Levels (S4ULs) for Public open Space (POS) residential.

(iv)Value derived from LQM Suitable 4 Use Levels (S4ULs) for Public Open Space (POS) park – these levels used below 300mm POS cover system as soils will not be disturbed by any future site users and exposure to these soils will be similar to a park end use.

(v)Value derived from LQM Suitable 4 Use Levels (S4ULs) alongside assessment with WM3 to ensure that materials remaining on site do not exceed the WM3 toxicity criteria for hazardous waste.

(vi)Value derived from Category 4 Screening Levels (C4SL) for residential land use with homegrown produce.

(vii)Value derived from Category 4 Screening Levels (C4SL) for residential land use without homegrown produce.

(viii)Value derived from Category 4 Screening Levels (C4SL) for Public open Space (POS) residential.

(ix)Value derived from Category 4 Screening Levels (C4SL) for Public Open Space (POS) park.

(x)Mercury – Based on elemental Mercury.

(xi)PAH and TPH levels used are for 1% SOM.

(xii)Xylenes based on p-xylene (o-xylene 2600mg/kg, m-xylene 3500mg/kg) and is capped by its solubility.

(xiii)Value derived from LQM Suitable 4 Use Levels (S4ULs) for residential end use with plant uptake due to the volatilisation risk.

(xiv)BTEX is not SOM related due to inhalation pathway.

Appendix V: Photographs

PLATE 01 – TREE ROOT PROTECTION ZONE

PLATE 02 – STOCKPILING OF TOPSOIL STRIP

PLATE 03 – INSTALLATION OF LOW PERMEABILITY BARRIER

PLATE 04 – INSTALLATION OF LOW PERMEABILITY BARRIER

PLATE 05 – INSTALLATION OF LOW PERMEABILITY BARRIER

PLATE 06 – INSTALLATION OF LOW PERMEABILITY BARRIER

PLATE 07 – INSTALLATION OF POSITIVELY DRAINED HARDSTANDING

PLATE 08 – INSTALLATION OF POSITIVELY DRAINED HARDSTANDING

PLATE 09 – INSTALLATION OF POSITIVELY DRAINED HARDSTANDING

PLATE 10 – INSTALLATION OF POSITIVELY DRAINED HARDSTANDING

PLATE 11 – PROVISION OF COVER SYSTEM

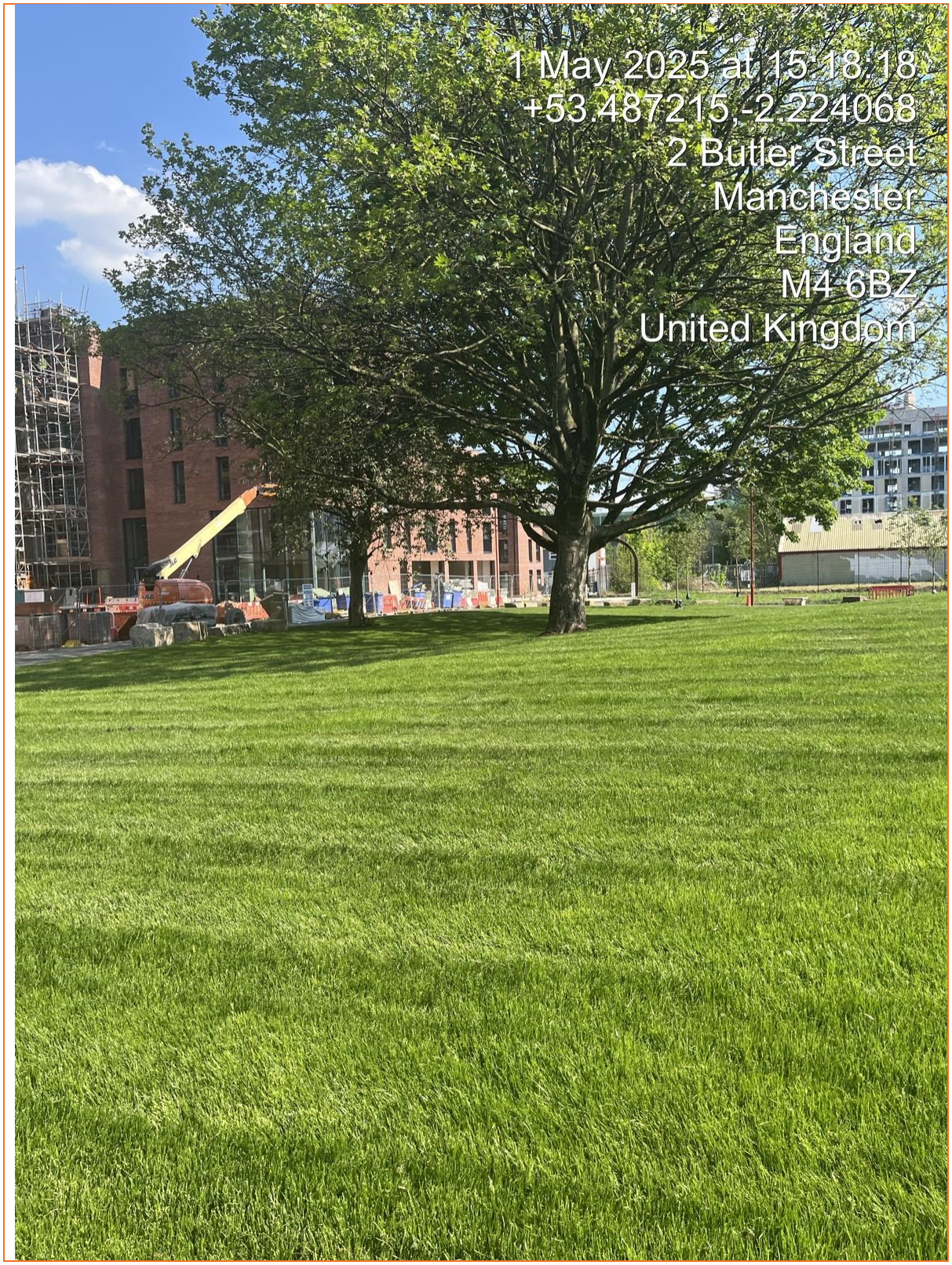


PLATE 12 – PROVISION OF COVER SYSTEM

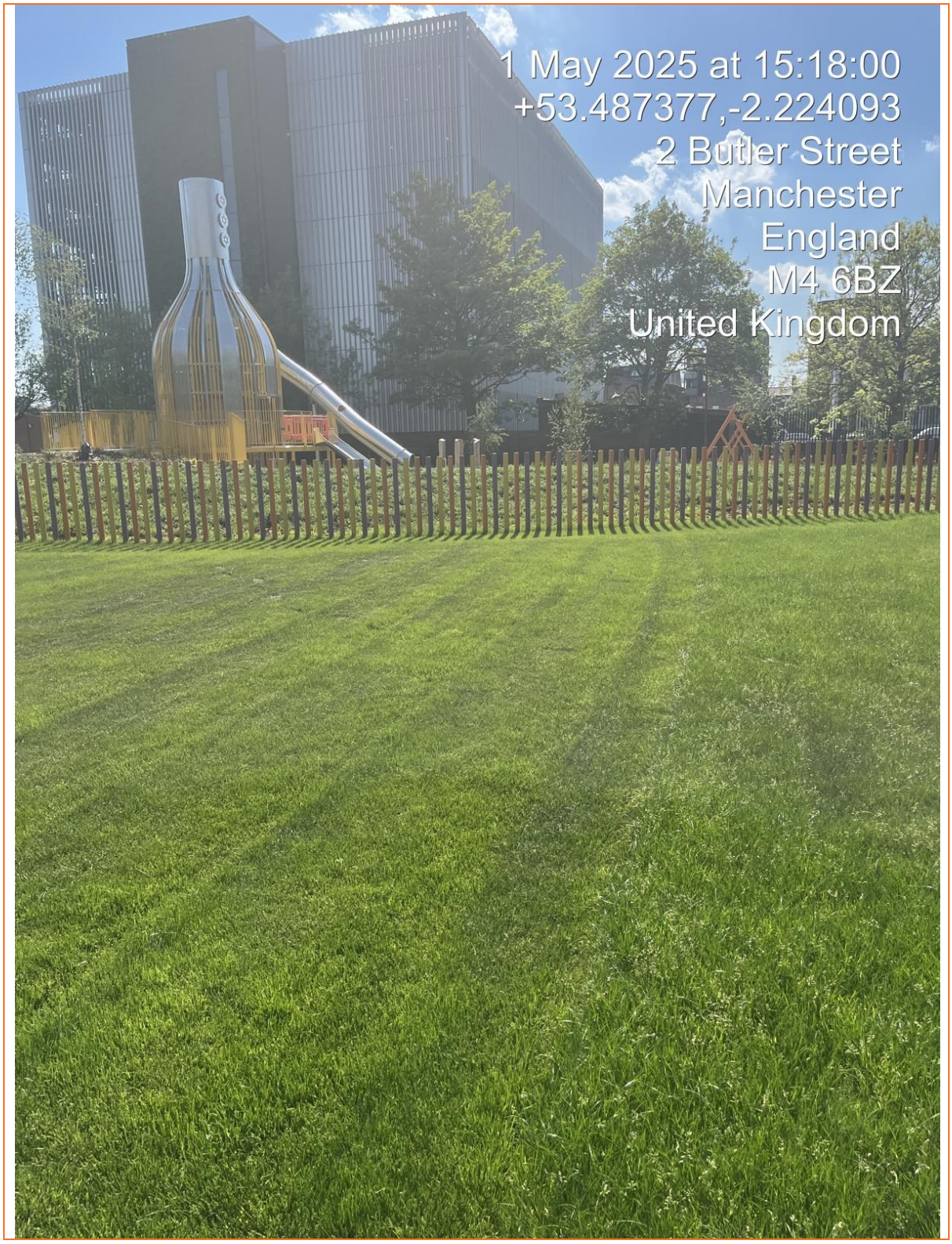
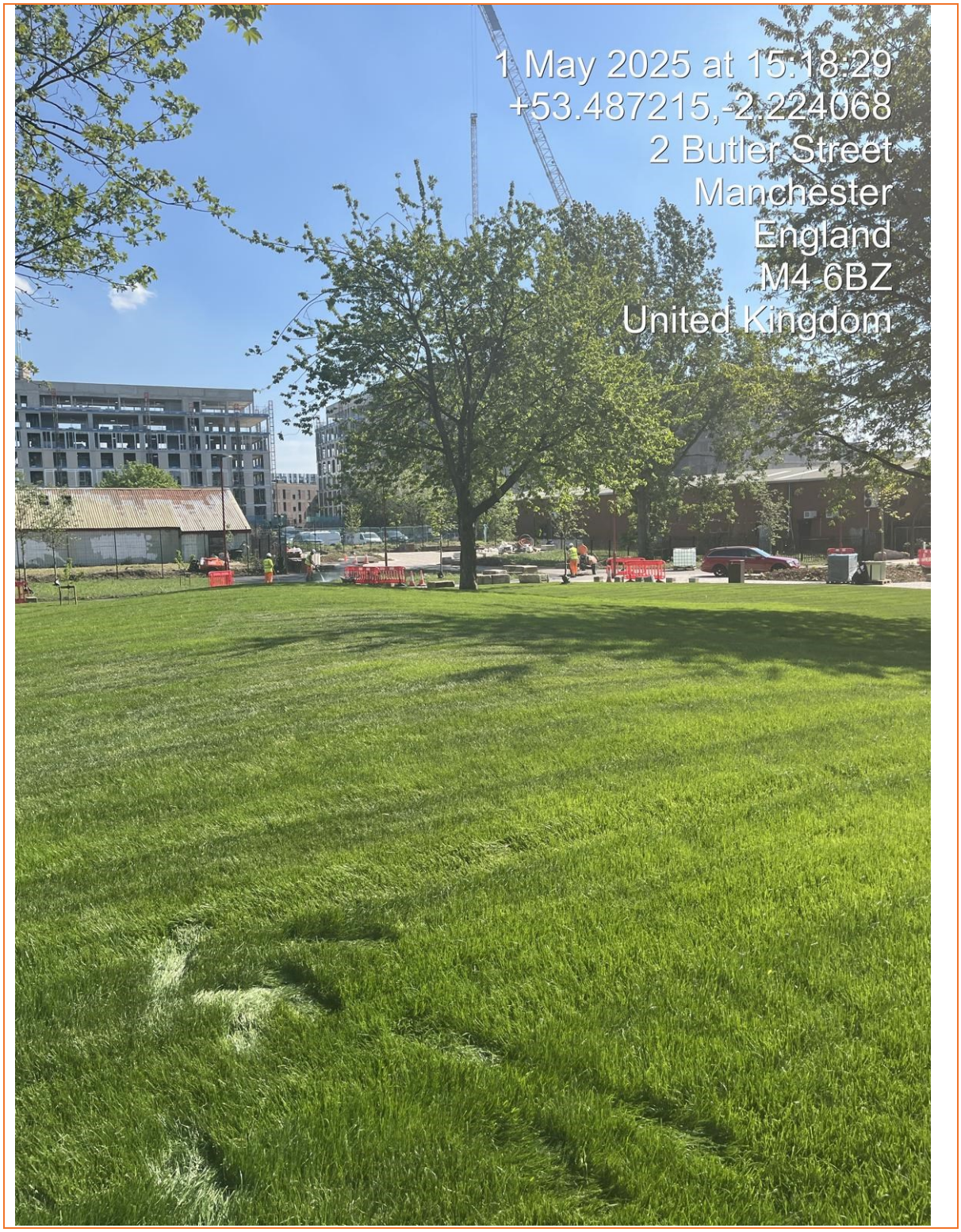


PLATE 13 – PROVISION OF COVER SYSTEM

PLATE 14 – PROVISION OF COVER SYSTEM

PLATE 15 – PROVISION OF COVER SYSTEM



Appendix VI: Chemical Laboratory Results

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-19169-1		
Initial Date of Issue:	26-Jun-2024		
Re-Issue Details:			
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	ndawson@e3p.co.uk		
Project	Ancoats Green		
Quotation No.:		**Date Received:**	17-Jun-2024
Order No.:	008535	**Date Instructed:**	17-Jun-2024
No. of Samples:	13		
Turnaround (Wkdays):	4	**Results Due:**	20-Jun-2024
Date Approved:	26-Jun-2024		
Approved By:			
	[redacted]		
Details:	David Smith, Technical Director		

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Ancoats Green

Client: E3P						**Chemtest Job No.:**	24-19169	24-19169	24-19169	24-19169	24-19169	24-19169	24-19169	24-19169
Quotation No.:						**Chemtest Sample ID.:**	1822276	1822277	1822278	1822279	1822280	1822281	1822282	1822283
						Client Sample ID.:	HPTS101	HPTS102	HPTS103	HPTS104	HPTS105	HPSS101	HPSS102	HPSS103
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Date Sampled:	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type		U	2192		N/A		-	-	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020		31	27	33	31	16	14	15	19
Soil Colour		N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A		Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A		Clay	Loam	Clay	Clay	Loam	Loam	Loam	Loam
pH at 20C		M	2010		4.0		7.4	8.0	7.1	7.1	7.4	7.8	8.0	7.5
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010		< 0.010	< 0.010	< 0.010	< 0.010	0.039	< 0.010	< 0.010	< 0.010
Total Sulphur		U	2175	%	0.010		0.081	0.051	0.058	0.047	0.046	0.14	0.060	0.035
Cyanide (Total)		M	2300	mg/kg	0.50		1.9	1.5	1.6	1.7	1.3	1.2	1.0	0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50		0.72	5.4	3.2	3.4	4.9	2.9	3.1	5.3
Sulphate (Total)		U	2430	%	0.010		0.19	0.16	0.18	0.13	0.12	0.15	0.14	0.052
Arsenic		M	2455	mg/kg	0.5		19	20	26	11	14	27	32	15
Cadmium		M	2455	mg/kg	0.10		0.60	0.37	0.52	0.24	0.68	1.2	0.65	0.23
Chromium		M	2455	mg/kg	0.5		35	20	38	42	19	41	28	29
Copper		M	2455	mg/kg	0.50		88	46	76	35	63	140	96	44
Mercury		M	2455	mg/kg	0.05		0.37	0.30	0.34	0.15	0.33	0.47	0.53	0.15
Nickel		M	2455	mg/kg	0.50		25	17	29	15	20	34	29	27
Lead		M	2455	mg/kg	0.50		280	140	240	120	150	380	460	80
Selenium		M	2455	mg/kg	0.25		0.83	0.64	1.1	0.62	0.74	1.2	0.94	1.0
Zinc		M	2455	mg/kg	0.50		220	130	190	96	190	400	230	110
Chromium (Hexavalent)		N	2490	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40		11	9.8	10	8.0	7.6	8.4	7.2	2.9
Total Organic Carbon		M	2625	%	0.20		6.5	5.7	5.9	4.6	4.4	4.9	4.2	1.7
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	7.6	< 1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	66	22	16	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0		26	23	17	11	250	93	45	16
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0		19	15	11	9.3	160	100	75	17
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0		56	150	44	36	260	150	120	38
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0		5.5	11	< 1.0	4.2	29	19	19	< 1.0
Total TPH >C6-C40	EH_1D_Total	M	2670	mg/kg	10		110	200	72	60	780	380	270	71
Naphthalene		M	2800	mg/kg	0.10		0.77	0.21	0.10	0.24	< 0.10	0.38	0.33	0.11
Acenaphthylene		N	2800	mg/kg	0.10		< 0.10	0.13	< 0.10	0.10	< 0.10	0.22	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10		1.1	0.42	< 0.10	0.26	< 0.10	0.68	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10		0.79	0.30	< 0.10	0.13	< 0.10	0.42	< 0.10	< 0.10

Results - Soil

Project: Ancoats Green

Client: E3P				**Chemtest Job No.:**		24-19169	24-19169	24-19169	24-19169	24-19169	24-19169	24-19169	24-19169
Quotation No.:				**Chemtest Sample ID.:**		1822276	1822277	1822278	1822279	1822280	1822281	1822282	1822283
				Client Sample ID.:		HPTS101	HPTS102	HPTS103	HPTS104	HPTS105	HPSS101	HPSS102	HPSS103
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Date Sampled:		14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Phenanthrene		M	2800	mg/kg	0.10	5.7	8.2	0.82	2.0	1.0	5.8	1.5	0.89
Anthracene		M	2800	mg/kg	0.10	1.6	1.2	0.15	0.37	0.21	1.4	0.36	0.21
Fluoranthene		M	2800	mg/kg	0.10	7.5	11	1.5	3.6	1.7	11	2.8	1.2
Pyrene		M	2800	mg/kg	0.10	6.7	10	1.5	3.2	1.5	10	2.5	0.99
Benzo[a]anthracene		M	2800	mg/kg	0.10	2.6	4.1	0.63	1.4	0.70	4.4	1.2	0.33
Chrysene		M	2800	mg/kg	0.10	3.1	5.0	0.62	1.4	0.67	5.1	1.2	0.34
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	3.2	5.3	0.97	2.2	0.95	6.2	1.7	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.2	1.9	0.35	0.72	0.35	2.1	0.56	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	2.4	4.0	0.67	1.6	0.74	4.8	1.3	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	1.4	2.5	0.51	1.1	0.51	3.3	0.88	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.31	0.54	< 0.10	0.30	< 0.10	0.66	0.21	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	1.5	2.6	0.54	1.3	0.51	3.6	0.95	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	40	57	8.4	20	8.8	60	16	4.1
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	< 0.10

Results - Soil

Project: Ancoats Green

Client: E3P						**Chemtest Job No.:**	24-19169	24-19169	24-19169	24-19169
Quotation No.:						**Chemtest Sample ID.:**	1822284	1822285	1822286	1822287	1822288
						Client Sample ID.:	HPSS104	HPSS105	TS106	TS107	TS108
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
						Date Sampled:	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type		U	2192		N/A	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	19	12	31	19	24
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones, Roots and Glass	Stones and Roots
Soil Texture		N	2040		N/A	Clay	Clay	Clay	Clay	Clay
pH at 20C		M	2010		4.0	7.2	8.7	7.2	7.5	7.7
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	0.047	0.038	0.15	0.043
Total Sulphur		U	2175	%	0.010	0.041	0.039	0.068	0.099	0.061
Cyanide (Total)		M	2300	mg/kg	0.50	0.60	< 0.50	1.4	1.4	0.90
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.2	19	3.5	5.6	3.4
Sulphate (Total)		U	2430	%	0.010	0.12	< 0.010	0.16	0.17	0.14
Arsenic		M	2455	mg/kg	0.5	20	74	22	18	13
Cadmium		M	2455	mg/kg	0.10	0.32	1.6	0.38	0.62	0.41
Chromium		M	2455	mg/kg	0.5	43	59	21	27	23
Copper		M	2455	mg/kg	0.50	53	270	70	83	59
Mercury		M	2455	mg/kg	0.05	0.21	1.2	0.37	0.64	0.36
Nickel		M	2455	mg/kg	0.50	25	68	22	23	18
Lead		M	2455	mg/kg	0.50	150	730	170	240	160
Selenium		M	2455	mg/kg	0.25	1.0	2.2	0.73	0.75	0.43
Zinc		M	2455	mg/kg	0.50	130	450	130	210	160
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	4.2	5.2	6.1	11	7.1
Total Organic Carbon		M	2625	%	0.20	2.4	3.0	3.5	6.4	4.1
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	5.0	< 1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	31	3.2	7.0	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	6.7	130	56	48	22
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	5.6	120	38	27	18
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	19	170	66	95	77
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	36	< 1.0	11	14
Total TPH >C6-C40	EH_1D_Total	M	2670	mg/kg	10	31	500	160	190	130
Naphthalene		M	2800	mg/kg	0.10	< 0.10	0.21	0.12	0.79	0.19
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	0.15	0.48	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	0.44	0.16	1.4	0.18
Fluorene		M	2800	mg/kg	0.10	< 0.10	0.41	0.17	1.1	0.11

Results - Soil

Project: Ancoats Green

Client: E3P				**Chemtest Job No.:**		24-19169	24-19169	24-19169	24-19169	24-19169
Quotation No.:				**Chemtest Sample ID.:**		1822284	1822285	1822286	1822287	1822288
				Client Sample ID.:		HPSS104	HPSS105	TS106	TS107	TS108
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
				Date Sampled:		14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024	14-Jun-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**					
Phenanthrene		M	2800	mg/kg	0.10	0.59	3.3	1.4	13	1.3
Anthracene		M	2800	mg/kg	0.10	0.15	0.84	0.29	2.4	0.31
Fluoranthene		M	2800	mg/kg	0.10	1.5	3.8	2.0	17	2.6
Pyrene		M	2800	mg/kg	0.10	1.4	3.6	1.8	15	2.4
Benzo[a]anthracene		M	2800	mg/kg	0.10	0.61	1.3	0.73	6.2	1.1
Chrysene		M	2800	mg/kg	0.10	0.61	1.4	0.99	7.3	1.3
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	0.85	1.6	0.98	7.9	1.6
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	0.27	0.61	0.40	2.9	0.58
Benzo[a]pyrene		M	2800	mg/kg	0.10	0.55	1.2	0.71	6.3	1.2
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	0.33	0.75	0.64	3.8	0.92
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	0.15	0.41	0.86	0.17
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	0.39	0.89	0.67	4.0	0.95
Total Of 16 PAH's		N	2800	mg/kg	2.0	7.3	21	12	90	15
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.61	0.70

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-24349-1		
Initial Date of Issue:	12-Aug-2024		
Re-Issue Details:			
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	ndawson@e3p.co.uk		
Project	Ancoats Green - POS Handpits		
Quotation No.:		**Date Received:**	31-Jul-2024
Order No.:	009001	**Date Instructed:**	31-Jul-2024
No. of Samples:	22		
Turnaround (Wkdays):	5	**Results Due:**	06-Aug-2024
Date Approved:	12-Aug-2024		
Approved By:			

[redacted]

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P						**Chemtest Job No.:**	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:						**Chemtest Sample ID.:**	1843626	1843627	1843628	1843629	1843630	1843631	1843632	1843633
						Client Sample ID.:	POS1-TS	POS1-SS	POS2-TS	POS2-SS	POS3-TS	POS3-SS	POS4-TS	POS4-SS
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Top Depth (m):	0.1	0.4	0.1	0.4	0.1	0.4	0.1	0.4
						Date Sampled:	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type		U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry		U	2192	%	0.001								
Total Asbestos		U	2192	%	0.001								
Moisture		N	2030	%	0.020	12	11	12	68	11	6.8	13	9.6
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	None	Stones and Roots	5% Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C		M	2010		4.0	7.7	7.7	7.5	7.2	7.4	7.9	7.4	8.1
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.011	< 0.010	0.017	0.038
Total Sulphur		U	2175	%	0.010	0.075	0.051	0.045	0.050	0.057	0.089	0.064	0.030
Cyanide (Total)		M	2300	mg/kg	0.50	1.3	< 0.50	1.3	1.4	1.5	< 0.50	1.4	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.3	4.0	2.5	8.4	3.1	7.6	2.8	4.1
Sulphate (Total)		U	2430	%	0.010	0.082	0.13	0.094	0.11	0.11	0.12	0.15	0.11
Arsenic		M	2455	mg/kg	0.5	11	13	13	14	17	35	12	16
Cadmium		M	2455	mg/kg	0.10	0.15	0.19	0.15	0.18	0.19	0.46	0.26	0.19
Chromium		M	2455	mg/kg	0.5	12	19	15	17	15	16	17	23
Copper		M	2455	mg/kg	0.50	33	41	48	54	77	110	75	210
Mercury		M	2455	mg/kg	0.05	0.11	0.20	0.19	0.47	0.15	0.27	0.20	0.18
Nickel		M	2455	mg/kg	0.50	13	21	15	20	16	24	18	30
Lead		M	2455	mg/kg	0.50	110	150	150	220	130	230	130	130
Selenium		M	2455	mg/kg	0.25	0.34	0.36	0.29	0.35	0.33	0.42	0.36	0.51
Zinc		M	2455	mg/kg	0.50	68	90	100	130	210	200	130	150
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	7.2	4.6	5.3	4.8	8.7	6.0	6.2	6.9
Total Organic Carbon		M	2625	%	0.20	4.2	2.7	3.1	2.8	5.1	3.5	3.6	4.0
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.1	< 1.0	7.4
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	27	< 1.0	23	11	29
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	11	8.9	18	69	< 1.0	59	20	120
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	12	15	14	43	< 1.0	100	16	120
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	51	34	42	140	< 1.0	110	59	110
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	2.5	4.0	5.1	20	< 1.0	15	7.0	19
Total TPH >C6-C40	EH_1D_Total	N	2670	mg/kg	10	76	62	79	300	< 10	320	110	420
Naphthalene		M	2800	mg/kg	0.10	1.6	0.34	0.71	0.51	0.20	0.47	< 0.10	0.32

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P				**Chemtest Job No.:**		24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:				**Chemtest Sample ID.:**		1843626	1843627	1843628	1843629	1843630	1843631	1843632	1843633
				Client Sample ID.:		POS1-TS	POS1-SS	POS2-TS	POS2-SS	POS3-TS	POS3-SS	POS4-TS	POS4-SS
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.1	0.4	0.1	0.4	0.1	0.4	0.1	0.4
				Date Sampled:		29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Acenaphthylene		N	2800	mg/kg	0.10	0.43	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	0.49	0.84	1.2	0.77	0.20	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	0.65	0.54	0.86	0.55	0.12	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	5.3	4.9	5.4	3.9	1.2	5.2	0.74	5.6
Anthracene		M	2800	mg/kg	0.10	1.3	1.3	1.3	1.0	0.27	1.4	0.18	1.3
Fluoranthene		M	2800	mg/kg	0.10	7.3	7.8	6.0	4.9	1.9	9.4	1.5	8.4
Pyrene		M	2800	mg/kg	0.10	6.9	6.6	5.2	4.4	1.8	7.9	1.3	7.0
Benzo[a]anthracene		M	2800	mg/kg	0.10	3.0	3.5	2.6	2.2	0.99	4.3	0.74	3.2
Chrysene		M	2800	mg/kg	0.10	3.1	3.1	2.0	2.1	0.99	4.8	0.84	3.5
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	3.9	4.7	3.5	2.9	1.5	5.9	1.2	4.2
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.4	1.5	1.0	0.94	0.44	2.1	0.38	1.5
Benzo[a]pyrene		M	2800	mg/kg	0.10	3.3	3.8	2.9	2.4	1.1	4.3	0.85	3.4
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	2.7	2.9	2.0	1.8	0.83	2.5	0.66	2.1
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.37	0.46	0.43	0.28	< 0.10	0.63	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	2.6	2.2	1.6	1.4	0.70	2.2	0.55	2.0
Total Of 16 PAH's		N	2800	mg/kg	2.0	44	45	37	30	12	51	8.9	43
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	13	< 0.10	< 0.10	6.5	< 0.10

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P						**Chemtest Job No.:**	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:						**Chemtest Sample ID.:**	1843634	1843635	1843636	1843637	1843638	1843639	1843640
						Client Sample ID.:	POS5-TS	POS5-SS	POS6-TS	POS6-SS	POS7-TS	POS7-SS	POS8-TS
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Top Depth (m):	0.1	0.4	0.1	0.4	0.1	0.4	0.1
						Date Sampled:	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type		U	2192		N/A	-	-	-	-	-	-	Fibres/Clumps
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Amosite
Asbestos by Gravimetry		U	2192	%	0.001							<0.001
Total Asbestos		U	2192	%	0.001							<0.001
Moisture		N	2030	%	0.020	13	12	11	7.3	11	6.8	18
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	None	Stones and Roots	Stones and Roots	Stones and Roots	Roots and Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C		M	2010		4.0	7.3	7.8	7.4	7.9	7.5	8.0	7.6
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	0.038	0.13	< 0.010	0.010	< 0.010	0.040
Total Sulphur		U	2175	%	0.010	0.053	0.050	0.041	0.049	0.058	0.089	0.14
Cyanide (Total)		M	2300	mg/kg	0.50	1.7	0.80	1.1	1.4	3.3	0.70	5.0
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	7.6	3.9	3.1	14	2.8	3.2	6.2
Sulphate (Total)		U	2430	%	0.010	0.13	0.12	0.073	0.087	0.10	0.067	0.091
Arsenic		M	2455	mg/kg	0.5	11	13	6.4	8.1	9.3	9.0	20
Cadmium		M	2455	mg/kg	0.10	0.35	0.47	< 0.10	0.12	0.40	0.22	0.22
Chromium		M	2455	mg/kg	0.5	18	26	6.2	10	15	15	9.8
Copper		M	2455	mg/kg	0.50	45	56	32	32	43	36	47
Mercury		M	2455	mg/kg	0.05	0.32	0.44	0.27	0.80	0.24	0.17	0.16
Nickel		M	2455	mg/kg	0.50	14	19	7.4	12	11	18	13
Lead		M	2455	mg/kg	0.50	130	160	58	110	540	110	160
Selenium		M	2455	mg/kg	0.25	< 0.25	0.39	< 0.25	< 0.25	< 0.25	0.32	0.43
Zinc		M	2455	mg/kg	0.50	110	140	53	77	110	86	90
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	8.4	7.1	5.2	7.4	8.8	6.2	16
Total Organic Carbon		M	2625	%	0.20	4.9	4.1	3.0	4.3	5.1	3.6	9.4
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	5.0	4.6	< 1.0	13	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	25	19	25	84	16
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	24	18	130	94	49	320	38
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	12	21	160	120	36	200	29
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	89	70	200	140	98	290	75
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	13	7.3	31	27	17	60	9.7
Total TPH >C6-C40	EH_1D_Total	N	2670	mg/kg	10	140	120	550	400	230	970	170
Naphthalene		M	2800	mg/kg	0.10	0.61	0.30	0.36	0.39	0.58	0.63	0.81

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P				**Chemtest Job No.:**		24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:				**Chemtest Sample ID.:**		1843634	1843635	1843636	1843637	1843638	1843639	1843640
				Client Sample ID.:		POS5-TS	POS5-SS	POS6-TS	POS6-SS	POS7-TS	POS7-SS	POS8-TS
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.1	0.4	0.1	0.4	0.1	0.4	0.1
				Date Sampled:		29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
Acenaphthylene		N	2800	mg/kg	0.10	0.16	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	0.69	< 0.10	0.82	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	0.58	< 0.10	0.57	0.65	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	5.1	1.8	6.3	9.1	6.8	8.5	3.4
Anthracene		M	2800	mg/kg	0.10	1.1	0.40	1.5	2.0	1.5	1.9	0.72
Fluoranthene		M	2800	mg/kg	0.10	6.8	3.1	11	16	8.9	11	5.0
Pyrene		M	2800	mg/kg	0.10	6.2	2.9	10	14	7.6	9.1	4.4
Benzo[a]anthracene		M	2800	mg/kg	0.10	3.0	1.3	4.9	6.5	3.4	3.9	2.1
Chrysene		M	2800	mg/kg	0.10	3.0	1.6	4.6	7.5	4.1	4.7	2.5
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	4.0	2.1	6.4	8.6	4.5	5.6	3.0
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.3	0.63	2.1	3.3	1.5	1.9	1.1
Benzo[a]pyrene		M	2800	mg/kg	0.10	3.3	1.7	5.5	7.3	3.3	4.7	2.4
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	2.2	1.1	3.8	4.5	2.1	3.1	1.5
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.51	< 0.10	0.71	0.87	< 0.10	0.53	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	1.9	1.1	3.2	4.2	2.3	2.9	1.5
Total Of 16 PAH's		N	2800	mg/kg	2.0	41	18	62	85	47	59	28
Total Phenols		M	2920	mg/kg	0.10	< 0.10	0.19	< 0.10	< 0.10	0.56	< 0.10	0.17

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P						**Chemtest Job No.:**	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:						**Chemtest Sample ID.:**	1843641	1843642	1843643	1843644	1843645	1843646	1843647
						Client Sample ID.:	POS8-SS	SP101	SP102	SP103	SP104	SP105	SP106
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Top Depth (m):	0.4						
						Date Sampled:	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type		U	2192		N/A	Fibres/Clumps	-	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry		U	2192	%	0.001	<0.001							
Total Asbestos		U	2192	%	0.001	<0.001							
Moisture		N	2030	%	0.020	14	15	20	17	12	16	22
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C		M	2010		4.0	7.4	7.9	8.0	7.9	7.9	8.0	7.9
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.022	0.041	0.078	0.045	0.089	0.041	0.016
Total Sulphur		U	2175	%	0.010	0.21	0.27	0.24	0.066	0.068	0.070	0.073
Cyanide (Total)		M	2300	mg/kg	0.50	5.0	0.90	0.50	0.70	1.2	< 0.50	1.3
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	11	6.1	5.8	9.9	2.6	1.6	8.2
Sulphate (Total)		U	2430	%	0.010	0.19	0.079	0.19	0.10	0.14	0.099	0.11
Arsenic		M	2455	mg/kg	0.5	86	13	52	9.2	18	12	15
Cadmium		M	2455	mg/kg	0.10	1.4	0.29	0.76	0.31	0.99	0.34	0.26
Chromium		M	2455	mg/kg	0.5	29	12	24	11	19	12	16
Copper		M	2455	mg/kg	0.50	220	43	120	52	63	41	51
Mercury		M	2455	mg/kg	0.05	0.57	0.23	1.0	0.26	0.56	0.21	0.21
Nickel		M	2455	mg/kg	0.50	44	10	30	13	17	11	13
Lead		M	2455	mg/kg	0.50	640	210	390	140	180	120	140
Selenium		M	2455	mg/kg	0.25	2.6	< 0.25	1.5	< 0.25	1.6	0.56	0.31
Zinc		M	2455	mg/kg	0.50	440	95	290	130	130	89	110
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	22	14	10	6.6	9.1	7.2	7.1
Total Organic Carbon		M	2625	%	0.20	13	7.9	5.8	3.8	5.3	4.2	4.1
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	7.9	< 1.0	< 1.0	180	6.1	5.1	6.2
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	26	18	< 1.0	450	57	25	21
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	64	29	< 1.0	130	620	61	90
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	43	18	< 1.0	380	570	34	130
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	81	39	< 1.0	230	970	78	140
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	15	5.8	< 1.0	57	210	10	23
Total TPH >C6-C40	EH_1D_Total	N	2670	mg/kg	10	240	110	< 10	1600	2400	210	410
Naphthalene		M	2800	mg/kg	0.10	1.3	0.68	0.23	0.29	0.50	0.36	0.34

Results - Soil

Project: Ancoats Green - POS Handpits

Client: E3P				**Chemtest Job No.:**		24-24349	24-24349	24-24349	24-24349	24-24349	24-24349	24-24349
Quotation No.:				**Chemtest Sample ID.:**		1843641	1843642	1843643	1843644	1843645	1843646	1843647
				Client Sample ID.:		POS8-SS	SP101	SP102	SP103	SP104	SP105	SP106
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.4						
				Date Sampled:		29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024	29-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
Acenaphthylene		N	2800	mg/kg	0.10	0.52	0.18	0.11	< 0.10	0.12	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	0.83	< 0.10	0.26	< 0.10	< 0.10	< 0.10	0.43
Fluorene		M	2800	mg/kg	0.10	0.66	< 0.10	0.26	< 0.10	< 0.10	< 0.10	0.37
Phenanthrene		M	2800	mg/kg	0.10	6.8	5.8	2.3	6.1	6.0	2.7	3.3
Anthracene		M	2800	mg/kg	0.10	1.7	1.2	0.66	1.4	1.4	0.59	1.1
Fluoranthene		M	2800	mg/kg	0.10	11	7.2	5.2	9.4	9.7	4.3	5.1
Pyrene		M	2800	mg/kg	0.10	10	6.3	4.7	8.1	8.9	4.1	4.4
Benzo[a]anthracene		M	2800	mg/kg	0.10	5.2	2.8	2.6	3.5	4.3	1.9	2.0
Chrysene		M	2800	mg/kg	0.10	5.6	3.1	2.4	4.1	4.8	2.3	2.4
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	7.1	3.5	3.7	4.7	6.0	2.6	2.8
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	2.4	1.1	1.2	1.7	2.1	0.91	0.84
Benzo[a]pyrene		M	2800	mg/kg	0.10	5.7	2.5	3.1	3.9	5.1	2.2	2.4
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	4.4	1.6	2.3	2.5	2.9	1.4	1.4
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.82	< 0.10	0.42	0.50	< 0.10	< 0.10	0.24
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	3.7	1.6	1.9	2.5	2.8	1.3	1.4
Total Of 16 PAH's		N	2800	mg/kg	2.0	68	38	31	49	55	25	29
Total Phenols		M	2920	mg/kg	0.10	< 0.10	0.14	0.73	0.39	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key	
U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-41088-1		
Initial Date of Issue:	20-Dec-2024		
Re-Issue Details:			
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	ndawson@e3p.co.uk Kay Kierans Nicola Dawson		
Project	Ancoats Green Stockpiles Dec 24		
Quotation No.:	Q23-31421	**Date Received:**	13-Dec-2024
Order No.:	010246	**Date Instructed:**	13-Dec-2024
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	19-Dec-2024
Date Approved:	20-Dec-2024		
Approved By:	[redacted]		
Details:	David Smith, Technical Director		

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Ancoats Green Stockpiles Dec 24

Client: E3P						**Chemtest Job No.:**	24-41088	24-41088	24-41088	24-41088	24-41088	24-41088
Quotation No.: Q23-31421						**Chemtest Sample ID.:**	1909644	1909645	1909646	1909647	1909648	1909649	1909650
						Client Sample ID.:	TS101	TS102	TS103	TS104	TS105	TS106	TS107
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Date Sampled:	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type		U	2192		N/A	-	Fibres/Clumps	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry		U	2192	%	0.001		0.002					
Total Asbestos		U	2192	%	0.001		0.002					
Moisture		N	2030	%	0.020	21	25	26	24	24	26	19
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones, Roots and	Stones and Roots	Stones and Roots	Stones and Roots	Stones, Roots and
Soil Texture		N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Clay
pH at 20C		M	2010		4.0	7.9	7.8	7.8	7.4	7.7	7.8	8.0
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	0.018	0.039	< 0.010	< 0.010	0.017	< 0.010
Total Sulphur		U	2175	%	0.010	0.12	0.090	0.10	0.12	0.090	0.070	0.10
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	0.50	1.0	< 0.50	1.0	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	2.5	2.4	2.9	3.0	4.0	2.1	2.5
Sulphate (Total)		U	2430	%	0.010	0.13	0.15	0.12	0.13	0.18	0.16	0.11
Arsenic		M	2455	mg/kg	0.5	24	18	13	25	18	16	11
Cadmium		M	2455	mg/kg	0.10	0.55	0.60	0.56	0.55	0.67	0.73	0.41
Chromium		M	2455	mg/kg	0.5	100	27	19	25	36	23	21
Copper		M	2455	mg/kg	0.50	72	66	53	65	72	80	89
Mercury		M	2455	mg/kg	0.05	0.29	0.31	0.36	0.25	0.35	0.33	0.26
Nickel		M	2455	mg/kg	0.50	40	22	19	27	31	27	26
Lead		M	2455	mg/kg	0.50	220	190	150	210	290	260	140
Selenium		M	2455	mg/kg	0.25	1.0	0.84	0.64	0.95	0.89	0.69	0.54
Zinc		M	2455	mg/kg	0.50	160	160	130	150	180	210	210
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	10	13	8.5	9.3	7.4	6.6	6.7
Total Organic Carbon		M	2625	%	0.20	5.9	7.8	4.9	5.4	4.3	3.8	3.9
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	8.6	3.0	< 1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	9.6	4.9	32	15	5.5	3.0	11
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	25	25	260	57	27	26	31
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	28	25	450	45	21	25	34
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	120	51	1500	110	33	58	93
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	12	5.2	440	27	3.9	8.1	12
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10	200	110	2600	260	90	120	180
Naphthalene		M	2800	mg/kg	0.10	0.39	0.44	0.39	0.24	0.69	0.29	0.38
Acenaphthylene		N	2800	mg/kg	0.10	0.17	0.37	0.20	< 0.10	0.34	0.14	0.15

Results - Soil

Project: Ancoats Green Stockpiles Dec 24

Client: E3P				**Chemtest Job No.:**		24-41088	24-41088	24-41088	24-41088	24-41088	24-41088	24-41088
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1909644	1909645	1909646	1909647	1909648	1909649	1909650
				Client Sample ID.:		TS101	TS102	TS103	TS104	TS105	TS106	TS107
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Date Sampled:		11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024	11-Dec-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
Acenaphthene		M	2800	mg/kg	0.10	0.80	0.46	0.48	0.15	0.56	0.40	1.9
Fluorene		M	2800	mg/kg	0.10	0.59	0.52	0.52	0.16	0.65	0.32	1.2
Phenanthrene		M	2800	mg/kg	0.10	6.7	5.6	4.5	2.4	5.8	3.0	11
Anthracene		M	2800	mg/kg	0.10	1.3	1.1	1.0	0.38	1.3	0.60	3.0
Fluoranthene		M	2800	mg/kg	0.10	8.7	7.9	6.8	3.5	7.9	5.1	15
Pyrene		M	2800	mg/kg	0.10	7.5	7.2	6.5	3.2	7.6	4.8	12
Benzo[a]anthracene		M	2800	mg/kg	0.10	3.6	3.5	3.0	1.4	4.1	2.2	5.5
Chrysene		M	2800	mg/kg	0.10	4.0	3.6	3.2	1.7	4.1	2.3	5.2
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	5.0	4.2	3.9	2.0	4.5	3.0	5.9
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.8	1.4	1.4	0.65	2.0	1.0	2.2
Benzo[a]pyrene		M	2800	mg/kg	0.10	3.9	3.8	3.3	1.5	4.1	2.5	5.3
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	2.5	2.3	2.1	0.94	2.8	1.8	3.3
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.45	0.46	0.35	0.22	1.0	0.32	0.64
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	2.3	2.0	2.0	1.1	2.6	1.5	3.0
Total Of 16 PAH's		N	2800	mg/kg	2.0	50	45	40	20	50	29	76
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: Ancoats Green Stockpiles Dec 24

Client: E3P				**Chemtest Job No.:**		24-41088
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1909651
				Client Sample ID.:		TS108
				Sample Type:		SOIL
				Date Sampled:		11-Dec-2024
				Time Sampled:		12:00
				Asbestos Lab:		DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type		U	2192		N/A	Fibres/Clumps
Asbestos Identification		U	2192		N/A	Chrysotile
Asbestos by Gravimetry		U	2192	%	0.001	0.002
Total Asbestos		U	2192	%	0.001	0.002
Moisture		N	2030	%	0.020	23
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones and Roots
Soil Texture		N	2040		N/A	Clay
pH at 20C		M	2010		4.0	7.8
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.018
Total Sulphur		U	2175	%	0.010	0.11
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.1
Sulphate (Total)		U	2430	%	0.010	0.17
Arsenic		M	2455	mg/kg	0.5	23
Cadmium		M	2455	mg/kg	0.10	0.78
Chromium		M	2455	mg/kg	0.5	41
Copper		M	2455	mg/kg	0.50	92
Mercury		M	2455	mg/kg	0.05	0.46
Nickel		M	2455	mg/kg	0.50	33
Lead		M	2455	mg/kg	0.50	280
Selenium		M	2455	mg/kg	0.25	0.92
Zinc		M	2455	mg/kg	0.50	230
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50
Organic Matter		M	2625	%	0.40	8.1
Total Organic Carbon		M	2625	%	0.20	4.7
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	7.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	25
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	25
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	49
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	6.0
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10	110
Naphthalene		M	2800	mg/kg	0.10	0.49
Acenaphthylene		N	2800	mg/kg	0.10	0.33

Results - Soil

Project: Ancoats Green Stockpiles Dec 24

Client: E3P				**Chemtest Job No.:**		24-41088
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1909651
				Client Sample ID.:		TS108
				Sample Type:		SOIL
				Date Sampled:		11-Dec-2024
				Time Sampled:		12:00
				Asbestos Lab:		DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**	
Acenaphthene		M	2800	mg/kg	0.10	0.53
Fluorene		M	2800	mg/kg	0.10	0.48
Phenanthrene		M	2800	mg/kg	0.10	4.6
Anthracene		M	2800	mg/kg	0.10	0.98
Fluoranthene		M	2800	mg/kg	0.10	6.2
Pyrene		M	2800	mg/kg	0.10	5.8
Benzo[a]anthracene		M	2800	mg/kg	0.10	2.8
Chrysene		M	2800	mg/kg	0.10	2.8
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	3.6
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.3
Benzo[a]pyrene		M	2800	mg/kg	0.10	2.9
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	1.7
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.28
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	1.7
Total Of 16 PAH's		N	2800	mg/kg	2.0	37
Total Phenols		M	2920	mg/kg	0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	25-05089-1		
Initial Date of Issue:	03-Mar-2025		
Re-Issue Details:			
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	ndawson@e3p.co.uk		
Project	Ancoats Green Import SS and TS		
Quotation No.:	Q23-31421	**Date Received:**	13-Feb-2025
Order No.:	010676	**Date Instructed:**	13-Feb-2025
No. of Samples:	6		
Turnaround (Wkdays):	13	**Results Due:**	03-Mar-2025
Date Approved:	21-Feb-2025		
Approved By:	[redacted]		
Details:	David Smith, Technical Director		

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Ancoats Green Import SS and TS

Client: E3P						**Chemtest Job No.:**	25-05089	25-05089	25-05089	25-05089	25-05089	25-05089
Quotation No.: Q23-31421						**Chemtest Sample ID.:**	1932392	1932393	1932394	1932395	1932396	1932397
						Client Sample ID.:	TS101	TS102	TS103	SS101	SS102	SS103
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Date Sampled:	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type		N	2192		N/A	-	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	16	17	15	9.5	9.9	9.0
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Roots	Stones and Roots	Stones and Roots	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C		M	2010		4.0	8.0	8.3	8.4	8.5	8.3	8.3
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.014	0.018	< 0.010	< 0.010	< 0.010	< 0.010
Total Sulphur		U	2175	%	0.010	0.030	0.040	0.020	0.010	< 0.010	0.010
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	2.3	2.5	2.9	3.2	3.7	3.9
Sulphate (Total)		U	2430	%	0.010	0.080	0.053	0.049	0.012	< 0.010	< 0.010
Arsenic		M	2455	mg/kg	0.5	2.0	1.7	1.7	6.4	2.2	2.0
Cadmium		M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	5.6	4.8	4.6	14	8.9	6.3
Copper		M	2455	mg/kg	0.50	7.6	6.3	5.7	9.0	4.7	4.5
Mercury		M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	5.1	4.7	4.2	12	8.9	5.9
Lead		M	2455	mg/kg	0.50	8.8	6.6	6.6	4.6	1.9	1.9
Selenium		M	2455	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	24	20	18	19	10	9.7
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	4.1	2.8	2.4	< 0.40	< 0.40	< 0.40
Total Organic Carbon		M	2625	%	0.20	2.4	1.6	1.4	< 0.20	< 0.20	< 0.20
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	8.3	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	5.8	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	4.9	3.2	3.0	11	< 1.0	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	26	13	20	11	< 1.0	< 1.0
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	40	38	42	31	< 1.0	< 1.0
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	160	100	130	24	< 1.0	< 1.0
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	19	12	12	2.8	< 1.0	< 1.0
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10	250	170	200	93	< 10	< 10
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: Ancoats Green Import SS and TS

Client: E3P						**Chemtest Job No.:**	25-05089	25-05089	25-05089	25-05089	25-05089	25-05089
Quotation No.: Q23-31421						**Chemtest Sample ID.:**	1932392	1932393	1932394	1932395	1932396	1932397
						Client Sample ID.:	TS101	TS102	TS103	SS101	SS102	SS103
						Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Date Sampled:	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025
						Time Sampled:	12:00	12:00	12:00	12:00	12:00	12:00
						Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**							
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

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All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB	Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL
DURHAM	Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - The required amount of sample for analysis was not received
H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

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All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Report Information

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HWOL Acronym System

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2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com