VERIFICATION REPORT
FOR THE
REMEDIATION AND ENABLING WORKS
AT
COLLYHURST VILLAGE, MANCHESTER



Prepared for

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1 INTRODUCTION

1.1 The Commission

1.1.1 LK Remediate Limited (LKR) were commissioned by Far East Consortium (FEC) to undertake site remediation and enabling works for the development of the site at Collyhurst Village, Manchester.

1.2 Site Description

1.2.1 The site is located off Rochdale Road, Collyhurst, Manchester, M40 7SU centred at approximate National Grid Reference 385575E, 400310N. The site occupies an area of approximately 47,000m², with elevation ranging between 54 - 61 mAOD.

1.2.2 The site location is shown below:

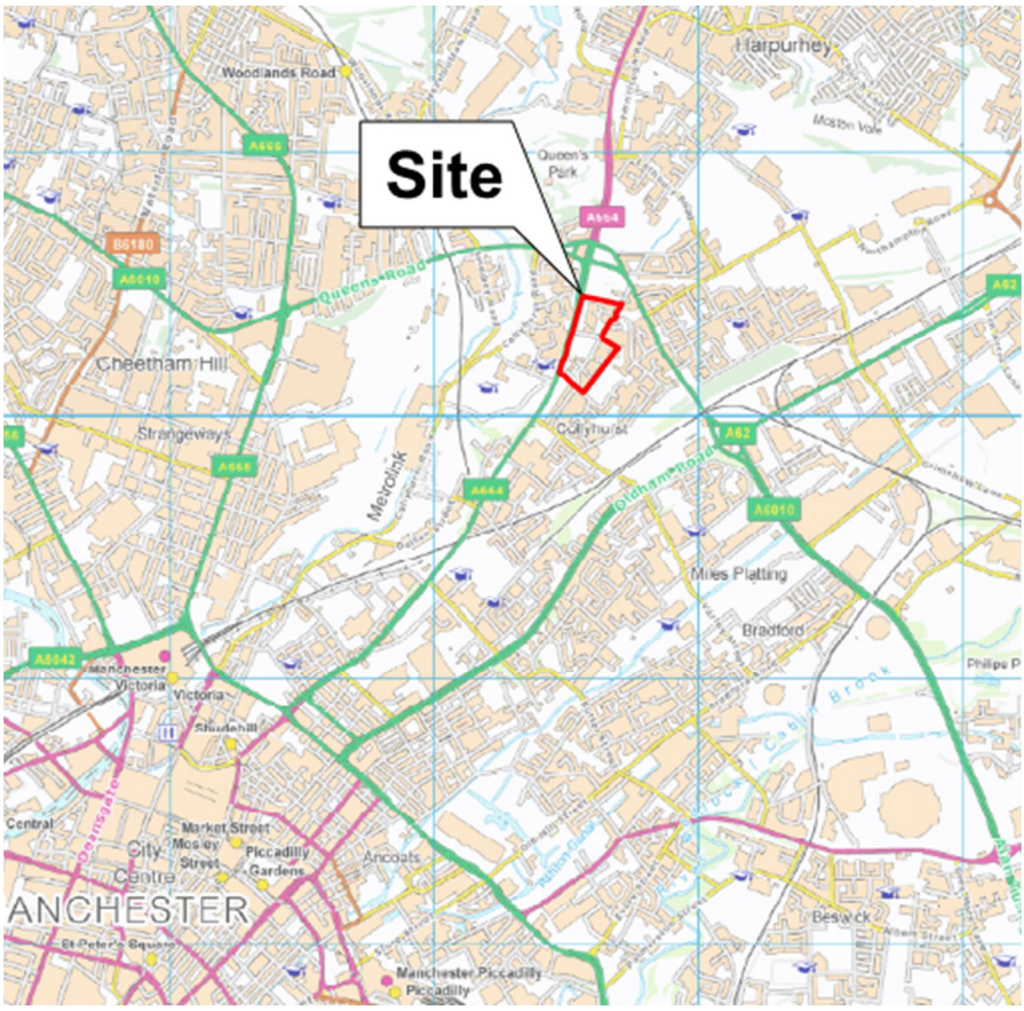


Figure 1 : Site Location

1.2.3 The site is surrounded to the west, south and east by residential properties, with an area of scrub woodland to the north. A664 Rochdale Road forms the western border to the site, with Thornton Street North forming the eastern boundary; the area of the main development works is split by Paget Street which runs between Rochdale Road and Thornton Street North. An area of public open space to the east of Thornton Street North also forms part of the site works; this area is to be retained as public open space as part of the final development.

1.2.4 The site was previously occupied by a mixture of low-rise residential buildings and public open space, comprising areas of mature and semi-mature trees and grassed areas. The buildings had been demolished and the arisings removed from site some years prior to commencement of these works, although foundations and hardstand areas were left in situ, together with live and abandoned underground utilities.

1.3 Proposed Development

1.3.1 The proposed development comprises of a mixture of townhouses, duplex apartments, and a public open space to the east of Thornton Street North. The development will have associated access roads, car parking and soft landscaping areas with retained and proposed planting.

1.3.2 The proposed development layout is shown on Drawing 8871-BA-MP-00_DR-A-(04)707-T2 prepared by Buttress Ltd (presented in Appendix 16).

1.4 Enabling Works Verification Report

1.4.1 The remediation strategy considered that the remediation works are spilt into 'pre-construction' (or enabling works) phase and the 'build phase' (i.e. during the development works) phase.

1.4.2 The scope of this verification report covers the 'pre-construction' enabling works phase. A 'post-construction' build phase verification report will also be required.

1.4.3 The aim of this report is to demonstrate to the Local Authority (LA) that the site has been suitably remediated to the extent that construction works may commence and the site is suitable for use (subject to regulatory approval of the 'post- construction' remediation works).

1.4.4 This Verification Report aims to:

- Summarise the background to the enabling works.
- Describe site enabling and pre-construction remediation works undertaken.
- Describe additions and variations to works outlined in the agreed pre-construction phase of remediation works.
- Provide an assessment of site won material earmarked for reuse in the development.
- Demonstrate that re-used site generated materials cannot be considered a waste.
- Describe further 'build phase' remediation works to be completed.

2 BACKGROUND

2.1 Previous Reports

2.1.1 The following reports have previously been prepared and issued by LK Consult (LKC) and should be read in conjunction with this report:

- Preliminary Risk Assessment (ref: CL-602-LKC 20 1120B-01 [R1], dated August 2020);
- Phase 2 Environmental Investigation, Risk Assessment and Outline Remediation Strategy (ref: CL-602-LKC 20 1120-02 [R1], dated January 2021);
- Remediation Strategy (ref: CL-602-LKC 20 1120-04 [R1], dated January 2021);
- Geotechnical Assessment Report (ref: CL-602-LKC 20 1120-02 [R1], dated October 2021);
- Desk Based Coal Mining Risk Assessment (ref CL-602-LKC 20 1120-01, dated October 2020); and
- Shallow Mining Site Investigation Report (ref: CL-602-LKC 20 1120-04 [R0], dated March 2022).

2.2 Summary of Previous Work

2.2.1 The key findings of the previous assessments and investigation work are summarised below:

- Part of a watercourse and reservoir were historically located on site. The site has since undergone a number of phases of development including residential properties with associated streets, nursery, cinema, care home and welfare centre. An orchard and electricity sub-station have also been present on the site. A mound and cutting were also historically present.
- The site currently comprises rough open ground (no buildings) across the majority of the site, housing is present on the southern part of the site, roadways and remnant foundations remain on site.
- The main site investigation was carried out on 13th to 23rd July 2020 and included 18no. window sample boreholes, 4no. cable percussive boreholes, 33no. trial pits, 10no. trial trenches and 4no. rotary boreholes.
- Made ground varied significantly across the site and was recorded between depths of 0.40-13.50mbgl. The made ground was predominantly gravelly sand comprising demolition rubble. Cobbly sands and gravel of a MOT type material were also locally present to between 0.65mbgl and 0.85mbgl.
- A significant thickness of ashy made ground was encountered across the site, predominantly in the east, increasing thickness further to the east.

2.2.2 The Remediation Strategy included an updated, overarching assessment of the Pollutant Linkages in previous reports. A summary of the pollutant linkages considered in the Remediation Strategy is as follows:

- Pollutant Linkage 1 – Direct Contact (dermal contact with soil, ingestion of soil, inhalation of soil derived dust): Arsenic, lead PAHs and non-volatile TPHs were locally above the relevant assessment criteria. Small quantities of asbestos containing material (quantification of <0.001%) was reported in four samples analysed. Based on the above, the probability of asbestos, metals, PAHs and TPH Aromatic C21-C35 affecting site users is considered likely. With a medium consequence, the risk is considered moderate and remediation (clean capping layer) was recommended.
-

- **Pollutant Linkage 2 – Inhalation of vapours:** Despite reported visual evidence of hydrocarbon contamination in one location in the form of lumps of tarmacadam fragments (confirmed as PAHs by chromatogram) no evidence of potentially volatile contaminants was identified during the investigation. It is considered the probability of volatile contaminants affecting site users as unlikely across the site. The consequence is expected to be medium, giving a low risk and no remediation is required.
- **Pollutant Linkage 3 – Hazardous gas** – Significant sources of ground gas were identified during the site investigation and subsequent monitoring period. Due to the number of monitoring visits with relatively high carbon dioxide (consistently above 5%v/v) it is considered that the eastern section of Plot B (refer to Figure 6 (Remediation Plan) in the Remediation Strategy) should be treated as CS2. Following the ground gas risk assessment, Characteristic Situation 1 was considered appropriate for all other areas and therefore no remediation was recommended.
- **Pollutant Linkage 4 – Controlled Waters –** The site investigation report identified a low risk to controlled waters based on no significantly elevated concentrations of potentially mobile contaminants and the low sensitivity of the receptor.

2.3 Pre-Commencement Information

2.3.1 The following additional documentation was prepared prior to commencement on site. For brevity, copies are not included in this report but may be supplied on request:

Soil Segregation and Management Plan

- To facilitate removal of surplus soils to an appropriate waste stream, a Soil Segregation Plan was produced which outlined sources of surplus material to be removed from site. The plan incorporated relevant findings of the site investigation report, soils descriptions, laboratory analysis, waste classification and management strategy.
- The report was sent to waste hauliers for consideration prior to the start of material being removed from site. The objective was to ensure that surplus materials generated from site were adequately classified and managed to identify a suitable disposal route.
- The Soil Segregation Plan was implemented on site by the LKR site manager.

Asbestos in Soils Management Plan

- An Asbestos in Soils Management Plan was produced prior to start on site. The AMP included an assessment of risk posed to construction workers and members of the public during enabling works and the presence of asbestos in soils.

Material Management Plan

- A Material Management Plan was produced prior to start of works on site to cover re-use of materials on site. The reuse of materials under DoW CoP[1] was agreed with regulators (MCC and EA) and declaration was made (reference 14/05/2021 15:01:46). The declaration is included in Appendix 1.
- Verification of the MMP is presented in Section 4 of this Report.

Health & Safety Construction Phase Plan

- A Construction Phase Plan (CPP) was produced under CDM Regulations prior to the start of the enabling works. The CPP is not considered in this report.

[1] CL:AIRE (March 2011). "The Definition of Waste: Development Industry Code of Practice. Version 2".

Notification of the Works

- Notification of the proposed works via Form F10 was prepared by LKR and submitted to the HSE on 19 April 2021; revisions to the expected duration of the works as a result of the programming of utility diversions were covered by subsequent notifications to HSE.

3 PRE-CONSTRUCTION REMEDIATION AND ENABLING WORKS

3.1 Scope of Work

3.1.1 The site enabling and remediation works are summarised below:

- Site set-up, surveys, and site segregation;
- Closure of public footpath across the site;
- Installation of a mixture of permanent and weldmesh fencing;
- Tree protection followed by vegetation removal and tree felling, including specialist removal of stands of Japanese Knotweed;
- Supervision of archaeological works;
- Diversion and/or disconnection of underground utility services;
- Stripping of topsoil to stockpile;
- Careful lifting and processing existing hardstanding and sub-base;
- Breaking out relic structures and removing soft spots or voids;
- Cut/fill with reduced level excavations and off-site disposal of contaminated soils not suitable to be retained on site, surplus made ground, vegetation and general construction waste;
- Construction of 300mm thick pile mats and capping to roads;
- Material tracking and site records to inform the MMP; and
- Provision of a Verification Report including all laboratory results, as-built drawings etc.

3.1.2 The enabling and remediation works commenced on site working in accordance with a performance specification based on CBR testing that was produced by the Client's Temporary Works Designer (Morgan Sindall), requiring ≥5% CBR on re-engineered fill.

3.1.3 For the purposes of materials classification under the requirements of the Specification for Highway Works, LKR undertook additional materials testing, to include laboratory analysis of the MDD/OMC relationship, particle density, MCV, Atterberg Limits and grading, with the use of site-analysed core-cutter samples to measure compaction and lightweight deflectometer to provide an indication of achieved bearing capacity. This is discussed further in Section 3.9.

3.1.4 Photographs were taken throughout the enabling and remediation works; a selection is presented in Appendix 14.

3.2 Earthworks Plant

3.2.1 Excavation and remediation operations were undertaken by a variety of 8 – 40 tonne excavators, depending on access constraints and depth of excavation, with an 8-tonne excavator used in conjunction with hand-digging and a CAT to expose underground services.

3.2.2 A CAT D6 dozer was used for stripping and trimming works.

3.2.3 Transport of material within the site was undertaken by 9-tonne forward-tipping dumpers, later augmented/replaced by 25-tonne articulated dumpers; a 12-tonne articulated dumper (Hydreema 912) was used during periods of weather-related adverse ground conditions.

3.2.4 Compaction plant comprised a Bomag BW213DH for the majority of work supplemented with an Amman ASC130, with a CAT CS66B used in the wetter winter period. A smaller Ammann ARX26m roller was used in areas of limited access. Manufacturer's published data was used to

assign compaction plant to a particular class in Table 6/4 of the Specification for Highway Works (SHW) Series 600, based on their static linear load as follows:

Table 3-1 : Compaction Plant Data

ROLLER MAKE/MODEL	DRUM MASS (kg)	DRUM WIDTH (m)	STATIC LINEAR LOAD (kg/m)	ROLLER CLASS (TABLE 6/4)	N[2]	D[3] (mm)
Bomag BW213DH	7560	2.13	3549	Vibratory roller, ref #7	4	200
Caterpillar CS66B	7355	2.13	3447	Vibratory roller, ref #7	4	200
Ammann ASC130	7263	2.13	3410	Vibratory roller, ref #7	4	200
Ammann ARX26	2460	1.20	1000	Vibratory roller, ref #3	10	125

3.2.5 The SHW method specification was used to provide an initial guide to the amount of compactive effort required; as this project has an end-product specification, both N and D could be subject to minor variation provided that the end product was compliant. In practice, cohesive fill was placed in layers of 250mm maximum uncompacted thickness, subject to an agreed tolerance of ±75mm.

3.3 Supervision, Watching Brief and Verification

3.3.1 The enabling and pre-construction remediation works were supervised on a full-time basis by a suitably qualified LKR remediation site manager with additional support and part-time supervision by a geo-environmental engineer.

3.3.2 A watching brief for any unusual ground conditions or visual or olfactory evidence of contamination (including asbestos containing material) was maintained by a suitably qualified LKR remediation site engineer and briefed site personnel. No evidence of significant unexpected visual or olfactory contamination was identified during the enabling works.

3.3.3 A length of 75mm diameter asbestos cement duct was encountered in made ground in the centre of the site during the course of LKR's works. It was noted to be intact and in good condition with no evidence of significant deterioration. It was carefully exposed to the works boundary and was removed with recourse to the AMP and a specialist contractor (Hardcore Crushing Ltd) removed the ACM to a suitably licenced facility. A copy of the waste consignment note is presented in Appendix 2.

3.3.4 There were no significant variations to the remediation strategy based on the findings of the watching brief or unexpected contamination. Suitability for use, disposal or verification testing was undertaken by the LKR geo-environmental engineer as required and is discussed in the following Sections.

3.4 Control of Water

3.4.1 No groundwater was encountered during the enabling works within the natural clay strata, although wet ground conditions were experienced in the made ground of the southern part of the site.

3.4.2 Surface water resulting from long periods of persistent heavy rainfall especially during the winter period was controlled using pumps, grips and temporary shallow French drains in accordance with CIRIA Report 113[4].

[2] *N = Number of passes*
[3] *D = Maximum layer thickness, based on Class 2B or Class 2C material*
[4] CIRIA (1986) "Control of Groundwater for Temporary Works" REP R113.

3.5 Management of Underground Utilities

3.5.1 As a result of the site's past development and use, numerous underground utilities were known to exist on and within the boundary of the site. Building on the pre-construction information supplied by the client, comprising utility company records, topographic surveys and ground penetrating radar (GPR) surveys, a phased programme of disconnections and diversions was undertaken during the works.

3.5.2 Site staff used a combination of CAT survey and hand-excavated trial trenches to locate and expose services within the site, and arrangements were then made with the individual utility companies for the diversion and/or disconnection and capping of these.

3.5.3 Drawing 20_1044_03 presented in Appendix 16 shows the position of known services remaining on site at the present time.

3.6 JK Excavations

3.6.1 The presence of Japanese Knotweed had been identified in a small section of the site adjacent to Thornton Street North. This plant is an invasive species listed in Schedule 9 to the Wildlife and Countryside Act 1981 and is classified as controlled waste under the Environmental Protection Act 1990.

3.6.2 Japanese Knotweed excavation and removal was undertaken by the Invasive Plant Company (IPC) during the enabling works. The Validation Report prepared by IPC is presented in Appendix 3.

3.7 Site Clearance and Waste Management

3.7.1 Waste material (including general construction waste) was segregated into appropriate waste types and removed from the site by registered waste carriers to suitably licenced facilities (see Table 3-2). Surplus soils were managed with recourse to the soil segregation plan and disposed of off-site to licensed facilities.

3.7.2 Duty of Care records (comprising haulier registrations and the environmental permits for receiving destinations) are summarised in Table 3-2 below (volumes of inert made ground are assessed at 8.25m^3/load, based on LKR's recent experience):

Table 3-2 : Waste Duty of Care Summary

HAULIER	WASTE CARRIER REGISTRATION	VOLUME (m^3)	WEIGHT (kg)	MATERIAL	DESTINATION	ENVIRONMENTAL PERMIT
W Maher & Sons	CBDU90617	7,937	N/A	Made ground (EWC 17:05:04)	Fletcher Bank Quarry	EPR/GP3733FE
W Maher & Sons	CBDU90617	255	N/A	Japanese Knotweed (EWC 17:05:04)	Fletcher Bank Quarry	EPR/GP3733FE
W Maher & Sons	CBDU90617	994	N/A	Vegetation (EWC 20:02:01)	Fletcher Bank Quarry	EPR/GP3733FE

HAULIER	WASTE CARRIER REGISTRATION	VOLUME (m^3)	WEIGHT (kg)	MATERIAL	DESTINATION	ENVIRONMENTAL PERMIT
Circle Waste	CBDU262015	N/A	3,300	Mixed Waste (EWC 17:09:04)	Circle Northwest Ltd, The Recycling Centre, Moss Lane, Lydon Road Industrial Estate, BL4 8NB	EPR/FB3801TR
Premier Waste Services	CBDU72343	N/A	6,040	Mixed Waste (EWC 17:09:04)	Old Station Goods Yard, Sheffield Road, Newton, Hyde, Cheshire, SK14 2JP	EAWML/50222
Salford Waste Services	CBDU257978	N/A	1,340	Mixed Waste (EWC 17:09:04)	Kingston House Transfer Station, 52 Cobden Street, Salford M6 6WF	EPR/ZP3492CU
JWS	CBDU50919	N/A N/A	1,860 3,760	Green Waste (20:02:01) Wood (EWC 17:02:01)	Land Adjacent to Railway Frederick Road Salford Manchester M6 6GH	EAWMI/50186
Hardcore Crushing	CBDU397200	<1	N/A	Asbestos Cement Water Pipes (EWC 17:06:05)	Bradley Park Landfill Site	EPR/LP3434HA
Kingwell Holdings	CBDU181466	110	240,360	Biomass – no EWC needed	Liberty Biomass Ltd (CM77 8DL.)	WEX228928
EMR	CBDU188448	N/A	4920	Various Metals.	EMR, Salford Ferrous, West Egerton Street, Salford, Manchester, M5 4DY	EP3198CN/V004

3.7.3 Waste transfer notes are held in paper copy by LKR and may be provided on request.

3.8 Earthworks Segregation and Reuse

3.8.1 Re-use of material was undertaken with reference to DoW CoP under a Materials Management Plan which was declared prior to the start of enabling works (see Section 4, below). A copy of the MMP declaration is presented in Appendix 1.

3.8.2 All areas of hardstanding, comprising buried floor slabs, historical foundations, roadways and former car-parking areas were broken out and excavated to stockpile. Redundant private drainage pipes and manholes were broken out and excavated to stockpile.

3.8.3 Significant relict in-ground structures associated with the former buildings were encountered and removed including areas of voiding (basements, etc). Average depths of in-ground structures were approximately 2-3m below existing ground level. Made ground was turned over to natural strata (or a maximum depth of 4m) to confirm removal of structures. Records of depth to natural strata are included on Drawing 20_1044_04 presented in Appendix 16.

3.8.4 In the southern half of the site close to Thornton Street North, a significant number of reinforced concrete piles approximately 300mm in diameter were encountered. These were cropped at ~3m below finished ground level and surveyed individually; the locations of these remaining obstructions are shown on Drawing 20_1044_07 presented in Appendix 16.

3.8.5 All artificial hard materials (concrete, brick, etc) arising from removal of hardstanding, slabs foundations and other below-ground obstructions were crushed to form suitable graded material for reuse on site in construction platforms.

3.8.6 Subsoil and topsoil generated during the works were stockpiled separately for later re-use by the client as part of the build phase remediation (clean cover soils). The quantities and locations of the five stockpiles is shown on Drawing 20_1044_06 presented in Appendix 16. Discussion of suitability of use is included in Section 3.11.

3.8.7 During processing, the suitability of crushed product was regularly checked for re-use and unsuitable elements (e.g. wood, plastics, metal, etc.) were removed and placed in skips for subsequent removal to a suitably licenced landfill site or recycling facility.

3.8.8 Due to prolonged periods of rain during the later stages of the enabling works, approximately 19t of granulated lime was used to dry and stabilise some of the re-engineered fill prior to final placement. The fill was loosely placed in layers of approximately 300mm thickness. Lime granules were spread over the surface of the fill and mixed through it using a hydraulic excavator; the lime was allowed time to act before the next layer was treated.

3.8.9 Site generated and imported aggregates were used to form piling mats to a thickness of 300mm. In roadways, 200mm of site generated and imported aggregate was placed as capping.

3.9 Earthworks Materials Testing

3.9.1 Following removal of the trees, Japanese Knotweed, other vegetation and fly-tipped waste, a series of characterisation samples were taken from across the site (samples T1 – T60) for the following analyses:

Table 3-3 : Characterisation Testing

TEST	# TESTS COMPLETED
Liquid and Plastic Limits (LL/PL/PI)	28
PSD - Wet Sieve, including 3 Sedimentation	29
Uniformity Coefficient	29
Moisture Content	69

TEST	# TESTS COMPLETED
MDD/OMC Relationship (2.5kg hammer)	15
Particle Density	15
Multi Point Moisture Condition Value	15
Organic Matter	30
Water Soluble Sulphate	30
Single Point Moisture Condition Value	61

3.9.2 Earthworks materials utilised in the works were as follows:

Table 3-4 : Classification of Materials

MATERIAL	CLASSIFICATION	SOURCE
Made Ground	Designated unsuitable based on visual assessment of organic content (e.g. topsoil, plant remains and roots) and/or silt content	Site won - deemed unsuitable for use and removed from site to licenced facility
Made Ground	Designated as proposed suitable fill based on visual assessment, comprising cohesive and granular materials, subject to riddling to remove oversize concrete and brickwork, and picked to remove construction waste (PE pipes, timber, etc)	Site won
Crushed Brick & Concrete	Class 6F2 – Selected granular material	Site won (processed on site by LKR)
Crushed Brick & Concrete	Class 6F5 – Selected granular material	Imported from two sources[5]

3.9.3 The quality assurance regime for re-engineered fill comprised (in-situ and laboratory geotechnical testing according to the type of material. A summary of testing undertaken is shown in Table 3-5 below:

Table 3-5 : Testing of Fill Material

TEST	# TESTS COMPLETED
Single Point Moisture Condition Value	61
Plate Load Tests (min equivalent CBR of 5%) – (FFL – 2m)	40 (formation) 37 (mats & roads)

3.9.4 Core cutter samples were taken during the works to provide an indication of the level of compaction being achieved under the adopted method specification; a total of 21 core cutter samples were taken and analysed. Review of the characterisation data obtained from earlier samples of made ground showed that there was a significant variation in particle density for samples of made ground classified as 'clay' on the basis of particle size distribution analysis. The graph below shows the grading curve data for 23 samples of 'clay' made ground (samples T1 – T60), together with three later samples (CL401, CL403 and CL405):

[5] *The 6F5 material was imported via W Maher & Sons and Fox Brothers Ltd*

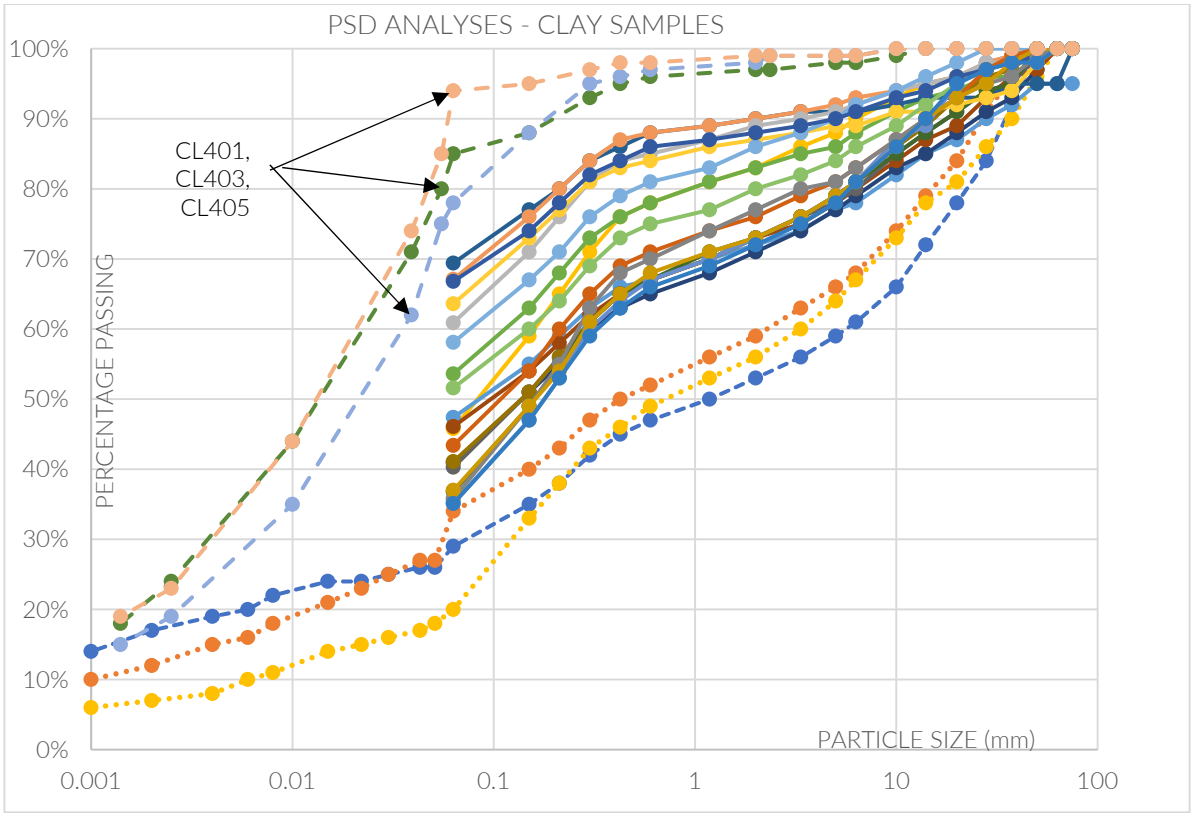


Figure 2 : PSD Analyses on Clay Made Ground

3.9.5 For the samples shown above, the reported particle densities range from 2.36 - 2.63Mg/m^3 with an average of 2.50Mg/m^3. To provide a meaningful assessment of the degree of compaction being achieved, six bulk samples (CL401 – CL406 inclusive) were taken of made ground from which core-cutter samples had earlier been taken; these were analysed for particle density (PD) and three of them (CL401, CL403 and CL405) were also analysed for particle size distribution (PSD). Reported particle densities ranged from 2.65 – 2.68Mg/m^3 with an average of 2.67Mg/m^3. The PSD analysis indicates that the material from which core-cutter samples were obtained is different from the earlier characterisation samples.

3.9.6 Accordingly, the core cutter results were re-analysed using the average particle density in order to determine the percentage air voids achieved using this material under the adopted method compaction. The core cutter data is shown below:

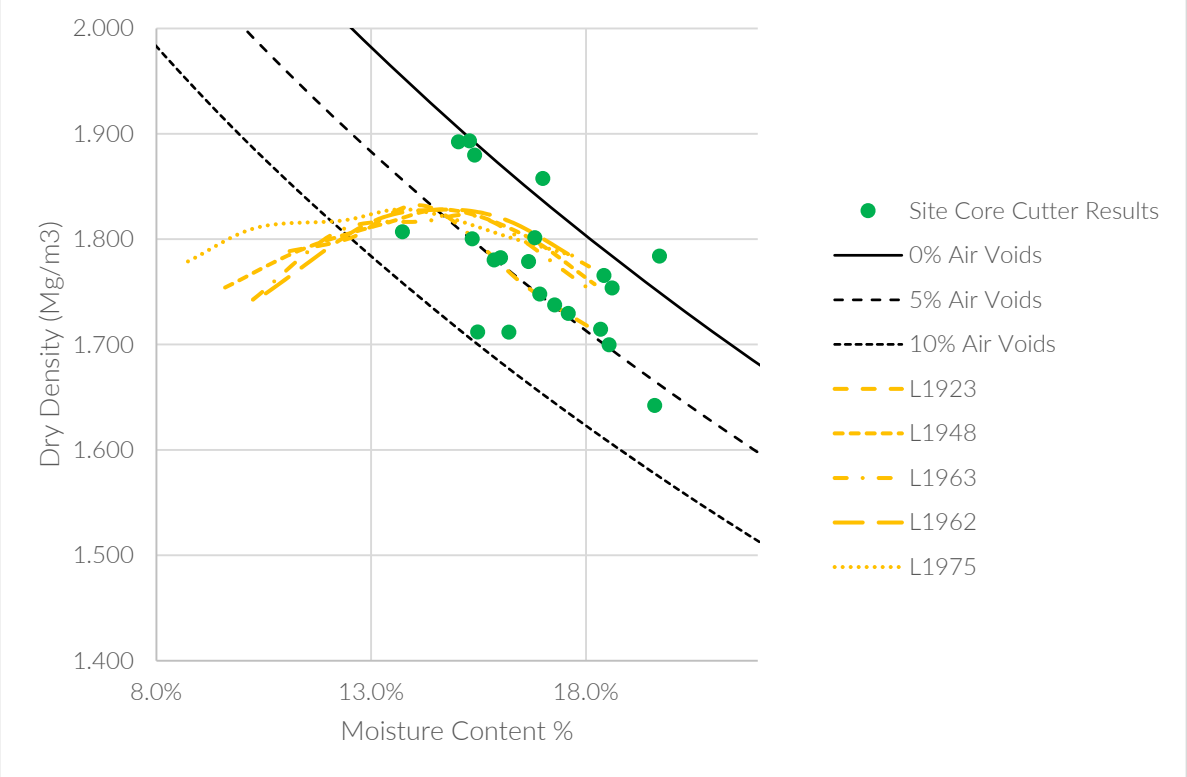


Figure 3 : Core Cutter Data

3.9.7 The OMC/MDD curves determined for characterisation samples with the most similar PSD and PD results have been added to the graph for comparison. Calculated air voids for the 21 core cutter samples range from -2.0% to 9.4% with an average of 3.7%. Given the observed variability in characteristic properties of the 'clay' made ground, this variation is considered acceptable.

3.9.8 To further assist with quality control of compaction, LKR's site team used a lightweight deflectometer (LWD) to undertake instant checks on completed layers and to identify any softer areas. Where soft spots were apparent from the LWD data, the material was excavated and replaced.

3.9.9 During the course of the works, a total of 40 CBR tests were undertaken on engineered fill materials. Results ranged from 2% - 44% with an average of 11.7%. The low readings (2% - 4%) were obtained early in the works (September 2021) on general fill 'trial pads' constructed to aid the temporary works design process being undertaken by Morgan Sindall. Tests were undertaken at different locations and depths to fit around the enabling works being undertaken at that time. Of these CBR tests, six achieved results <5%. The areas of the trial pads were subsequently excavated to 4m depth (or natural strata) as part of the main enabling works and thus were reengineered by excavation and recompaction as per the method used across the remainder of the site. These areas passed satisfactorily on re-test with results of 5.6% - 12.4%. Discarding these early failures, the range of CBRs obtained on engineered fill range from 5%-44%, average 12.9%

3.9.10 A further 31 CBR tests were undertaken on completed pile mats and road capping, with results ranging from 2.4% to 28.9%, average of 8.3%. Seven of the later CBRs undertaken on completed pile mats and road capping failed to achieve 5% CBR - assumed to be due to the effects of sustained rainfall on the crush materials. This material was excavated and allowed to dry before being replaced and recompacted; retests undertaken on these areas achieved satisfactory results. Including the re-test results, CBRs on pile mats and road capping range from 5.3% to 28.9%, with an average of 10.5%

3.9.11 All CBR results are summarised in Appendix 6, with the individual test certificates presented in Appendix 9; test locations are shown on Drawing 20_1044_05 presented in Appendix 16.

3.10 Assessment of Site Generated & Imported Aggregate

3.10.1 Material classification testing was undertaken on site generated and imported aggregates. Six samples of site generated aggregate (CR01-CR06) were collected and sent for geotechnical laboratory testing.

3.10.2 Site generated aggregates were tested for a range of parameters taken from Table 6/1 of the Specification for Highway Works (SHW) Series 600 for selected granular material *inter alia* PSD, moisture content, particle density and LA coefficient.

3.10.3 Site generated aggregates were supplemented by imported recycled 6F5 from two sources:

- W Maher & Sons Ltd: 123 x 8WT loads
- Fox Brothers Ltd: 58 x 8WT loads

3.10.4 The imported total of 181 loads (estimated at 8.25m^3/load) is equal to ~1,493m^3. Confirmatory geotechnical testing on delivered material was undertaken. Six samples of imported aggregate (CR201-204, CR212-213) were tested for the same suite of analytes as site generated aggregates.

3.10.5 Based on the testing undertaken, all site generated and imported aggregates were within the grading parameters for 6F2 and 6F5 material as described in Table 6/1 of the Specification for Highway Works (SHW) Series 600 for site generated and imported mixed recycled material respectively.

3.10.6 Twelve samples (CR07-18) of site generated and thirteen of imported aggregates (CR201-213) used in construction platforms were also sent for geochemical laboratory analysis. Due to the coarse nature of site generated aggregate, representative samples were collected into laboratory supplied bulk bags - therefore were reported as 'deviating samples'. Given the material largely comprised brick and concrete fragments and there was no evidence of hydrocarbon contamination, this is not thought to compromise the validity of the results. Indeed, the samples were crushed and homogenised prior to analysis, thereby increasing the surface area of components such as tarmacadam and is thereby considered a very conservative assessment.

3.10.7 Samples were scheduled for the following suites of testing:

- Metals / metalloids, pH, water soluble sulphate, speciated PAHs, TPHCWG, BTEX, MTBE, SOM and asbestos screen (including identification and type, if present).

3.10.8 When compared to residential without uptake assessment criteria, marginal exceedances of lead and arsenic were reported in one sample (CR203) and PAHs (using the B(a)P surrogate marked approach) in CR204, 205, 211, 213. One sample (CR202) also reported chrysotile asbestos fibres at <0.001%.

3.10.9 Of the twenty-five samples of crush analysed, all but two samples (CR16 and CR210) were reported as containing less than 1.5 g/litre of water-soluble sulphate; these two samples were both reported as containing 1.6 g/litre.

3.10.10 Whilst exceedances were noted, the above assessment criteria are considered overly conservative method. The aggregates on site, being beneath plots, roadways or clean environmental cover soils will not be accessible to future site users and therefore direct contact pathways are not applicable. There was no evidence of potentially volatile or mobile contamination noted as part of the watching brief.

3.10.11 Based on the above, both site-generated and imported aggregates are considered suitable for use beneath buildings, roadways and clean cover soils.

3.10.12 As well as plate load tests on re-engineered ground, as described in Section 3.9.9 above, further confirmatory plate load tests were also undertaken on completed pile mats and road running layers, and an equivalent CBR value was calculated for each test.

3.10.13 Results and locations of some of the tests on pile mats and roads have previously been provided to the Client. Test certificates are presented in Appendix 9, summarised in Appendix 6 and their locations detailed on Drawing 20_1044_05 presented in Appendix 16. The results ranged from 2% to 44% for engineered fill materials, and 2.4% to 28.9% for pile mats and roads (including failures and re-tests).

3.11 Assessment of Site-Won Materials for use in Build Phase Remediation

3.11.1 The quality assurance regime for topsoil and subsoil for re-use as part of clean cover soils comprised geochemical testing in accordance with the frequencies specified in the remediation strategy.

3.11.2 Records of site won subsoil and topsoil, including laboratory testing certificates and photographs are included in Appendix 15. The as-built positions and volumes of subsoil and topsoil stockpiles are shown on Drawing 20_1044_06 in Appendix 16.

3.11.3 Site won subsoil was categorised as being from a greenfield source on the basis that it was generated from natural strata >2m below original ground level and had not been subjected to what could be considered 'brownfield activity'.

3.11.4 Site won topsoil was categorised as being from a remediated source, to reflect its generation from original ground level, and was considered for use in the POS area (analogous with 'landscape' taken from the remediation strategy).

3.11.5 Sampling frequencies taken from the remediation strategy and number of tests are summarised in the table below:

Table 3-6: Compliance Testing of Soils for Build Phase

MATERIAL TYPE	QUANTITY	TEST	FREQUENCY	# TESTS REQUIRED	# TESTS COMPLETED
Topsoil	111m^3	Suite A	1 per 150m^3	3	3
Subsoil	2,270m^3	Suite A	1 per 200m^3	12	18

3.11.6 Eighteen samples of site generated natural subsoils (SS101-SS118) were collected for laboratory analysis. Results were compared to the nearest appropriate SOM based on a residential with plant uptake land use.

3.11.7 Three samples of site generated topsoil (TS01-03) for use in the area of POS were also collected for laboratory analysis with results compared to $POS_{(resi)}$ assessment criteria.

3.11.8 Samples were scheduled for the following suites of testing:

- Metals / metalloids, pH, water soluble sulphate, speciated PAHs, TPHCWG, BTEX, MTBE, SOM and asbestos screen (including identification and type, if present).

3.11.9 Site-won material has been assessed using criteria included in Appendix 13. With regards to the soil risk assessment LKR will use the following hierarchy:

- Category 4 Screening Levels (C4SLs).
- LQM Suitable 4 Use Levels (S4ULs).

3.11.10 Following the approach taken from the site investigation and risk assessment, LKR consider the main risk drivers for PAHs are benzo(a)pyrene (B(a)P) and naphthalene. Justification for use of

the surrogate marker approach is included in the main site investigation report undertaken by LK is considered applicable for material for re-use.

3.11.11 There were no exceedances of generic assessment criteria for either site generated subsoil for use in private garden or topsoil for use in POS and therefore these materials are considered suitable for use.

3.11.12 All retained stockpiled soils for use in build phase remediation were clearly demarcated on site using green mesh fencing and signage (refer to photographic records in Appendix 15). At the time of testing, site won subsoils were suitable for use as part of clean cover in gardens and soft landscaping. Steps should be taken to maintain segregation (site briefings, signage, fencing, material management, etc) to avoid cross contamination of clean site won material during construction phases. Should unsuitable material be mixed with clean soils on site, this may render them unsuitable for use.

4 MATERIAL MANAGEMENT

4.1 Material Management Plan

4.1.1 A Material Management Plan was produced prior to start of works on site to cover re-use of materials on site. The reuse of materials under the DoW CoP[6] was agreed with regulators (MCC and EA) and declaration was made (reference 14/05/2021 15:01:46). The declaration is included in Appendix 1.

4.1.2 This Section has been prepared in accordance with the DoW CoP and is intended to provide a record of material used on site.

4.2 Regulatory Agreement

4.2.1 The Risk Assessment and Remediation Strategy were supplied to the Local Authority (Manchester City Council) and Environment Agency contacts listed in the Materials Management Plan prior to commencing site works.

4.2.2 Correspondence was received from both the Local Authority and EA regarding the re-use of materials under the DoW CoP. The Local Authority approved the Remediation Strategy which included a description of the proposed re-use of site won soil in accordance with the DoW CoP. Approval of the Remediation Strategy was given via a planning permission 128788/FO/2020 dated 3rd December 2020. The EA provided no objection or amendments to the Remediation Strategy, Risk Assessment or MMP surrounding the re-use of materials under the DoW CoP. As such this is interpreted as acceptance.

4.2.3 The Qualified Person declaration was submitted to the EA at National Level; a copy of the email and automated response is presented in Appendix 1.

4.3 Amendments to the MMP

4.3.1 The MMP and volume re-use estimates were based on the initial design reduced site levels and ground investigation information. Following submission of the MMP, the design strategy was changed by the client, including incorporating an amended layout and revised levels.

4.3.2 Furthermore, the volume estimates in the declaration were based on reasonable assumptions of the ground conditions on site and overall site 'turnover'. During the enabling works, some areas of the site were found to comprise significant thicknesses of made ground and by its very nature, this approach is variable.

4.3.3 The above amendments are not thought to materially affect the principles of the MMP and re-used materials are deemed to maintain the certainty of use criteria, the variation in volumes not considered to be excessive. Given the above, along with the project timescales a revised declaration was not considered necessary.

4.4 Tracking Systems and Reuse

4.4.1 Upon commencing the enabling works, a materials tracking system was implemented by LKR, as outlined in the site Materials Management Plan. The tracking data was reviewed and updated as necessary during progression of the earthworks. Summarised tracking sheets are presented in Appendix 10.

4.4.2 Based on the site investigation and risk assessment, and subject to a watching brief site Made Ground was considered suitable for use beneath hardstanding and clean cover soils. The majority of made ground encountered during the remediation works comprised varying degrees of rubble, ash and reworked natural strata, as described in the site investigation reports. There

[6] CL:AIRE (March 2011). "The Definition of Waste: Development Industry Code of Practice. Version 2".

was no significant variation in the type of made ground encountered across the site therefore segregation of made ground materials for re-use was not required.

4.4.3 Geotechnical and geochemical testing of site generated aggregates, subsoils and topsoil is described in Section 3 of this report, which summarises the materials to be suitable for their intended use.

4.4.4 Site works comprised 'turnover' of made ground to allow removal of relict foundations and substructures and cut/fill to reduced levels. Therefore stockpiles of made ground for re-use were often small, transient and localised, with made ground generally being replaced within the same areas of site. The exceptions relate to recovery of hard materials following crushing and prior to placement to pile mats and road capping. Beyond crushing of oversized hard materials to generate aggregates, no other treatment of made ground was required and therefore no specific 'treatment' stockpiles were needed.

4.4.5 The final placement levels are shown Drawing 20_1044_02 presented in Appendix 16.

4.4.6 Throughout the works, LKR maintained appropriate site records relating to excavation, disposal and re-use of soils, including regular GPS surveys recording depths to natural strata and volumes of material contained within stockpiles. In addition to the interim GPS surveys, two drone surveys of the site were undertaken at different points in 2021. The interim survey drawings are included with the material tracking sheets in Appendix 10. Drawing 20_1044_08 presented in Appendix 16 shows both the retained stockpiles of subsoil and topsoil together with the transient stockpiles of suitable fill awaiting re-engineering and surplus fill awaiting disposal off-site.

4.5 Treatment Records

4.5.1 On-site treatment of material for reuse solely comprised crushing of oversized relict foundations to generate suitable aggregates. Crushing was undertaken using a Kleeman MC110R jaw crusher. The crusher permit is included in Appendix 2.

4.5.2 Handpicking of small volumes of deleterious material such as wood, metal and unsuitable general waste from made ground or processed site-won aggregate was small scale and did not constitute a waste treatment process requiring licensing or permitting; a separate record of the process is not necessary. Such material was segregated and removed from site by registered waste carriers.

4.6 Quantity of Material Used

4.6.1 The MMP anticipated that the turnover of made ground and cut/fill to level was estimated to generate approximately 24,000m^3, comprising 6,750m^3 of suitable aggregates (of which 2,800m^3 re-used in road capping and pile mats and 3,950m^3 stockpiled for temporary re-use in construction phase/ later disposal), 1900m^3 of subsoil and 15,350m^3 surplus for disposal during enabling works phase.

4.6.2 The table below details the actual measured volumes:

Table 4-1 : Quantities of Materials Used

ITEM	ANTICIPATED VOLUMES (m^3)	ACTUAL VOLUMES (m^3)
Surplus material for disposal	15,350	7,962
Clean subsoil for use in capping in gardens	1,900	2,270
Suitable aggregates for use in pile mats and road capping	2,800	1,666

ITEM	ANTICIPATED VOLUMES (m^3)	ACTUAL VOLUMES (m^3)
Suitable processed aggregate for placement in a temporary stockpile for the construction phase	3,950	0
Imported aggregate for completion of pile mats and road capping	0	1,494
Topsoil retained for use in POS capping layer	0	111
TOTAL	**24,000**	**13,503**

4.6.3 The differences between anticipated and actual volumes are attributable to the following factors:

- The 24,000m^3 was an estimate based on interpretation of the available site investigation and other data (made ground thicknesses encountered in site investigation locations, etc).
- A revision in design levels and layout undertaken by the client during the enabling works further affected the accuracy of this original figure.
- The quantity of clean subsoil recovered was 370m^3 greater than expected. As this material has been stockpiled above finished remediated levels, its recovery has accommodated an equivalent volume of suitable fill material that would have otherwise been sent off site for disposal. The same explanation applies to the 111m^3 of topsoil recovered.
- The quantity of suitable aggregate recovered from processing relic foundations and hardstanding was 1,134m^3 less than anticipated, necessitating the requirement to import 1,494m^3 of aggregate to complete construction of piling mats and road capping, and providing no stockpiled aggregate for later use in the construction phase.

4.6.4 With the above in mind, the variation in material re-use from the original MMP is considered nominal and within an acceptable limit of the material re-use estimates when taking bulking, engineering and intrinsic unknown factors into account. LKR consider that works carried out are compatible with and within the spirit of what was originally proposed and not significantly different and therefore should be considered a non-waste.

5 CONCLUSIONS

5.1 Pre-Construction Remediation and Enabling Works

5.1.1 A watching brief was maintained by a suitably qualified remediation site manager and geo-environmental consultant. No unexpected visual or olfactory evidence of contamination was identified during the enabling works.

5.1.2 The site was cleared of small amounts of general waste and vegetation prior to enabling works. Small volumes of site generated wastes were segregated based on material type and placed in skips for removal from site by a suitably licenced contractor.

5.1.3 Japanese Knotweed impacted soils were removed under specialist supervision.

5.1.4 Extensive areas of relict foundations and hard materials were grubbed out and processed for re-use on site in accordance with the declared MMP under recourse to the DoW COP. Suitable hard materials were re-used on site to form pile mats and road capping.

5.1.5 Surplus materials and general wastes were segregated based on material type and disposed of via registered hauliers to appropriate disposal facilities under duty of care requirements.

5.1.6 Recycled 6F5 aggregate was imported with appropriate testing, certification and supply chain detail.

5.1.7 Geotechnical criteria were tested and in-situ performance has been confirmed as suitable based on information provided by the Client and structural engineer assessment.

5.1.8 Testing of materials remaining on site for re-use was undertaken. Materials reused on site are considered suitable for use and the site is suitable for the proposed development, subject to the recommendations and subsequent verification of the outstanding build phase remediation works detailed in remediation strategy report.

5.1.9 Volumes of materials re-used under the MMP, although variations to the original declaration were undertaken, are similar to those submitted and LKR consider the four guiding principles of the MMP have been adhered to and materials can be considered as a non-waste

5.1.10 The proposed site enabling and pre-construction remediation works have been carried out in accordance with the Remediation Strategy (reference LKC 20 1044, dated January 2021) and submitted to the Local Authority.

5.1.11 A photographic record of the works was maintained, and selected photographs are presented in Appendix 14.

5.2 Build Phase Remediation and Verification

5.2.1 Build phase remediation works are not part of this report and should be undertaken in accordance with the agreed remediation strategy report.

5.2.2 The scope of the build phase remedial works comprises:

- Provision of suitable Environmental Cover Layer in soft landscaping areas; and
- Potable water pipeline assessment.

5.2.3 The remaining 'build phase' remediation carried out on the site requires validation by a third party and suitable documentary evidence provided in a Site Completion Report, such as photographs, consignment documents and analytical results. This should include as a minimum:

- Environmental Capping Layer depth validation.
- Validation testing of imported or site won subsoil, topsoil and physical break layer materials, as required.

- Evidence of the correct pipework installation and confirmation of the use of first-generation trench backfill, as required

5.3 Recommendations for Construction Phase

Excavations & Control of Arisings

5.3.1 Groundworks should incorporate suitable material management. Excavations into made ground may yield arisings which, whilst they may be considered to be suitable for use, may be deemed hazardous for disposal purposes. Groundworkers should carefully segregate (and stockpile separately) aggregate, made ground, and clean natural soils, in order that an excessive volume of unsuitable material is not generated.

5.3.2 A geo-environmental consultant should be consulted and with their approval made ground arisings could be:

- Redistributed beneath concrete, or areas of hardstanding, where they would be satisfactorily isolated from end users;
- Isolated beneath the clean cover soils in landscaped areas or
- Exported from site to a suitably licensed landfill facility.

5.3.3 Whilst off-site disposal is not generally considered in line with current government philosophy regarding sustainable development, it may be the most practical solution if redistribution and retention on site is not feasible. Any material exported from site should be appropriately characterised and a suitable disposal route determined. Material removed from site should be hauled by a registered waste carrier under appropriate duty of care procedures.

5.3.4 Excavations should remain stable in the short term but if left open for any significant period of time may require shoring, most notably in granular made ground. Trench boxes/ shoring should be installed as soon as possible to minimise risk of sidewall collapse.

5.3.5 All retained stockpiled soils for use in build phase remediation were clearly demarcated on site using green mesh fencing and signage (refer to photographic records in Appendix 15). At the time of testing, site won subsoils were suitable for use as part of clean cover in gardens and soft landscaping. Steps should be taken to maintain segregation (site briefings, signage, fencing, material management, etc) to avoid cross contamination of clean site won material during construction phases. Should unsuitable material be mixed with clean soils on site, this may render them unsuitable for use.

Control of Water

5.3.6 Based on observations during the remedial works and site investigation there is potential that groundwater flows will be encountered in shallow excavations, particularly in the deeper made ground in the south of the site. A system of surface water infiltration management should be implemented to minimise its impact during excavations and backfilling activities. Stockpiles should be sealed and prevailing weather conditions should be considered when undertaken certain aspects of groundwork.

5.3.7 Shallow groundwater may need to be controlled in line with current guidance.

5.3.8 Vehicle movements should be monitored and appropriate mitigation employed to minimise plant traffic on exposed areas of soil during excavations.

Health & Safety

5.3.9 Workers involved in excavations for foundations, drainage, utilities etc. are likely to come into direct contact with the made ground.

5.3.10 Made ground on site is known to contain low concentrations of asbestos containing materials. An asbestos in soils management plan should be incorporated into risk assessments for any

groundworks on site. Although workers will only be exposed to made ground for a relatively short time, simple precautionary measures, i.e., good personal hygiene and basic personnel protective equipment should be utilised. Maintaining made ground in a damp condition will also mitigate any potential risk.

5.3.11 In addition to the above, the atmosphere in shored trenches in excess of 1.2m should be monitored for oxygen and hazardous gas (methane & carbon dioxide), prior to personnel entering such excavations. Monitoring should continue whilst personnel are working in deep excavations.

5.4 Residual Risk

5.4.1 LKR has identified and assessed the following residual risks to remain following enabling and remediation works:

- Use of granulated lime in treatment of elevated moisture content within localised areas of cohesive fill in the northern half of the works has the potential to have raised the pH of this fill. Disposal of excavation arisings from future groundworks in this area will require analysis to investigate whether the elevated pH classifies the arisings as hazardous waste. Similarly, the placement of any imported material in lime-treated areas should be of low water-soluble sulphate content as specified in Clause 602.16 of SHW in order to mitigate the potential for formation heave.
- The presence of root protection zones for retained trees along the Rochdale Road boundary, in the extreme south-east corner of the site and in the park area of POS on the east side of Thornton Street, together with smaller zones associated with the project's public information signage, restricted access for LKR's enabling works. As a result of the implementation of these zones, it was not possible to undertake remediation works to the full extent of the original footprint. There is consequently a number of small areas of ground to which access was not possible, and which may require attention from future groundwork contractors. These features are shown on Drawing 20_1044_03 presented in Appendix 16.
- Two deep culverts and an existing sewer have been retained within the site boundary as specified, together with partially diverted Openreach telecommunications ducts along the Rochdale Road boundary. The known or inferred positions of these services is shown on Drawing 20_1044_03 presented in Appendix 16, together with the positions of service terminations along the site boundaries.
- Approximately 120 piles that were encountered in the south-east of the site were cropped at ~3m below ground level, so should present no constraint to the installation of drainage and service utilities. They will pose an obstruction for any future piling works, so foundation solutions in this area will need to consider their location and depth. Drawing 20_1044_07 details their location.
- LKR excavated and screened all made ground to natural strata and no contamination was identified. The residual risk is therefore considered low. As with all enabling and remediation works, it is important that future groundwork contractors maintain a watching brief in line with the remediation strategy with regard to potential visual and olfactory indicators of contamination not encountered during these works.

Appendix 1 : MMP Declaration

From: Yueming Lu <yueming.lu@claire.co.uk>
Sent: 17 May 2021 11:16
To: Peter Dunn
Subject: Notification - CL:AIRE DOWCOP Verification Report production - Ref: 14/05/2021 15:01:46

Dear,

You and your organisation have recently been identified as responsible for the CL:AIRE Definition of Waste: Code of Practice project Verification Report production - see project Declaration copied below (***Not a receipt).

By the estimated date of production - see in Question 12g, the report is expected to send to us via the following link: https://www.claire.co.uk/verification-report-upload, or you can advise us on the same form of the revised production date and the reason for the delay.
Please be aware that until the Verification Report is received, use of the DoW CoP remains incomplete and the material could be considered an illegal deposit.

However, if you are not the appropriate person to receive this email, please let us know by replying to this email immediately.

Timestamp	14/05/2021 15:01:46
Qualified Person Name	Mike Harper
Qualified Person Number	431
1. This Declaration relates to -	Site of Origin - Route A: Land affected by contamination or suspected of being affected by contamination.
2. Proposed Volumes	15,400
3a. Site of origin - name of site owner, address & contact details	Northern Gateway (FEC) No. 10 Limited Northern Assurance Building Second Floor, 9-21 Princess Street, Manchester, United Kingdom, M2 4DN
3b. Site of origin - site name & address	Collyhurst Village, off Thornton Street North, Manchester, M40 7SU
3c. Site of origin - developer name, address & contact details	LK Remediate Eton Business Park Eton Hill Road Radcliffe Manchester M26 5ZS Tel: 0161 763 7200
4a. Donor Site - developer name, address & contact details	n/a
4b. Donor Site - site name & address	n/a
4c. Receiver Site - developer name, address & contact details	n/a
4d. Receiver Site - site name & address	n/a
5a. Soil Treatment Facility / Hub site owner / operator - name, address & contact details	n/a
5b. EA / NRW Permit number for Mobile Treatment Plant or Fixed Soil Treatment site	n/a
5c. Donor site - developer name, address & contact details	n/a

5d. Donor site - name & address	n/a
5e. Receiver site - developer name, address & contact details	n/a
5f. Receiver site name and address	n/a
6a. Local Authority name, address	Manchester City Council Building Control PO Box 532 Town Hall MANCHESTER, M60 2LA
6b. Local Authority - name and contact details:	Rebecca Twigg-Purcell Environmental Protection Environmental Health Neighbourhoods Directorate Manchester City Council Tel: Contact Manchester 0161 234 5004 Email: r.twigg@manchester.gov.uk
6c. Environment Agency / Natural Resources Wales local office address & contact details	Stephen Bostock The Waste Enquiries Helpdesk Team Environment Agency | Richard Fairclough House, Knutsford Road, Warrington, WA4 1HT GMMCWasteEnquiries@environment-agency.gov.uk/ stephen.bostock@environment-agency.gov.uk Environment incident hotline (24/7) | 0800 80 70 60 General Enquiries | 03708 506 506
7. How will payment be made	BACS
8. Who will pay the Declaration fee?	Lauren Burgess, TerraConsult, Suite 104, Mere Grange Business Park, St Helens, WA9 5GG
9. Email address of person identified in Q8	laurenburgess@terraconsult.co.uk
10. Terms & Conditions	Person identified in Q8 has read and agreed to the Terms & Conditions.
11. Please provide a purchase order number	8157
12a. I confirm that -	I satisfy the Qualified Person requirements set out in Appendix 6 of the Definition of Waste: Development Industry Code of Practice to complete this Declaration. I have reviewed the Materials Management Plan for the above project. I have reviewed the risk assessment. I have reviewed the Remediation Strategy/Design Statement covering the above site. I have requested correspondence / documentation relating to the development and how that relates to the use of materials.
12b. Please provide a reference for the Materials Management Plan	LKR 201044_MMP
12c. Please provide a reference for the Risk Assessment	Preliminary Risk Assessment (PRA) report, undertaken by LKC (Ref: LKC 20 1120B, dated 4th February 2020). Updated Preliminary Risk Assessment (PRA) report, undertaken by LKC (Ref: LKC 20 1120, dated August 2020). To incorporate the extended planning boundary. Phase 2 Site Investigation, Risk Assessment and Outline Remediation Strategy report, undertaken by LKC (Ref: LKC 20 1120, dated October 2020).
12d. Please provide a reference for the Remediation Strategy or Design Statement documents.	Collyhurst Village Manchester Remediation Strategy October 2020 (ref LKC 20 1120)
12e. Please provide a reference for the Verification Plan	Verification Plan detailed in Section 26 and Appendix H1 of the MMP
12f. Identify the organisation and individual(s) (email address / contact	Peter Dunn LK Consult

details) with responsibility for producing the Verification Report	Eton Business Park Eton Hill Road Radcliffe Manchester M26 5ZS Tel: 0161 763 7200
12g. Please provide an estimated production date for the Verification Report.	29/10/2021
12h. Please reference other supporting documents as required in the MMP. e.g. as a minimum this must include - location plans, schematics, Desk Top Study, mass balance calculations, contingency arrangements, tracking system. Where these are part of another document, this should be explained here. It is recommended each item is listed.	Phase 1 Report (LKC 20 1120 Collyhurst Village Phase 1 PRA_R1) Preliminary Risk Assessment (PRA) report (Ref: LKC 20 120B, dated 4th February 2020). Updated Preliminary Risk Assessment (PRA) report (Ref: LKC 20 1120, dated August 2020). To incorporate the extended planning boundary. Phase 2 Site Investigation, Risk Assessment and Outline Remediation Strategy report (Ref: LKC 20 1120, dated October 2020). Appendix A1 - Existing Site Plan - Sheet 1 Appendix A1 - Existing Site Plan - Sheet 2 Appendix A1 - Existing Site Plan - Sheet 3 Appendix A2 - Proposed Masterplan South Appendix A2 - Proposed Masterplan Village Appendix B1 - Enabling Works Schematic Material Movements Appendix B2 - Enabling Works Stages Appendix C2 - Earthworks & Compaction Specification Appendix G1 - Example Tracking Document Appendix H1 - Verification Statement LK Remediate have provided details of contingency and tracking arrangements. The Client's chosen contractor will reuse the excavated materials (as described in the MMP) from the site of origin to form site levels. It is the chosen Contractor's responsibility to undertake any amendments necessary to either relocate or render the materials suitable. The chosen Contractor will be responsible for the disposal of any out of specification material as part of the remediation package. The Client will be responsible for any out of specification material arising from the civil construction works. Excess materials requiring disposal will be disposed off-site under instruction from the client or re-used under DoWCoP under an amendment to the MMP. If programme slips, additional resources are to be employed and/or extended working hours (subject to any planning conditions) will be actioned to achieve the agreed completion date. Other risk scenarios include geotechnically unsuitable materials (i.e., natural organic soils) that cannot be reused either within the soft cover system or beneath building footprint or infrastructure. Potential for unidentified chemical contamination that requires disposal off site. As above, the contractor will be responsible for the disposal of out of specification materials.
13a. I confirm that I have reviewed the following correspondence / documentation relating to the development and how that relates to the use of materials from:	a) The Local Authority
13b. Please reference the correspondence with the Local Authority.	From: Rebecca Twigg <rebecca.twigg@manchester.gov.uk> Sent: 28 April 2021 13:41 To: Peter Dunn Subject: Re: Collyhurst Village MMP

	From: Peter Dunn <p.dunn@thelkgroup.com> Sent: 27 April 2021 15:41 To: Graeme Souter <graeme.souter@manchester.gov.uk>; Laura Miller <laura.miller@manchester.gov.uk> Subject: FW: Collyhurst Village MMP
13c. Please reference the correspondence with the EA / NRW.	The remediation strategy, which states material re-use under DoWCoP, has been agreed through planning and therefore this can then be deemed as no objection from the EA.
13d. Please reference the correspondence with other relevant regulatory bodies	n/a
14a. I have reviewed the planning consent including planning conditions	Planning Permission 128788/FO/2020
14b. I have reviewed correspondence concerning the planning consent regarding the development from:	a) The Local Authority
14c. Please list correspondence reviewed in 14b.	From: Rebecca Twigg <rebecca.twigg@manchester.gov.uk> Sent: 28 April 2021 13:41 To: Peter Dunn Subject: Re: Collyhurst Village MMP Confirming no objection.
15. If planning consent is not required please explain why	n/a
16. I confirm that the MMP contains the information required:-	The risk assessment assesses human health and environmental risks in relation to the proposed uses of all the materials in the MMP. The risk assessment concludes that the objectives of preventing harm to human health and pollution of the environment will be met if materials are used in the proposed manner., The Local Authority, the Environment Agency / Natural Resources Wales and other relevant environmental regulatory bodies have not objected to the proposed development / land remediation on the basis that the use of any material is likely to cause harm to human health or pollution of the environment. [This confirmation should be given regardless of whether planning consent is required for the activity. Also see paragraph 3.37 of the CoP.]., The EA/NRW have not objected to the reuse of materials on the grounds that it a.) constitutes a waste management operation or b.) has had a previous application for an environmental permit for waste recovery refused (on the grounds that the project represents waste disposal)., The project or phase to which this Declaration applies has not yet commenced; this is not a retrospective application of the DoW CoP., The project does not involve land-spreading / agricultural re-profiling.

Kind regards

Dr. Yueming Lu

CL:AIRE
Web: www.claire.co.uk

Leading Sustainable Land Reuse

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Appendix 2 : Duty of Care

The Hazardous Waste Regulations 2005:

Consignment Note

Producer's / Holder's / Consignor's Copy

RECYCLING THE PAST FOR THE FUTURE

PART A Notification details

A1 - Consignment Note Code: **LKGROU / 21091**

A2 - The waste below is to be removed from: LK Group Site Winthrop Avenue, Collyhurst, M40 8NJ

A3 - The waste will be taken to: Steptoe's Yard Ltd, Moorfield Ind., Est., Moorfield Way, Altham, Accrington, BB5 5TX

A4 - The waste producer was (if different from 2.): Hardcore Crushing Ltd (Demolition Company) Tel: 01254 233045

PART B Description of the waste

B1 - The process creating the waste(s) was: **Site Preparation**

B2 - The SIC for the process creating the waste: **43.12**

B3 - WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC Code)	Quantity (Kg)	The chemical/biological components in the waste and concentrations are:		Physical form (gas, liquid, solid, powder, sludge, mixed)	Hazard Code(s)	Container type, number and size
			Component	Concentration (% or mg/kg)			
Asbestos Cement Water Pipes	170605	<.1000kg	Asbestos	>0.1%	Solid	HP7	Bulk Bag

The information below is to be completed for each EWC identified:

EWC Code	UN identification number	Proper shipping name	UN Class(es)	Packing group	Special handling required
170605	UN 2590	White Asbestos	9	III - Low	

PART C Carrier's Certificate

(If more than 1 carrier is used, please attach a schedule for subsequent carriers. If schedule of carriers is attached tick here)

I certify that I collected the consignment & that the details in A2, A3 and B3 are correct and I have been advised of any handling requirements

Where this note comprises part of a multiple collection, the round number and collection number are: /

C1 - Carrier's name: Hardcore Crushing Ltd On behalf of: LK Group Ltd (Remediation Contractor) Tel: 0161 763 7200

C2 - Carrier's registration number / reason for exemption: **CBDU 397200**

C3 - Vehicle Registration number (or mode of transport if not road): **KY67 LZC** Signature:

Date: 9/9/2021 Time: 15:00

PART D Consignor's Certificate

I certify that the information in A, B, & C has been completed and is correct; that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierachy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

Consignor name: John Taylor

On behalf of: Hardcore Crushing Ltd, Moorfield Ind Est, Moorfield Way, Altham, Accrington, Lancs, BB5 5TX. Tel: 01254 233045. Email: contracts@steptoesyard.co.uk

Signature:

Date: 9/9/2021 Time: 15:00

PART E Consignee's Certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

	Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC Code accepted / rejected	Waste Man. Op. (R or D Code)
Individual EWC code(s) received	170605	< 1000kg	✓	D15 Temp

I received this waste at the address given in A4 on: Date: 9/9/21 Time: 4-30

Vehicle registration number (or mode of transport if not road): KY67 LZC

If the waste is rejected please provide details: —

I certify that waste permit/exempt waste operation number: NWFD3 Exemption authorises the management of the waste described in B at the address given in A3

Name: John Taylor

on behalf of: Steptoe's Yard Ltd

Date: 9/9/21

Time: 4-30

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of consignments forming the collection are:	

HYNDBURN
The place to be
an excellent council

CRUSHER OPERATING PERMIT

Kleeman MC110R EVO Mobile Jaw Crusher (2019 Model)

Serial Number:	K005-0200
Permit Ref:	HBC/LAPPC/88a
Issue Date:	16th March 2021

Contact details: Nicola Briggs
Environmental Health Officer
Scaitcliffe House
Ormerod Street
Accrington
Lancashire
BB5 0PF
Tel: 01254 380623
Email: Nicola.briggs@hyndburnbc.gov.uk

Appendix 3 : Japanese Knotweed Validation Report

COLLYHURST
JAPANESE KNOTWEED
VALIDATION REPORT

Job Number: IPM 21 1105
Date of Report: 10th December 2021
Client: LK Remediate



INCREASING LAND VALUE

LK GROUP

DOCUMENT VERIFICATION

Site Address	Thornton Street North, Manchester		
Job Title	Collyhurst		
Document Title	Japanese Knotweed Validation Report		
Job Number	IPM 21 1105	**Document Ref.**	IPM211105VR
Date Issued	10th December 2021	**Report Version**	001
Prepared By	Lee Worrall	**Signature**	
Reviewed By	Conor Leyden	**Signature**	

DISCLAIMER

This report has been prepared by IPC who have exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant experienced in preparing reports of a similar scope.

However, to the extent that the report is based on or relies upon information contained in records, reports or other materials provided to IPC which have not been independently produced or verified, IPC gives no warranty, representation or assurance as to the accuracy or completeness of such information.

This report is prepared solely for the benefit of LK Remediate. It may not be relied upon by, or submitted to a third party for their reliance for the purposes of valuation, mortgage, insurance and regulatory approval, until all invoices have been settled in full.

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1 INTRODUCTION

1.1 Background

The LK Group was asked to provide a survey, management plan and method statement for Japanese Knotweed (JK) within the site of the proposed residential property development in Coll.

1.2 Site Details

Following the survey one area of Japanese Knotweed, approximately 63m2.

The Japanese Knotweed was present in one area, please see below:

1.2.1 Figure 1: Invasive Plant Survey

1.3 Plant Description

JK or *Fallopia japonica* is an herbaceous perennial which forms large clumps 1-3 metres high. It is fully dioecious and can reproduce by seed (however not in this country) and by large rhizomes which may reach a length of 5-6 metres. A very small fragment of the rhizome, as little as the size of a finger nail, can potentially regenerate a whole new plant.

The stout stems are hollow and bamboo-like, extend from an erect base and are simple or little branched and glabrous with thinly membranous sheaths. Leaves are broadly ovate, truncate to cuneate at base, abruptly cuspidate, 5-15 cm long, 5-12 cm broad, with petioles 1-3 cm long.

1.4 Legislation

Section 14(2) of the Wildlife and Countryside Act 1981 (WCA 1981) states that "if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence." Japanese knotweed is one of the plants listed in the Schedule. Anyone convicted of an offence under Section 14 of the WCA 1981 may face a fine of £5,000 and/or 6 months imprisonment, or 2 years and/or an unlimited fine on indictment.

The Environmental Protection Act 1990 (EPA 1990) contains a number of legal provisions concerning "controlled waste", which are set out in Part II. Any Japanese knotweed contaminated soil or plant material that you discard, intend to discard or are required to discard is likely to be classified as controlled waste.

The most relevant provisions are in: section 33 (1a) and (1b) which create offences to do with the deposit, treating, keeping or disposing of controlled waste without a licence. Exemptions from licensing are available in some circumstances, and are set out in Schedule 3 to the Waste Management Licensing Regulations 1994 as amended (the WMLR 1994) s.33 (1c) which makes it an offence to keep, treat or dispose of controlled waste in a manner likely to cause pollution of the environment or harm to human health.

Section 34 places duties on any person who imports, produces, carries, keeps, treats or disposes of controlled waste. Waste must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal.

Waste must be transferred to an authorised person, in other words a person who is either a registered carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991. A waste transfer note must be completed and signed giving a written description of the waste, which is sufficient to enable the receiver of the waste to handle it in accordance with their own duty of care.

The provisions concerning waste transfer notes are set out in the Environmental Protection (Duty of Care) Regulations 1991 (as amended). Failure to comply with these provisions is an offence.

2 METHODOLOGY

2.1 Proposed Management Plan

The proposed works involved the excavation of Japanese Knotweed from the development area of the site with all material being transferred to licensed landfill.

The works are also followed by a 4-year spraying and monitoring programme where any remaining Japanese Knotweed is treated with herbicide.

2.2 Summary of works

Works commenced on 28th May 2021 at 8.00am:
On site were an IPC operative and a team of arborists.
Installation of fencing to demarcate area of Japanese Knotweed completed.
Supervision of tree removal adjacent to Japanese Knotweed completed.
Supervision of tree removal within Japanese completed.
Decontamination of arborists completed.
Works completed at 12.00pm, site left safe and tidy.

Works re-commenced on 21st June 2021 at 8.00am:
On site were an IPC operative and excavator operative.
Excavation of Japanese Knotweed impacted soils commenced.
Transfer of arisings to licensed landfill via 8-wheel wagon commenced.
Works completed at 4.00pm, site and excavation left safe and tidy.

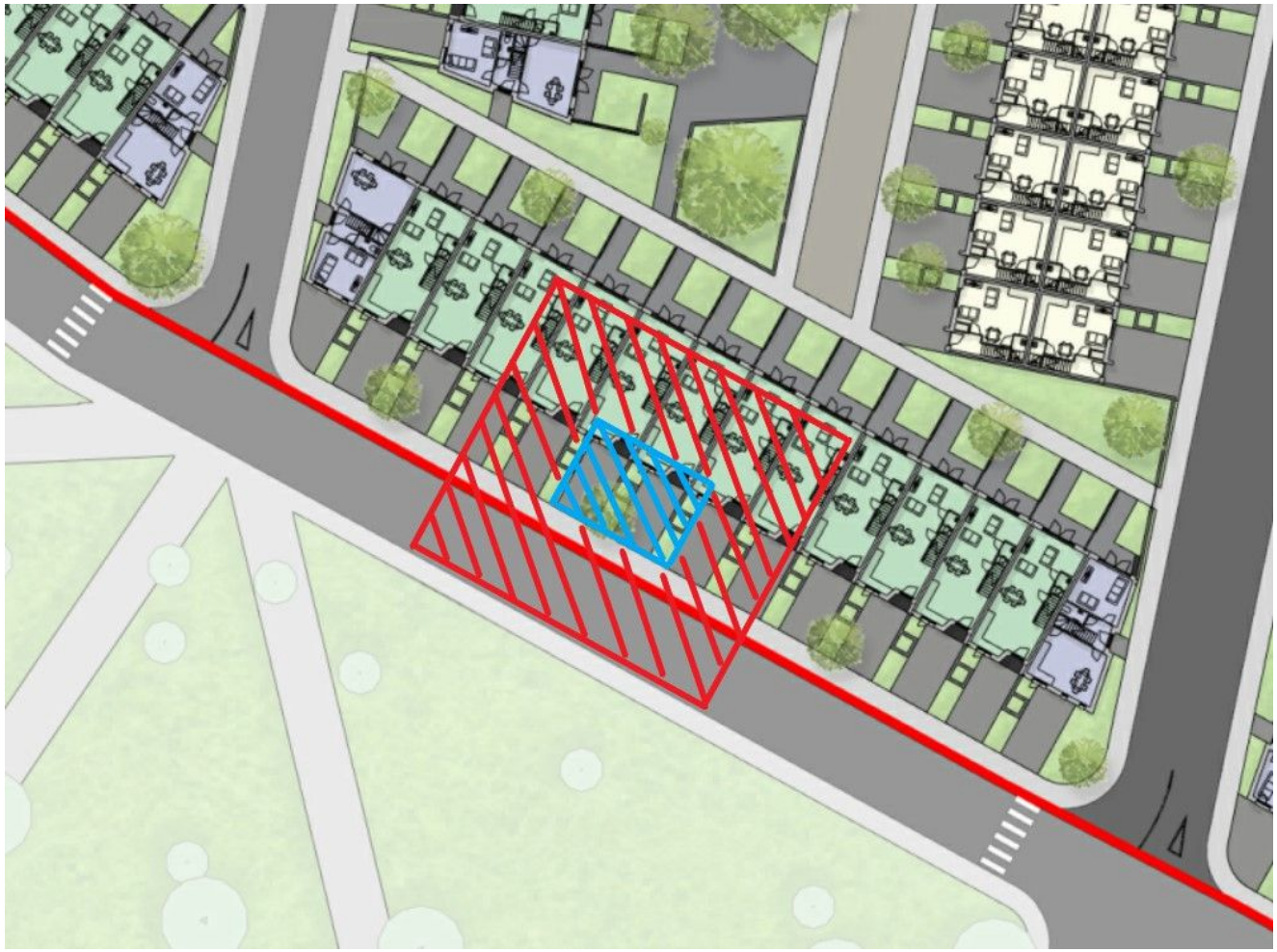
Works re-commenced on 22nd June 2021 at 8.00am:
On site were an IPC operative and excavator operative.
Excavation of Japanese Knotweed impacted soils completed.
Transfer of arisings to licensed landfill via 8-wheel wagon completed.
All works completed at 4.00pm, site and excavation left safe and tidy.

2.3 Post Completion

We will continue to monitor the area and treat the remaining Japanese Knotweed on site for a period of 4 years. We will issue reports and photographs following each visit.

3 APPENDICIES

3.1 Appendix A – Post Works Drawing



Extract from: 8871-BA-XX-00-DR-A-(04)100-Proposed Masterplan Village

KEY

Japanese Knotweed with offset

Do not scale from this drawing and work from marked dimensions only. All dimensions and features should be confirmed on site by the Contractor. Where this drawing includes information provided to LK Consult Ltd by others, LK Consult Ltd gives no warranty, representation or assurance as to the accuracy of such information.

InvasivePlantCompany
Japanese knotweed specialists

Client: LK Remediate

Site: Collyhurst

Title: Japanese Knotweed Plan

Job No.	Scale	Figure	Revision
IPM 21 1105	NTS	1	0

Drawn By	Checked By	Drawn
LW	CL	14/12/2021

3.2 Appendix B – Operational Photos






KINGWELL















3.3 Appendix C – Landfill Permit and Transfer Notes

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Churchill Enviro Limited

Fletcher Bank Quarry Landfill Site
Fletcher Bank
Whalley Road
Bury
Ramsbottom
Lancashire
BL0 0DD

Variation application number

EPR/GP3733FE/V002

Permit number

EPR/GP3733FE

Fletcher Bank Quarry Landfill Site
Permit number EPR/GP3733FE

Introductory note

This introductory note does not form a part of the permit

The following gives notice of the variation and consolidation of this environmental permit. We have issued this variation to consolidate the original permit and subsequent variations and to update some of the conditions following a statutory review of permits in the landfill sector. We have also converted the permit into the current EPR permit format using modern conditions.

The Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2016, regulation 34(1), to periodically review permits. As a result of that review we have identified a number of necessary changes we must make to your permit to reflect current legislation and best practice. These changes principally relate to:

- The addition of a standard condition for landfill gas management at landfills that accept biodegradable waste;
- A change to the hydrogeological risk assessment condition so that reviews are undertaken every 6 years rather than every 4 years;
- Standard leachate and groundwater quality monitoring tables (schedule 3); and
- A standard reporting table (schedule 4).

Schedule 1 to this notice summarises the changes we have made to this permit.

Status log of the permit		
Description	**Date**	**Comments**
Application DP3638ST	Received 09/05/2005	
Response to schedule 4 notice	Request dated 01/02/2006	Response dated 03/05/2006
Response to request for information	Request dated 09/05/2006	Response dated 12/05/2006
Permit determined	08/03/2007	Permit issued to Marshalls Mono
Application EPR/GP3733FE/T001 (full transfer of permit DP 3638ST)	Duly made 10/03/11	
Transfer determined EPR/GP3733FE (varied and consolidated permit issued)	21/03/11	Permit issued to Churchill Enviro Limited
Environment Agency Landfill Sector Review Permit reviewed Variation determined EPR/GP3733FE/V002 Permit EPR/GP3733FE (Billing ref: KP3539WD)	27/08/2020	Varied and consolidated permit issued in modern condition format.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/GP3733FE

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Churchill Enviro Limited (“the operator”),

whose registered office is

1 Eyebank Road
Bowden
Altrincham
WA14 3LR

company registration number **05393456**

to operate an installation at

Fletcher Bank Quarry Landfill Site
Fletcher Bank
Whalley Road
Bury
Ramsbottom
Lancashire
BL0 0DD

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Philip Lamb	**27/08/2020**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation. The following table summarises the latest changes to the landfill permit template, however your permit may contain more changes than this where your permit has not been varied to recent template conditions.

Condition	Description of change
1.5	Generic condition to reflect the requirements of the Waste Framework Directive.
2.7.1(a)	Added reference to a specific table to clarify what wastes are permitted by which permitted activity.
2.7.2	Added to separately identify the waste types and quantities that can be accepted for restoration.
2.10	Revised gas management condition imposed for all landfills.
3.1.1	Generic condition imposed on all activities to simplify sub-conditions
3.1.2 to 3.13	Revised conditions to reflect the terminology used by the Groundwater Directive for 'hazardous substances' and to require hydrogeological risk assessment reviews are submitted every 6 years rather than every 4 years.
	Sub-condition that referred to emission of 'non-hazardous pollutants' deleted. Such emissions are regulated by condition 3.2.
	Two sub-conditions that referred to limits in specific tables in schedule 3 deleted as they are now covered by 3.1.1.
3.6	Revised generic pests condition imposed on all activities.
4.2.2	Amended to ensure that information on 'annual production/ treatment' (Schedule 4, Table S4.2) is provided in February each year where annual reports may be submitted at other times of the year.
4.2.2(a)	Text expanded to clarify the details we require in an annual report.
4.2.2(h)	New condition requiring annual submission of a plan of monitoring and extraction locations with reference to monitoring tables in schedule 3
4.3.1	Generic notifications condition added.
Schedules	
Table S1.1	Amended description of the landfill activity to clarify that this includes restoration. Activity references amended to reflect changes introduced by Industrial Emissions Directive (2010/75/EU).
Table S1.5	Amended to clarify that restoration is a separate part of the activity unrelated to landfill cover.
Schedule 2	Standard list of wastes added.
Schedule 3	Monitoring and compliance tables have been re-ordered so that those with compliance limits appear first. Standard monitoring frequency and parameters have been included for certain routine monitoring requirements
Table S4.1	Amended to only require regular reports of information that relate to compliance limits.
Table S4.2	Additional details of landfill gas extracted required to improve climate change data quality.
Table S4.3	Amended to include natural gas as an energy source for consistency with other sectors.
Schedule 6	Definitions added to clarify meaning of:

Condition	Description of change
	Inert waste Exceeded Hazardous substance Medicinal product Previous year Waste acceptance criteria Waste acceptance procedure

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/GP3733FE

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/GP3733FE/V002 authorising,

Churchill Enviro Limited (“the operator”),

whose registered office is

1 Eyebank Road
Bowden
Altrincham
WA14 3LR

company registration number **05393456**

to operate an installation at

Fletcher Bank Quarry Landfill Site
Fletcher Bank
Whalley Road
Bury
Ramsbottom
Lancashire
BL0 0DD

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Philip Lamb	**27/08/2020**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Finance

1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency dated 23/11/16 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.

1.2.1 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:

(a) the costs of setting up and operating the landfill;

(b) the costs of the financial provision required by condition 1.2.1; and

(c) the estimated costs for the closure and aftercare of the landfill.

1.3 Energy efficiency

1.3.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) Implement any appropriate measures identified by a review.

1.4 Efficient use of raw materials

1.4.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.5 Avoidance, recovery and disposal of wastes produced by the activities

1.5.1 The operator shall:

(a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;

(b) review and record at least every four years whether changes to those measures should be made; and

(c) take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1, table S1.4 have been completed.

2.6 Landfill Engineering

2.6.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.6.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.

2.6.3 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:

(a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

(b) a change has otherwise been agreed in writing by the Environment Agency.

2.6.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.

2.6.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.6.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:

(a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

(b) a change has otherwise been agreed in writing by the Environment Agency.

2.6.7 The operator shall submit a CQA Validation Report within four weeks of the completion of the construction of the relevant landfill infrastructure or other time period agreed in writing with the Environment Agency.

2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.

2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:

(a) confirmed whether or not it is satisfied; or

(b) informed the operator that it requires further information.

2.6.10 Where the Environment Agency has required further information under condition 2.6.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:

(a) confirmed whether or not it is satisfied; or

(b) informed the operator that it requires further information.

2.7 Waste acceptance

2.7.1 Wastes shall only be accepted for disposal if:

(a) they are listed in schedule 2, table S2.1; and

(b) they are non- hazardous waste; and

(c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm); and

(d) they are not shredded used tyres; and

(e) they are not liquid waste (including waste waters but excluding sludge); and

(f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown; and

(g) all the relevant waste acceptance procedures have been completed; and

(h) they fulfil the relevant waste acceptance criteria; and

(i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria; and

(j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment; and

(k) they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

2.7.2 Wastes shall only be accepted for restoration where:

(a) they are listed in schedule 2, table S2.2 and

(b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.

2.7.3 The operator shall:

(a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and

(b) be satisfied that the waste conforms to the requirements of condition 2.7.1.

2.7.4 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.

2.7.5 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.7.6 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing 1772/2/004

2.7.7 The quantity of waste that is deposited or recovered in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.

2.7.8 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

2.8 Leachate levels

2.8.1 The limits for the level of leachate listed in schedule 3 table S3.1 shall not be exceeded.

2.9 Closure and aftercare

2.9.1 The operator shall maintain a closure and aftercare management plan.

2.10 Landfill gas management

2.10.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:

(a) collect landfill gas; and

(b) control the migration of landfill gas.

2.10.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.

2.10.3 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;

(b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 The limits in Schedule 3 shall not be exceeded.

3.1.2 The operator shall prevent the input of any hazardous substances from the activities into groundwater

3.1.3 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:

(a) between nine and six months prior to the sixth anniversary of the granting of the permit, and

(b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:

(a) Leachate specified in tables S3.1 and S3.7;

(b) Groundwater specified in tables S3.2 and S3.5;

(c) Landfill gas specified in tables S3.3, S3.4 and S3.6;

(d) Surface water specified in table S3.8.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:

(a) annually, and

(b) prior to the disposal of waste in any new cell or new development area of the landfill, and

(c) following closure of the landfill or part of the landfill.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;

(b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) the results of groundwater monitoring;

(ii) sub-surface landfill gas monitoring;

(iii) leachate levels, quality and quantities;

(iv) landfill gas generation and collection;

(v) the specification and as built drawings of the basal, sidewall and capping engineering systems.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year (‘the annual report’) shall be submitted to the Environment Agency by 31st January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will

include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;

(b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3

(c) the annual production/treatment set out in schedule 4 table S4.2;

(d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;

(e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;

(f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;

(g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;

(h) a plan(s) ('the monitoring and extraction point plan – MEPP') showing the locations of existing and any new leachate and landfill gas extraction and all monitoring points.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) using the forms specified in schedule 4 table S4.4 or other reporting format as agreed in writing with the Environment Agency; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) in the event of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator

must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.4 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
A1	D5 –Specially engineered landfill	Section 5.2 Part A(1) (a), The disposal of waste in a landfill.	Landfill for non-hazardous waste	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9 and 2.11 in part B of the application Form. Excluding the response to questions 2.2.10, 2.2.15-2.2.21, .2.35-2.2.41, 2.2.42, 2.2.46, 2.2.47 (part 5), 2.2.49, 2.2.58-2.2.61 (parts 1 and 2), 2.2.64-2.2.68, 2.2.72-2.2.76, 2.2.79-2.81, 2.3.4, 2.7, 2.9.1-2.9.3	09/05/2005
Response to Schedule 4 dated 01/02/2006	Revised drawings DESID 6B (Rev A) and DESID 7B (Rev A)	Received by email on 03/04/2006
	FBQ Landsim Report rev. 1.pdf (March 2006)	
	Fbq sch 4 response note.doc (March 2006)	
	Fbq two phase model.pdf	
	Fbq two phase results.pdf	
	Letter from Silkstone Environmental dated 26th March 2006	
	Letter from FGB dated 3rd April 2006 (ref: JC/JKB/Fletcherbank 192)	
Response to email dated 09/05/2006	Fletchbank_liner_workbook.pdf	Received by email on 12/05/2006
	FBQ HRA landsim revea1.pdf (May 2006)	Received by email on 22/05/2006

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Amendment to the installation boundary	INPUTS update1 revised source term.pdf INPUTS update 2 revised source term.pdf INPUTS update 3 revised source term.pdf HRA annex 1 reportV2.doc	Received by email on 23/06/2006
	Revised installation boundary drawings DESID2, 4, 5A, 5B, 6A, 7A and 8A	
	Fletcher bank update 1_revised source_term.sim Fletcher bank update 1_revised source_term.rst Fletcher bank update 2_revised source_term.sim Fletcher bank update 2_revised source_term.rst Fletcher bank update 3_revised source_term.sim Fletcher bank update 3_revised source_term.rst	
	Revised Non-technical summary Revised Environmental Setting and Installation Design Report	Received by email on 06/07/2006
	Partial Revision of Part B of the application form (excluding the responses to questions 2.2.38, 2.2.18-2.2.19 and 2.2.74)	Received by email on 07/07/2006
	Drawing MM/FBQ/QWP0106-01 site layout Drawing MM/FBQ/PPC/DESID8D	Received 31/07/2006
Letter proposing changes to waste's accepted	Operator proposes to restrict the input of waste to those which comply with the landfill tax qualifying exemption order.	23/09/14
Response to letter dated 23/09/14	Environment Agency accepts the changes to wastes accepted on site	01/10/14
Pre-operational condition 2	The techniques are detailed in emails from Rob Barlow to Matt Bennett on 23 October 2014 (containing site plans) & 4 November 2014.	04/11/14

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
1	A revised Landfill Gas Risk assessment shall be submitted to the Environment Agency for approval. The risk assessment shall consider the installation as identified in Schedule 2 of this permit and shall be based on the waste types listed in Schedule 3 of this permit. The report shall include a revised Gas Sim model and contain any necessary revisions to the procedures for the monitoring and management of landfill gas at the site.	27/10/2020
2	A landfill gas report shall be submitted to Environment Agency for approval. The report shall contain appropriate borehole specific background levels and compliance limits for perimeter gas monitoring boreholes BEL1, BEL2, SLR2 and SLR3 and assessment criteria for internal waste boreholes FB106 to FB111. The report shall include any necessary revisions to the landfill gas action plan as contained in Appendix 4 of the Regulatory Specification 2005.	27/02/2021
3	A particulate Management and Monitoring Plan shall be submitted to the Environment Agency for approval. The plan shall include the measures to be taken to minimise any particulate matter escaping beyond the installation boundary and proposals for carrying out monitoring and assessment of particulate matter in accordance with the Environment Agency's guidance on monitoring of particulate matter (M17). The plan shall be implemented by the operator from the date of approval by the Environment Agency.	27/10/2020
5	The Operator shall submit to the Environment Agency for approval a revised Surface Water management and monitoring plan that is specific to the installation as identified in schedule 3 of the permit. The plan shall take into account the requirements of the Environment Agency's guidance on monitoring of landfill leachate, Groundwater and Surface Water (LFTGN02) and include as a minimum: Relevant surface water monitoring points upstream and downstream of the installation on Crossbank Brook. Monitoring points shall be indication on a drawing of suitable scale. The plan shall be implemented by the Operator from the date of approval by the Environment Agency.	27/12/2020

Table S1.4 Pre-operational measures for future development		
Reference	**Operation**	**Pre-operational Measures**
1	Prior to deposit of waste in any cell	A revised Leachate Management Plan shall be submitted to the Environment Agency for approval. The plan shall include procedures for leachate extraction and collection and details of leachate disposal and discharge methods and routes. The plan shall be implemented by the operator from the date of approval by the Environment Agency.

Table S1.5 Annual waste input limits	
Category	**Limit Tonnes/ Year**
Inert waste	150,000
Waste for restoration	To be agreed in accordance with the Restoration Plan approved under condition 2.7.2.

Schedule 2 – List of permitted wastes

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	**Description**
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones

Table S2.2 Permitted waste types for restoration	
Waste code	**Description**
To be agreed in accordance with the Restoration Plan approved under condition 2.7.2.	

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/Description	**Limit**	**Monitoring frequency**	**Monitoring standard and method**
Operational Cells or Phases (Any cells or phases that do not have a final engineered cap agreed in accordance with the landfill engineering condition, 2.6)			
Leachate collection sump in each cell identified on plan 1772/3/013 Environmental Monitoring Plan	5 m above cell base	Monthly	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with the Agency as part of a leachate monitoring plan.
Non Operational Cells or Phases (Any cells or phases that have a final engineered cap agreed in accordance with the landfill engineering condition, 2.6)			
Leachate collection sump in each cell identified on plan 1772/3/013 Environmental Monitoring Plan	5 m above cell base	Quarterly	As specified in Environment Agency Guidance TGN02 (February 2003) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Or as otherwise agreed with the Agency as part of a leachate monitoring plan.

Table S3.2 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
FBE-11/01, FBE-11/02, FBE-11/02A, SLR2 Soakaway to the north east of the site as identified on drawing 1772/3/013 Environmental Monitoring Plan	Ammoniacal- N	2 mg/l	Spot Sample	Monthly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride	250 mg/l		Monthly	
	Mercury	0.0001 mg/l		Quarterly	
	Cadmium	0.0001 mg/l		Quarterly	

Table S3.3 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description	**Parameter**	**Limit (including units)**	**Monitoring frequency**	**Monitoring standard or method**
BEL1, BEL2, SLR2 and SLR3 identified on drawing MMF/FBQ/PPC-DESID8A	Methane	1% v/v Note 1	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	1.5% v/v Note 1		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
Note 1: The limits are interim until agreed in accordance with table S1.3, improvement condition 2.				

Table S3.4 Landfill gas emissions from capped surfaces for cells that have accepted non hazardous biodegradable waste – monitoring requirements			
Monitoring point Ref. /description	**Parameter**	**Monitoring frequency**	**Monitoring Standard or method**
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Whole site	Total methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other

Table S3.4 Landfill gas emissions from capped surfaces for cells that have accepted non hazardous biodegradable waste – monitoring requirements			
Monitoring point Ref. /description	**Parameter**	**Monitoring frequency**	**Monitoring Standard or method**
			subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.5 Groundwater – other monitoring requirements			
Monitoring Point Ref./Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**
Up gradient MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese	Annually	
	Hazardous substances	Annually for first six years of operation	
Down or cross gradient MEPP	Water level, electrical conductivity, chloride, ammoniacal nitrogen, pH,	Quarterly	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
	total alkalinity, magnesium, potassium, total sulphates, calcium, sodium, chromium, copper, iron, lead, nickel, zinc, manganese	Annually	
	Hazardous substances detected in leachate	Annually for first six years of operation then every two years	

MEPP	Base of monitoring point (mAoD)	Annually	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency. After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.

Table S3.6 Landfill gas – other monitoring requirements

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	Monthly until gas extraction commences	Calibrated handheld monitoring instrument	For cells or phases which have no active gas extraction. Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
	Hydrogen sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (enter version number and issue date) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	For cells or phases which have no active gas extraction. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring. Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans

Table S3.7 Leachate – other monitoring requirements				
Monitoring point reference or description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Operational Cells or Phases **(Any cell or phases that do not have a final engineered cap agreed in accordance with condition 2.6)**			At leachate compliance point as listed in table S3.1. As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency	
MEPP	pH, EC, total alkalinity, ammoniacal nitrogen, Chloride, COD, BOD, cadmium, chromium, copper, lead, nickel, iron, arsenic, magnesium, potassium, total sulphates, calcium, sodium, zinc, manganese	Quarterly		None
MEPP	Hazardous substances	Annually		None
MEPP	Depth to base (mAoD)	Annually		None
Non Operational Cells or Phases **(Any cell or phases that have a final engineered cap agreed in accordance with condition 2.6)**				

Table S3.7 Leachate – other monitoring requirements				
Monitoring point reference or description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
MEPP	pH, EC, total alkalinity, ammoniacal nitrogen, Chloride, COD, BOD, cadmium, chromium, copper, lead, nickel, iron, arsenic, magnesium, potassium, total sulphates, calcium, sodium, zinc, manganese,	Annually		None
MEPP	Hazardous substances	Once every four years		None
MEPP	Depth to base (mAoD)	Annually		

Table S3.8 Surface water – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
MEPP	Ammoniacal nitrogen Chloride Suspended Solids Visual Oil and Grease pH electrical conductivity	Monthly	Spot sample	As specified in Environment Agency Guidance TGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data		
Parameter	**Reporting period**	**Period ends**
Leachate and/ or groundwater level As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission to groundwater As specified by schedule 3, table S3.2	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in external monitoring boreholes As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission of landfill gas from capped surfaces As specified by schedule 3, table S3.4	Every 12 months	31 December
Other groundwater monitoring As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 31 December
Other Landfill gas monitoring As specified by schedule 3, table S3.6 Trace gas monitoring	Every 3 months Every 12 months	31 March, 30 June, 30 September, 31 December 31 December
Other leachate monitoring As specified by schedule 3, table S3.7	Every 12 months	31 December
Other surface water monitoring As specified by schedule 3, table S3.8	Every 12 months	31 December
Meteorological data Landfill Directive, annex III, section 2	Every 12 months	31 December

* - where the reporting period is 12 months, you may submit this information as part of the ‘annual report’ required by condition 4.2.2.

Table S4.2: Annual production/treatment	
Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass. Accepted from offsite for treatment at any onsite effluent treatment plant.	Cubic metres/year

Table S4.3 Performance Parameters			
Parameter	**Frequency of assessment**	**Annual total**	**Unit**
Energy used (including for leachate treatment)	Annually		MWh of electricity or natural gas

Table S4.4 Reporting Forms		
Media/parameter	**Reporting Format**	**Date of Form**
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	27/08/2020
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	27/08/2020
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	27/08/2020
Waste Return	Waste Return Form RATS2E	-
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	27/08/2020

Schedule 5 – Notification

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any incident or accident which significantly affects or may significantly affect the environment	
To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“Background concentration” means such concentration of that substance as is present in:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge; or
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site.

(a) “Cell layout drawing” means: A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:

(i) the location of the new cell on the site;

(ii) the proposed level (Above Ordnance Datum) of the base of the excavation;

(iii) the proposed finished levels of all containment and leachate drainage layers;

(iv) the positions of leachate management infrastructure; and

(v) the positions of landfill gas infrastructure (if appropriate).

(b) A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:

(i) changes to slope length and gradient within the cell;

(ii) new leachate or landfill gas infrastructure construction design;

(iii) slope stability issues such as new basal excavation level; and/or

(iv) depth of waste.

“Construction Proposals” means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

“CQA Validation Report” means the final “as built” construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- “As-built” plans and sections of the works;
- Copies of the site engineer’s daily records;
- Records of any problems or non-compliances and the solution applied;

- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.675. Words and expressions used in this permit which are also used in those Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“exceeded” means that a value is above a permitted limit, or where a range of values or a minimum value is set as a permitted limit it means a value outside that range or below the minimum value, whichever is applicable.

‘Hazardous property’ has the meaning in Annex lll of the Waste Framework Directive

“Hazardous substances” as defined by the Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.675, schedule 22 and listed in our Hydrogeological risk assessment guidance, annex J to our H1 risk assessment guidance.

‘Hazardous waste’ has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended)

“Landfill Infrastructure” means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;
- lining within the installation.

within the site.

“Liquids” means any liquid other than leachate within the engineered landfill containment system.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“LFTGN 05” means Environment Agency Guidance for monitoring enclosed landfill gas flares.

“LFTGN 07” means Environment Agency Guidance on monitoring landfill gas surface emissions.

“LFTGN 08” means Environment Agency Guidance for monitoring landfill gas engines.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"inert waste" means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater

“Medicinal product” means any medicine licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) or their predecessors under the Medicines Act 1968, section 130.

“M2” means Environment Agency Guidance Monitoring of stack emissions to air.

“New Cell” means any new cell, part of a cell or other similar new area of the site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;
- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

“MEPP” Monitoring and extraction point plan, required by condition 4.2.2(h) to specify extraction points and routine monitoring locations.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“No impact” means that the change made to the construction process will not affect the agreed design criteria, specification or performance in a way that has a negative effect.

“Pests” means Birds, Vermin and Insects.

“Previous year” means the 12 month period preceding the month the annual report is submitted in.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“Relevant waste acceptance procedures” means the procedure for the acceptance of waste at landfills and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“Relevant waste acceptance criteria” means the waste acceptance criteria and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“Review of the Hydrogeological Risk Assessment” means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the EP Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the permit continue to meet the requirements of the EP Regulations.

‘Sustainably extracted’ means where suction can be applied to the extraction wells such that a flow rate of landfill gas, with a methane content capable of either being combusted, or treated by bio-oxidation, can be extracted without increasing the risk of air ingress to the waste or inducing aerobic degradation within the waste.

‘Waste code’ - See ‘List of Wastes’.

“WFD” means Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [and repealing certain Directives] – the Waste Framework Directive.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08

Where the following terms appear in the waste code list in Tables S2.1 or S2.2 they have the meaning given below:

‘hazardous substance’ means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008;

‘heavy metal’ means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances;

‘polychlorinated biphenyls and polychlorinated terphenyls’ (‘PCBs’) means PCBs as defined in Article 2(a) of Council Directive 96/59/EC’.
Article 2(a) says that ‘PCBs’ means:

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 % by weight;

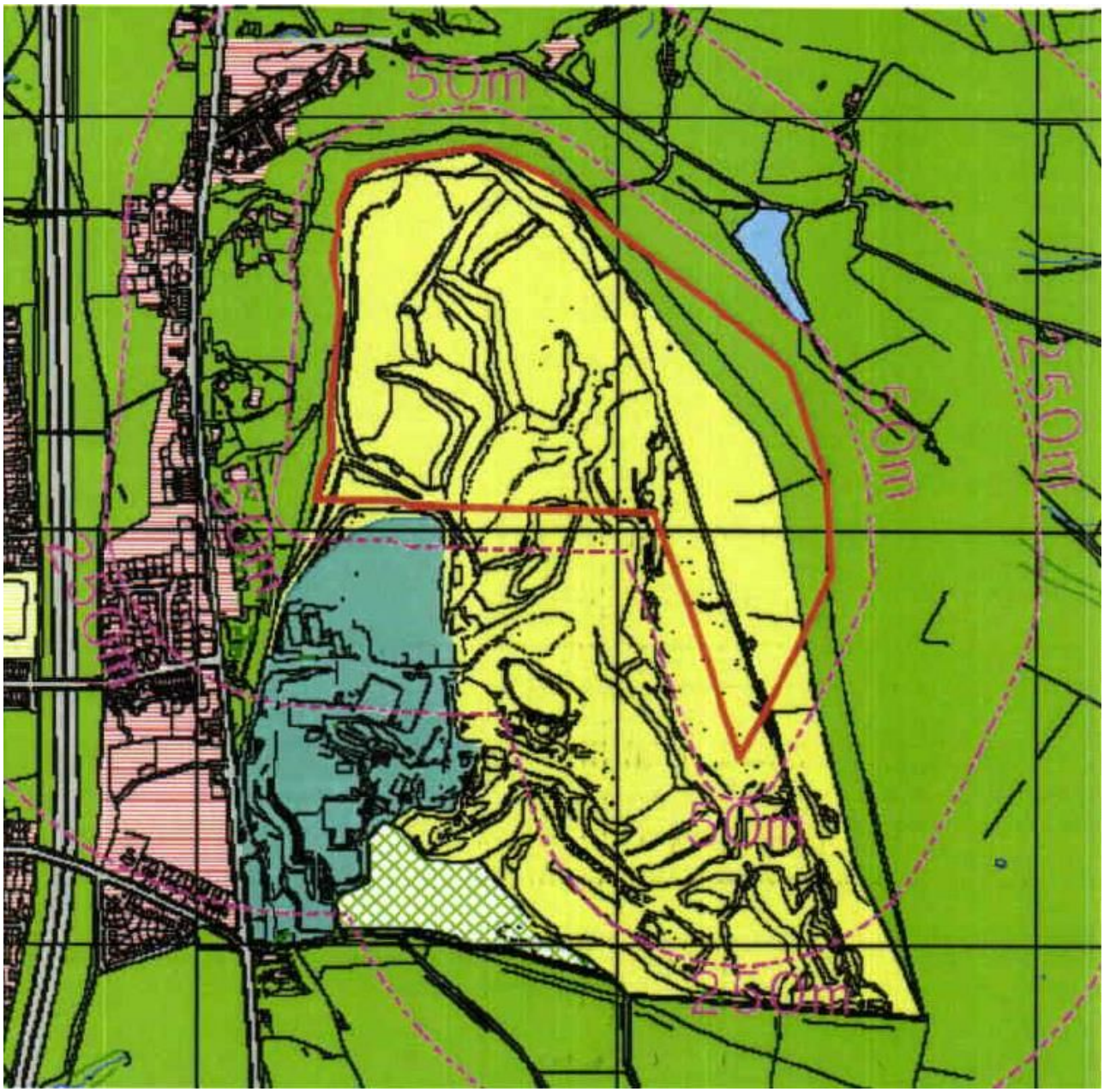
‘transition metals’ means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances;

‘stabilisation’ means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste;

‘solidification’ means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste;

‘partly stabilised wastes’ means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term.

Schedule 7 – Site plan



END OF PERMIT

Appendix 4 : Ecological Assessments

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

17th May 2021

Our Ref: P.1463.21

Conor Leyden
LK Remediate Ltd
Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Manchester
M26 2ZS

Dear Mr Leyden
Re: Nesting Bird Check, Padget Street, M40 7SU

Following receipt of your instructions, the above site was attended by Mrs Liz Kenyon BSc (Hons) Qual CIEEM on the 17th May 2021 to carry out a nesting bird check of the trees and pockets of bramble scrub that will be removed to accommodate the development. Weather conditions were mild (9°C), with a F1, Beaufort scale light air, $^{4}/_{8}$ cloud cover at the start of the inspection.

These weather conditions were suitable for assessing if any nesting birds were present within the trees and areas of bramble scrub. The trees and bramble scrub could be assessed fully from ground level. The weather conditions and time of year the survey was carried out is not considered a limit to the conclusions of the letter report.

The site is divided onto four sections, three of the sections are bound by Rochdale Road (A664) to the west and Thornton Street North to the east. The fourth section is to the east of Thornton Street North and bound by Burgess Street and Churnet Street. Trees also line the verge of Rochdale Road (A664). The trees in each of the four sections were observed from within the site boundary for 30 minutes by Liz Kenyon from different viewpoints. The trees that line the verge on Rochdale Road (A664) were also observed for 30 minutes from the roadside at different viewpoints and the trees within the central section of the site were observed from Thornton Street. The bramble scrub was also present within two of the sections, the areas of scrub were observed for 15minutes each. The trees to the northern site boundary were also observed from within the site as some of the trees will require works to accommodate the proposals.

The trees and bramble scrub in question are shown on the following photographs.

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93



Photograph 1: Hawthorn to the north western corner of the site with an old nest present



Photograph 2: Trees within the central section of the site



Photograph 3: Section four



Photograph 4: Pocket of bramble scrub

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93



Photograph 5: Trees line the verge adjace to Rochdale Road

Results

A **moderate** level of bird activity was noted on the site. The majority of bird activity was noted within the central section of the site with bird species, including magpie, blackbird and wood pigeon moving between the trees and flying to and from the surrounding roof tops. Several starlings were also foraging within the grassed areas of the fourth section and along Thornton Road. Blackbirds were also noted moving between the trees lines the verge of Rochdale Road (A664). Throughout the survey magpie, crow and starlings were recorded flying over all four sections of the site. A nest was noted with a hawthorn to the north western corner of the site. The nest was observed for 15 minutes from beneath the tree. The tree was also observed from the roadside, no activity at the nest was recorded from each observation position and the nest is confirmed to not be active. No further nests were recorded during the survey.

Conclusions

There were **moderate** levels of bird activity on the site. Magpie, blackbird and woodpigeon were noted moving between the trees within the site. Starlings were noted foraging within the grassed areas of the fourth section of the site. No nesting activity or active nests were noted during the survey within trees that will be lost to the proposals. An old nest was noted within a hawthorn to the north western corner of the site.

Due to the time of year and the bird activity on the site the surveys are valid for 48 hours from the date of the survey being carried out. If further vegetation clearance works are required within the bird nesting period March to August inclusive; a further breeding bird survey will be required to be conducted by a suitably qualified ecologist.

Yours sincerely

Liz Kenyon

Liz Kenyon
Ascerta

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

20th May 2021

Our Ref: P.1463.21

Conor Leyden
LK Remediate Ltd
Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Manchester
M26 2ZS

Dear Mr Leyden
Re: Nesting Bird Check, Padget Street, M40 7SU

Following receipt of your instructions, the above site was attended by Miss Lizzie Atkinson MSc (Hons) Qual CIEEM on the 20th May 2021 to carry out a nesting bird check of the trees that will be removed to accommodate the development. Weather conditions were mild (9°C), with a F1, Beaufort scale light air, 8/8 cloud cover at the start of the inspection.

These weather conditions were suitable for assessing if any nesting birds were present within the trees and areas of bramble scrub. The trees could be assessed fully from ground level. The weather conditions and time of year the survey was carried out is not considered a limit to the conclusions of the letter report.

The site is divided onto four sections, three of the sections are bound by Rochdale Road (A664) to the west and Thornton Street North to the east. The fourth section is to the east of Thornton Street North and bound by Burgess Street and Churnet Street. Trees also line the verge of Rochdale Road (A664). The trees that line the western section of the site, adjacent to Rochdale Road were observed from within the site boundary for 30 minutes by Lizzie Atkinson from different viewpoints. The trees that line the verge on Rochdale Road (A664) were also observed for 30 minutes from the roadside at different viewpoints.

The trees in question are shown on the following photographs.

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93



Photograph 1: Tree within the central section of the site, adjacent to Rochdale Road



Photograph 2: Trees adjacent to Rochdale Road from within the site

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93

Results
A **moderate** level of bird activity was noted on the site. The majority of bird activity was noted within the central section of the site with bird species, including magpie, great tit, robin, wren, blackbird and wood pigeon moving between the trees and flying to and from the surrounding roof tops. Several starlings were also foraging within the grassed areas of the site. During the survey magpie, crow, common gull and starlings were recorded flying over the site.

Conclusions
There were **moderate** levels of bird activity on the site. Magpie, blackbird, great tit, robin, wren, blackbird and woodpigeon were noted moving between the trees within the site. Starlings were noted foraging within the grassed areas. No nesting activity or active nests were noted during the survey within trees that will be lost to the proposals.

Due to the time of year and the bird activity on the site the surveys are valid for 48 hours from the date of the survey being carried out. If further vegetation clearance works are required within the bird nesting period March to August inclusive; a further breeding bird survey will be required to be conducted by a suitably qualified ecologist.

Yours sincerely

Liz Kenyon
Liz Kenyon
Ascerta

Ascerta
Landscape, Arboricultural & Ecological Solutions
for the Built Environment

25th May 2021

Our Ref: P.1463.21

Conor Leyden
LK Remediate Ltd
Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Manchester
M26 2ZS

Dear Mr Leyden
Re: Nesting Bird Check, Padget Street, M40 7SU

Following receipt of your instructions, the above site was attended by Miss Lizzie Atkinson MSc (Hons) Qual CIEEM on the 25th May 2021 to carry out a nesting bird check of the trees that will be removed to accommodate the development. Weather conditions were mild (9°C), with a F1, Beaufort scale light air, 8/8 cloud cover at the start of the inspection.

These weather conditions were suitable for assessing if any nesting birds were present within the trees and areas of bramble scrub. The trees could be assessed fully from ground level. The weather conditions and time of year the survey was carried out is not considered a limit to the conclusions of the letter report.

The site is divided onto four sections, three of the sections are bound by Rochdale Road (A664) to the west and Thornton Street North to the east. The fourth section is to the east of Thornton Street North and bound by Burgess Street and Churnet Street. Trees also line the verge of Rochdale Road (A664). The trees and scrub within the section that is bound by Paget Street to the north, Thornton Street North to east and Rochdale Road to the west were observed from within the site boundary for 30 minutes by Lizzie Atkinson from different viewpoints. The trees and scrub were then search for nests for a further 30 minutes.

The trees in question are shown on the following photographs.



Photograph 1: Trees along the Paget Street road site boundary



Photograph 2: Taped off trees with active crow nest within the centre of the site



Photograph 3: Trees to the west along the Rochdale Road site boundary.



Photograph 4: Trees within the centre of the site.

Results

A **moderate** level of bird activity was noted on the site. The majority of bird activity was noted within the central section of the site with bird species, including magpie, robin, bullfinch and wood pigeon moving between the trees and scrub. Several starlings were also foraging within the grassed areas of the site. During the survey, magpie, crow, common gull, robin, bullfinch, black cap, pied wagtail and starlings were recorded flying over the site or perching within trees. An active crow nest was identified within a tree within the centre of the site and this tree was taped off with hazard tape.

Conclusions

There were **moderate** levels of bird activity on the site. Magpie, blackbird, robin, bullfinch and crow were noted moving between the trees within the site. Starlings were noted foraging within the grassed areas. An active crow nest was identified within the central area of the site. This tree with the active nest needs to be retained for 6 weeks until the eggs have hatched, and the young have fledged. A buffer of 5m needs to be kept around the tree with the active nest to ensure the birds are not disturbed during nesting.

Due to the time of year and the bird activity on the site the surveys are valid for 48 hours from the date of the survey being carried out. If further vegetation clearance works are required within the bird nesting period March to August inclusive; a further breeding bird survey will be required to be conducted by a suitably qualified ecologist.

Yours sincerely



Lizzie Atkinson
Ascerta

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

28th May 2021

Our Ref: P.1463.21

Conor Leyden
LK Remediate Ltd
Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Manchester
M26 2ZS

Dear Mr Leyden
Re: Nesting Bird Check, Padget Street, M40 7SU

Following receipt of your instructions, the above site was attended by Miss Lizzie Atkinson MSc (Hons) Qual CIEEM on 28th May 2021 to carry out a nesting bird check of the trees that will be removed to accommodate the development. Weather conditions were mild (11°C), with a F1, Beaufort scale light air, 8/8 cloud cover at the start of the inspection.

These weather conditions were suitable for assessing if any nesting birds were present within the trees and areas of bramble scrub. The trees could be assessed fully from ground level. The weather conditions and time of year the survey was carried out is not considered a limit to the conclusions of the letter report.

The site is divided onto four sections, three of the sections are bound by Rochdale Road (A664) to the west and Thornton Street North to the east. The fourth section is to the east of Thornton Street North and bound by Burgess Street and Churnet Street. Trees also line the verge of Rochdale Road (A664).
The trees and scrub within the section that is bound by Paget Street to the north, Thornton Street North to east and Rochdale Road to the west, as well as the section adjacent that is bound by Shellard Road to the south, were observed from within the site boundaries for 30 minutes by Lizzie Atkinson from different viewpoints. The trees and scrub in both sections were then search for nests for a further 30 minutes.

The trees in question are shown on the following photographs.

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93



Photograph 1: Remaining trees along within the central section that line adjacent to Rochdale Road.



Photograph 2: Taped off trees with active crow nest within the centre of the site.



Photograph 3: Trees within the section that is bound by Shellard Road to the south.



Photograph 4: Remaining trees within the section that is bound by Shellard Road to the south.

Results

A **moderate** level of bird activity was noted on the site. The majority of bird activity was noted within the central section of the site with bird species, including starlings, magpie, robin, blackbird moving between the trees and scrub. Two magpies were observed foraging within the grassed areas of the site. During the survey, magpie, crow, common gull, robin, great tit and starlings were recorded flying over the site or perching within trees.

Conclusions

There were **moderate** levels of bird activity on the site. Magpie, blackbird, robin, great and crow were noted moving between the trees within the site. Starlings were noted foraging within the central section and flying over site. No new active nests were identified and the active crow nest, identified on 25th May 2021, has been taped off and retained for 6 weeks until the eggs have hatched, and the young have fledged. A buffer of 5m needs to be kept around the tree with the active nest to ensure the birds are not disturbed during nesting.

Due to the time of year and the bird activity on the site the surveys are valid for 48 hours from the date of the survey being carried out. If further vegetation clearance works are required within the bird nesting period March to August inclusive; a further breeding bird survey will be required to be conducted by a suitably qualified ecologist.

Yours sincerely



Lizzie Atkinson
Ascerta

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

1st June 2021

Our Ref: P.1463.21

Conor Leyden
LK Remediate Ltd
Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Manchester
M26 2ZS

Dear Mr Leyden
Re: Nesting Bird Check, Padget Street, M40 7SU

Following receipt of your instructions, the above site was attended by Miss Lizzie Atkinson MSc (Hons) Qual CIEEM on 1st June 2021 to carry out a nesting bird check of the trees that will be removed to accommodate the development. Weather conditions were warm (15°C), with a F0, Beaufort scale calm, 0/8 cloud cover at the start of the inspection.

These weather conditions were suitable for assessing if any nesting birds were present within the trees and areas of bramble scrub. The trees could be assessed fully from ground level. The weather conditions and time of year the survey was carried out is not considered a limit to the conclusions of the letter report.

The site is divided onto four sections, three of the sections are bound by Rochdale Road (A664) to the west and Thornton Street North to the east. The fourth section is to the east of Thornton Street North and bound by Burgess Street and Churnet Street. Trees also line the verge of Rochdale Road (A664).
The remaining trees and scrub within the section that is bound by Paget Street to the north, Thornton Street North to east and Rochdale Road to the west, as well as the section adjacent that is bound by Shellard Road to the south, were observed from within the site boundaries for 30 minutes by Lizzie Atkinson from different viewpoints. The trees and scrub in both sections were then search for nests for a further 30 minutes.

The trees in question are shown on the following photographs.

Mere One, Mere Grange, Elton Head Road, St Helens, Merseyside WA9 5GG
Tel: 0845 463 4404 **Email:** info@landscapetreesecology.com **Web:** www.landscapetreesecology.com
VAT Reg. No.: 171 7491 93



Photograph 1: Remaining trees along within the central section that line adjacent to Rochdale Road.



Photograph 2: Taped off trees with active crow nest within the centre of the site.



Photograph 3: Remaining trees within the section that is bound by Shellard Road to the south.



Photograph 4: Remaining trees within the section that is bound by Shellard Road to the south.

Results

A **low** level of bird activity was noted on the site. The majority of bird activity was noted within the central section of the site with bird species, including starlings, magpie and blue tits moving between the trees on the site. Two magpies were observed within a tree within the north-western corner of the central section of the site. Starlings were noted foraging within the central site section. During the survey, magpie, crow, common gull, wood pigeon, blue tits and starlings were recorded flying over the site or perching within trees.

Conclusions

There were **low** levels of bird activity on the site. Magpie, blue tit and crow were noted moving between the trees within the site. Starlings were noted foraging within the central section and flying over site. No new active nests were identified and the active crow nest, identified on 25th May 2021, has been taped off and retained for 6 weeks until the eggs have hatched, and the young have fledged. A buffer of 5m needs to be kept around the tree with the active nest to ensure the birds are not disturbed during nesting.

Due to the time of year and the bird activity on the site the surveys are valid for 48 hours from the date of the survey being carried out. If further vegetation clearance works are required within the bird nesting period March to August inclusive; a further breeding bird survey will be required to be conducted by a suitably qualified ecologist.

Yours sincerely



Lizzie Atkinson
Ascerta

Appendix 5 : Summary of Geochemical Testing

COLLYHURST VILLAGE - GEOCHEMICAL TESTING SUMMARY

SAMPLE REF	REPORT REF	SAMPLE DATE	ASBESTOS	ORGANIC CONTENT	SULPHATE (WATER SOLUBLE)	TOTAL SULPHATE CONTENT	pH	MC
T1								
T2	21-33192	22/09/2021	-	4.2%	< 0.010	0.053	-	10.0%
T3	21-33192	22/09/2021	-	1.1%	< 0.010	0.053	-	2.9%
T4	21-33192	22/09/2021	-	1.3%	0.019	0.080	-	3.7%
T5								
T6	21-33192	22/09/2021	-	1.7%	0.010	0.051	-	3.6%
T7	21-33192	22/09/2021	-	1.0%	< 0.010	0.043	-	3.5%
T8	21-33192	22/09/2021	-	1.2%	< 0.010	0.057	-	5.3%
T9	21-33192	22/09/2021	-	1.0%	< 0.010	0.054	-	3.9%
T10								
T11	21-33192	22/09/2021	-	1.0%	0.024	0.066	-	4.8%
T12								
T13								
T14	21-33192	22/09/2021	-	1.0%	0.024	0.023	-	5.2%
T15								
T16								
T17	21-33192	22/09/2021	-	1.9%	0.011	0.029	-	2.8%
T18								
T19								
T20								
T21								
T22	21-33192	22/09/2021	-	0.9%	0.016	0.035	-	3.6%
T23	21-33192	22/09/2021	-	0.9%	0.019	0.030	-	4.9%
T24	21-33192	22/09/2021	-	0.9%	0.012	0.050	-	3.8%
T25	21-33192	22/09/2021	-	1.0%	0.027	0.043	-	4.6%
T26	21-33192	22/09/2021	-	2.8%	0.013	0.051	-	5.3%
T27	21-33192	22/09/2021	-	1.0%	0.010	0.047	-	5.3%
T28								
T29	21-33192	22/09/2021	-	1.0%	< 0.010	0.044	-	3.7%
T30								
T31	21-33192	22/09/2021	-	1.0%	0.023	0.043	-	5.2%
T32								
T33								
T34								
T35								
T36	21-33192	22/09/2021	-	2.2%	0.022	0.049	-	2.1%
T37								
T38	21-33192	22/09/2021	-	0.9%	0.026	0.054	-	3.9%
T39								
T40								
T41	21-33192	22/09/2021	-	0.6%	0.015	0.032	-	2.3%
T42	21-33192	22/09/2021	-	0.8%	0.047	0.046	-	3.7%
T43	21-33192	22/09/2021	-	0.9%	0.014	0.060	-	20.0%
T44	21-33192	22/09/2021	-	1.2%	0.022	0.040	-	3.2%
T45	21-33192	22/09/2021	-	1.0%	< 0.010	0.033	-	2.2%
T46								
T47	21-33192	22/09/2021	-	0.8%	< 0.010	0.029	-	3.1%
T48								
T49								
T50								
T51								
T52								
T53								
T54								
T55	21-33192	22/09/2021	-	1.8%	0.017	0.038	-	3.0%
T56								
T57	21-33192	22/09/2021	-	1.9%	0.011	0.045	-	3.5%
T58								
T59	21-33192	22/09/2021	-	0.9%	0.026	0.059	-	12.0%
T60	21-33192	22/09/2021	-	0.8%	0.011	0.029	-	2.3%

COLLYHURST VILLAGE - GEOCHEMICAL TESTING SUMMARY

SAMPLE REF	REPORT REF	SAMPLE DATE	ASBESTOS	ORGANIC CONTENT	SULPHATE (WATER SOLUBLE)	TOTAL SULPHATE CONTENT	pH	MC
TS01	21-23312	05/07/2021	Not detected	13.0%	0.021	-	7.7	24.0%
TS02	21-23312	05/07/2021	Not detected	9.1%	0.061	-	7.8	27.0%
TS03	21-23312	05/07/2021	Not detected	9.1%	0.018	-	7.8	24.0%
SS101	21-30471	01/09/2021	Not detected	2.0%	0.017	-	8.7	7.6%
SS102	21-30471	01/09/2021	Not detected	2.5%	<0.010	-	8.6	6.0%
SS103	21-30471	01/09/2021	Not detected	2.4%	0.014	-	8.6	13.0%
SS104	21-30471	01/09/2021	Not detected	3.4%	0.016	-	8.5	13.0%
SS105	21-30471	01/09/2021	Not detected	5.6%	<0.010	-	8.5	13.0%
SS106	21-30471	01/09/2021	Not detected	2.4%	0.019	-	8.6	14.0%
SS107	21-42230	30/11/2021	Not detected	1.9%	<0.010	-	9.0	17.0%
SS108	21-42230	30/11/2021	Not detected	1.6%	<0.010	-	9.0	18.0%
SS109	21-42230	30/11/2021	Not detected	1.6%	<0.010	-	9.0	16.0%
SS110	21-42230	30/11/2021	Not detected	1.4%	<0.010	-	8.9	18.0%
SS111	22-06489	21/02/2022	Not detected	3.1%	0.530	-	8.8	23.0%
SS112	22-06489	21/02/2022	Not detected	1.7%	0.055	-	8.6	21.0%
SS113	22-06489	21/02/2022	Not detected	2.2%	0.150	-	8.7	22.0%
SS114	22-06489	21/02/2022	Not detected	1.4%	0.041	-	8.7	22.0%
SS115	22-06489	21/02/2022	Not detected	2.1%	0.037	-	8.7	23.0%
SS116	22-06489	21/02/2022	Not detected	1.6%	0.046	-	8.6	26.0%
SS117	22-06489	21/02/2022	Not detected	1.7%	0.047	-	8.7	24.0%
SS118	22-06489	21/02/2022	Not detected	2.1%	0.280	-	8.8	25.0%
CR07	21-38842	02/11/2021	Not detected	4.1%	0.150	-	10.8	12.0%
CR08	21-38842	02/11/2021	Not detected	5.6%	0.090	-	9.9	12.0%
CR09	21-38842	02/11/2021	Not detected	5.6%	0.057	-	9.9	13.0%
CR10	21-38842	02/11/2021	Not detected	10.0%	0.110	-	10.1	12.0%
CR11	21-38842	02/11/2021	Not detected	4.8%	0.071	-	10.2	13.0%
CR12	21-38842	02/11/2021	Not detected	2.7%	0.130	-	9.5	9.7%
CR13	21-38842	02/11/2021	Not detected	2.9%	0.150	-	11.2	13.0%
CR14	21-38842	02/11/2021	Not detected	3.8%	0.190	-	10.7	11.0%
CR15	22-06128	16/02/2022	Not detected	2.8%	1.400	-	9.7	16.0%
CR16	22-06127	16/02/2022	Not detected	3.3%	1.600	-	10.8	16.0%
CR17	22-06125	16/02/2022	Not detected	2.6%	1.400	-	9.9	15.0%
CR18	22-06129	16/02/2022	Not detected	2.2%	1.400	-	10.3	16.0%
CR201	22-02909	26/01/2022	Not detected	1.3%	0.300	-	12.0	11.0%
CR202	22-02908	26/01/2022	0.001	3.6%	0.700	-	11.0	14.0%
CR203	22-03438	26/01/2022	Not detected	1.6%	<0.010	-	>12.0	8.2%
CR204	22-03430	26/01/2022	Not detected	3.5%	1.400	-	10.7	9.8%
CR205	22-06913	23/02/2022	Not detected	4.5%	0.089	-	11.0	9.3%
CR206	22-06831	23/02/2022	Not detected	1.3%	1.000	-	11.5	7.8%
CR207	22-06862	23/02/2022	Not detected	1.7%	0.370	-	8.4	9.8%
CR208	22-06857	23/02/2022	Not detected	2.8%	1.500	-	10.5	11.0%
CR209	22-06854	23/02/2022	Not detected	4.5%	1.400	-	10.3	13.0%
CR210	22-06860	23/02/2022	Not detected	3.5%	1.600	-	9.5	17.0%
CR211	22-06858	23/02/2022	Not detected	6.0%	0.200	-	10.6	12.0%
CR212	22-10826	22/03/2022	Not detected	6.0%	0.360	-	7.4	10.0%
CR213	22-10831	22/03/2022	Not detected	1.6%	0.300	-	>12.0	9.2%

Appendix 6 : Summary of Geotechnical Testing

COLLYHURST VILLAGE : GEOTECHNICAL TESTING SUMMARY

SAMPLE REF	MATERIAL TYPE	SOURCE	REPORT REF	SAMPLE DATE	Single Point MCV	Multi Point Moisture Condition Value (MCV)	Liquid and Plastic Limits (LL/PL/PI)	PSD	Uniformity Coefficient	Moisture Content	MDD/OMC Relationship (2.5kg)	MDD/OMC Relationship (Vib Hammer)	Particle Density (A = assumed)	LA Coefficient	Constituent Parts Analysis of Recycled Aggregate						
															Rc	Ru	Rb	Ra	Rg	X	FL
CR01	Crush	Site generated	MRN 4117-14	27/07/2021				6F2 ok		7.7%		1.91 / 8.7%	2.40A	34	95%	0.0%	3.8%	1.1%	0.0%	0.1%	1.3%
CR02	Crush	Site generated	MRN 4117-14	27/07/2021				6F2 ok		5.0%		1.92 / 8.8%	2.40A	35	94%	0.0%	4.1%	1.9%	0.0%	0.2%	1.0%
CR03	Crush	Site generated	MRN 4117-14	27/07/2021				6F2 ok		4.5%		1.92 / 8.5%	2.40A	34	96%	0.0%	2.7%	1.0%	0.1%	0.2%	0.7%
T1	Made Ground	Site generated	L1877	14/09/2021	10.3					20%											
T2	Made Ground	Site generated	L1878	14/09/2021	13.8					13%											
T3	Made Ground	Site generated	L1879	14/09/2021	8.3					18%											
Composite T1-T3	Made Ground	Site generated	L1883	14/09/2021	8.2		38/21/17	saCL	>580	20%											
			L1884	14/09/2021	9.9	✓	37/21/16	saCL	1673	17%	1.73 / 15%		2.51								
T4	Made Ground	Site generated	L1880	14/09/2021	14.6					23%											
T5	Made Ground	Site generated	L1881	14/09/2021	16.0					24%											
T6	Made Ground	Site generated	L1882	14/09/2021	14.0					23%											
Composite T4-T6	Made Ground	Site generated	L1885	14/09/2021	15.5		42/29/13	grclASH	533	23%											
	Made Ground	Site generated	L1886	14/09/2021	14.4	✓	42/28/13	grclASH	505	23%	1.46 / 23%		2.23								
T7	Made Ground	Site generated	L1978	22/09/2021			41/21/19	saCL	>3	12%											
			L1896	14/09/2021	15.0					6.1%											
T8	Made Ground	Site generated	L1979	22/09/2021			42/25/16	clSA	>12	18%											
			L1897	14/09/2021	15.6					11%											
T9	Made Ground	Site generated	L1973	22/09/2021		✓	49/21/28	saCL	>4	8.8%	1.66 / 16%		2.36								
			L1898	14/09/2021	15.2					12%											
T10	Made Ground	Site generated	L1899	14/09/2021	11.6					10%											
T11	Made Ground	Site generated	L1974	22/09/2021		✓	40/20/20	saCL	>2	14%	1.74 / 16%		2.48								
			L1900	14/09/2021	15.0					11%											
T12	Made Ground	Site generated	L1901	14/09/2021	14.2					8.5%											
T13	Made Ground	Site generated	L1902	14/09/2021	14.3					11%											
T14	Made Ground	Site generated	L1961	22/09/2021		✓	42/21/22	saCL	>5	17%	1.62 / 17%		2.38								
			L1903	14/09/2021	15.1					10%											
T15	Made Ground	Site generated	L1904	14/09/2021	9.8					8.0%											
T16	Made Ground	Site generated	L1905	14/09/2021	12.3					7.8%											
T17	Made Ground	Site generated	L1964	22/09/2021			43/20/22	saCL	>4	17%											
			L1906	14/09/2021	14.6					9.9%											
T18	Made Ground	Site generated	L1965	22/09/2021			42/21/21	saCL	>4	15%											
			L1907	14/09/2021	15.1					11%											
T19	Made Ground	Site generated	L1908	14/09/2021	9.3					8.2%											
T20	Made Ground	Site generated	L1909	14/09/2021	16.4					17%											
T21	Made Ground	Site generated	L1910	14/09/2021	14.4					8.8%											
T22	Made Ground	Site generated	L1966	22/09/2021			42/23/19	saCL	>4	15%											
			L1911	14/09/2021	12.6					7.5%											
T23	Made Ground	Site generated	L1962	22/09/2021	16.9	✓	39/19/20	saCL	N/A	14%	1.83 / 15%		2.62								
T24	Made Ground	Site generated	L1967	22/09/2021	10.0		42/21/21	saCL	>5	17%											
T25	Made Ground	Site generated	L1947	22/09/2021	7.9	✓	41/20/21	saCL	>5	17%	1.72 / 16%		2.44								
T26	Made Ground	Site generated	L1952	22/09/2021	16.6					12%											
T27	Made Ground	Site generated																			
T28	Made Ground	Site generated	L1941	22/09/2021	6.6					6.8%											
T29	Made Ground	Site generated	L1963	22/09/2021	15.3	✓	40/18/22	saCL	N/A	13%	1.82 / 15%		2.57								
T30	Made Ground	Site generated																			
T31	Made Ground	Site generated	L1968	22/09/2021	12.8		41/19/22	saCL	N/A	15%											
T32	Made Ground	Site generated	L1953	22/09/2021	14.0					14%											
T33	Made Ground	Site generated	L1954	22/09/2021	15.0					14%											
T34	Made Ground	Site generated	L1955	22/09/2021	9.8					17%											
T35	Made Ground	Site generated	L1960	22/09/2021	12.6					13%											
T36	Made Ground	Site generated	L1975	22/09/2021	14.4	✓	38/19/20	saCL	N/A	12%	1.83 / 14%		2.63								
T37	Made Ground	Site generated	L1956	22/09/2021	14.4					16%											
T38	Made Ground	Site generated	L1976	22/09/2021	13.4	✓	NON-PLASTIC	saASH	>58	23%	1.46 / 17%		2.21								
T39	Made Ground	Site generated	L1971	22/09/2021	14.7					13%											
T40	Made Ground	Site generated	L1957	22/09/2021	11.9					18%											
T41	Made Ground	Site generated	L1980	22/09/2021	14.5		39/21/18	saCL	N/A	13%											
T42	Made Ground	Site generated	L1977	22/09/2021	16.5	✓	36/23/13	GRSA	>29	12%	1.78 / 15%		2.45								
T43	Made Ground	Site generated	L1969	22/09/2021	11.8		40/19/21	saCL	>2	15%											
T44	Made Ground	Site generated	L1948	22/09/2021	14.8	✓	41/18/23	saCL	N/A	13%	1.83 / 15%		2.59								
T45	Made Ground	Site generated	L1970	22/09/2021	10.4		41/19/22	saCL	>3	17%											
T46	Made Ground	Site generated	L1942	22/09/2021	13.0					7.3%											
T47	Made Ground	Site generated																			
T48	Made Ground	Site generated	L1943	22/09/2021	12.9					6.8%											
T49	Made Ground	Site generated	L1958	22/09/2021	14.5					13%											
T50	Made Ground	Site generated	L1944	22/09/2021	11.0					7.1%											
T51	Made Ground	Site generated	L1945	22/09/2021	12.9					6.4%											
T52	Made Ground	Site generated	L1912	14/09/2021	11.4					17%											
T53	Made Ground	Site generated	L1946	22/09/2021	12.6					6.8%											
T54	Made Ground	Site generated	L1959	22/09/2021	9.9					17%											
T55	Made Ground	Site generated	L1949	22/09/2021	13.6	✓	37/19/17	saCL	>4	11%	1.74 / 14%		2.44								
T56	Made Ground	Site generated	L1921	22/09/2021	12.9			saASH	>17	12%											

COLLYHURST VILLAGE : GEOTECHNICAL TESTING SUMMARY

SAMPLE REF	MATERIAL TYPE	SOURCE	REPORT REF	SAMPLE DATE	Single Point MCV	Multi Point Moisture Condition Value (MCV)	Liquid and Plastic Limits (LL/PL/PI)	PSD	Uniformity Coefficient	Moisture Content	MDD/OMC Relationship (2.5kg)	MDD/OMC Relationship (Vib Hammer)	Particle Density (A = assumed)	LA Coefficient	Constituent Parts Analysis of Recycled Aggregate						
															Rc	Ru	Rb	Ra	Rg	X	FL
T57	Made Ground	Site generated	L1922	22/09/2021	12.1	✓	NON-PLASTIC	clSA	>61	10%	1.70 / 16%		2.42								
T58	Made Ground	Site generated	L1972	22/09/2021	15.1					13%											
T59	Made Ground	Site generated	L1923	22/09/2021	9.1	✓	37/19/17	saCL	>5	15%	1.83 / 14%		2.50								
T60	Made Ground	Site generated	L1924	22/09/2021	10.0		36/20/16	saCL	>5	15%											
CR04	Crush	Site generated	MRN 4117/16	11/11/2021				6F2 ok		12%		1.93 / 9.0%	2.40A	37	94%	0.0%	4.1%	1.8%	0.0%	0.0%	0.3%
CR05	Crush	Site generated	MRN 4117/16	11/11/2021				6F2 ok		11%		1.92 / 8.4%	2.40A	35	91%	0.0%	6.5%	2.5%	0.0%	0.0%	0.7%
CR06	Crush	Site generated	MRN 4117/16	11/11/2021				6F2 ok		9.7%		1.91 / 8.9%	2.40A	34	95%	0.0%	3.7%	1.3%	0.0%	0.0%	0.4%
CR201	Crush	Imported (W Maher)	MRN 4297-2	26/01/2022				6F5 ok		9.2%		2.10 / 8.7%	2.65A	42	69%	3.2%	27%	0.8%	0.1%	0.0%	0.7%
CR202	Crush	Imported (W Maher)	MRN 4297-2	26/01/2022				6F5 ok		11%		2.08 / 8.6%	2.65A	45	65%	2.9%	32%	0.2%	0.3%	0.0%	0.2%
CR203	Crush	Imported (Fox Bros)	MRN 4297-2	26/01/2022				6F5 ok		7.3%		2.10 / 7.7%	2.65A	45	70%	0.8%	29%	0.5%	0.1%	0.0%	0.5%
CR204	Crush	Imported (Fox Bros)	MRN 4297-2	26/01/2022				6F5 ok		8.2%		2.09 / 8.4%	2.65A	44	67%	5.1%	27%	0.8%	0.1%	0.0%	0.4%
CL401	Clay	Site generated	MRN 4297-4	23/02/2022				saCL		16%			2.68								
CL402	Clay	Site generated	MRN 4297-4	23/02/2022									2.67								
CL403	Clay	Site generated	MRN 4297-4	23/02/2022				saCL		15%			2.68								
CL404	Clay	Site generated	MRN 4297-4	23/02/2022									2.65								
CL405	Clay	Site generated	MRN 4297-4	23/02/2022				saCL		16%			2.66								
CL406	Clay	Site generated	MRN 4297-4	23/02/2022									2.67								
CR212	Crush	Imported (W Maher)	MRN 4297-8	22/03/2022				6F5 ok		8.2%		2.06 / 9.0%	2.65A	45	74%	2.9%	23.0%	0.1%	0.1%	0.0%	0.2%
CR213	Crush	Imported (W Maher)	MRN 4297-8	22/03/2022				6F5 ok		7.8%		2.07 / 9.1%	2.65A	42	67%	3.9%	28.0%	0.7%	0.3%	0.0%	0.7%

COLLYHURST VILLAGE : GEOTECHNICAL TESTING SUMMARY

EQUIVALENT CBR DATA

TEST REF	REPORT REF	DATE	LAB	MATERIAL	PLATE DIA (mm)	CBR	SUBGRADE MODULUS (k_{762})
1	DNR 78336-A	27/06/2021	CTS	Soil/Mix	450	15.3%	70.3
2	DNR 78336-B	27/06/2021	CTS	Soil/Mix	450	9.4%	53.1
3	DNR 78336-C	27/06/2021	CTS	Soil/Mix	450	14.1%	67.1
4	DNR 78336-D	27/06/2021	CTS	Soil/Mix	450	9.7%	54.0
5	DNR 78336-E	27/06/2021	CTS	Soil/Mix	450	6.9%	44.5
6	DNR 78336-F	27/06/2021	CTS	Soil/Mix	450	20.7%	83.7
7	DNR 78336-G	27/06/2021	CTS	Soil/Mix	450	19.4%	80.7
8	DNR 78336-H	27/06/2021	CTS	Soil/Mix	450	24.6%	92.5
9	DNR 78336-I	27/06/2021	CTS	Soil/Mix	450	17.6%	76.3
10	DNR 78336-J	27/06/2021	CTS	Soil/Mix	450	13.7%	65.8
CBR 1	HS6234-1	14/09/2021	HIXTRA	Formation	600	2.0%	20.0
CBR 2	HS6234-2	14/09/2021	HIXTRA	Formation	600	2.0%	20.0
CBR 3	HS6234-3	14/09/2021	HIXTRA	Formation	600	2.0%	20.0
CBR 4	HS6234-4	14/09/2021	HIXTRA	Formation	600	5.0%	37.0
CBR 5	HS6234-5	14/09/2021	HIXTRA	Formation	600	4.0%	34.0
CBR 6	HS6234-6	14/09/2021	HIXTRA	Formation	600	3.0%	26.0
CBR 8	HS6264-1	21/09/2021	HIXTRA	Formation	600	9.0%	50.0
CBR 17	HS6264-2	21/09/2021	HIXTRA	Formation	600	28.0%	100.0
CBR 14	HS6264-3	21/09/2021	HIXTRA	Formation	600	8.0%	48.0
CBR 41	HS6264-4	21/09/2021	HIXTRA	Formation	600	15.0%	70.0
CBR 38	HS6264-5	21/09/2021	HIXTRA	Formation	600	11.0%	58.0
CBR 7	HS6264-6	21/09/2021	HIXTRA	Formation	600	4.0%	34.0
CBR 36	HS6264-7	21/09/2021	HIXTRA	Formation	600	5.0%	35.0
CBR 22	HS6264-8	21/09/2021	HIXTRA	Formation	600	8.0%	49.0
CBR 31	HS6269-1	22/09/2021	HIXTRA	Formation	600	6.0%	40.0
CBR 45	HS6269-2	22/09/2021	HIXTRA	Formation	600	10.0%	54.0
CBR 24	HS6269-3	22/09/2021	HIXTRA	Formation	600	44.0%	129.0
CBR 43	HS6269-4	22/09/2021	HIXTRA	Formation	600	23.0%	90.0
CBR 57	HS6269-5	22/09/2021	HIXTRA	Formation	600	8.0%	50.0
3	HS6275-1	23/09/2021	HIXTRA	Formation	600	6.0%	41.0
3A	HS6275-2	23/09/2021	HIXTRA	Formation	600	13.0%	65.0
6	HS6275-3	23/09/2021	HIXTRA	Formation	600	13.0%	64.0
5	HS6275-4	23/09/2021	HIXTRA	Formation	600	11.0%	60.0
TM1	LKC TM1	15/10/2021	LKC	Formation	600	5.6%	39.4
TM2	LKC TM2	15/10/2021	LKC	Formation	600	7.3%	45.9
TM3	LKC TM3	15/10/2021	LKC	Formation	600	12.4%	62.3
1	MRN 4297 - 1	03/02/2022	MR	Crush	600	6.6%	43.0
2	MRN 4297 - 1	03/02/2022	MR	Crush	600	9.4%	53.0
3	MRN 4297 - 1	03/02/2022	MR	Crush	600	4.8%	36.0
4	MRN 4297 - 1	03/02/2022	MR	Crush	600	8.4%	50.0
5	MRN 4297 - 1	03/02/2022	MR	Crush	600	9.9%	55.0
6	MRN 4297 - 1	03/02/2022	MR	Crush	600	5.9%	41.0
7	MRN 4297 - 1	03/02/2022	MR	Crush	600	4.0%	32.0
8	MRN 4297 - 1	03/02/2022	MR	Crush	600	5.5%	39.0
9	MRN 4297 - 1	03/02/2022	MR	Crush	600	10.7%	57.0
10	MRN 4297 - 1	03/02/2022	MR	Crush	600	9.5%	53.0
TM4	LKC TM4	14/02/2022	LKC	Formation	600	8.3%	49.2
TM5	LKC TM5	14/02/2022	LKC	Formation	600	14.8%	68.9
TM6	LKC TM6	14/02/2022	LKC	Formation	600	9.2%	52.5
TM7	LKC TM7	14/02/2022	LKC	Formation	600	6.4%	42.6
17	MRN 4297 - 5A	21/03/2022	MR	Crush	600	7.8%	48.0
18	MRN 4297 - 5A	21/03/2022	MR	Crush	600	7.3%	46.0
19	MRN 4297 - 5A	21/03/2022	MR	Crush	600	7.7%	47.0
20	MRN 4297 - 5A	21/03/2022	MR	Crush	600	8.6%	50.0
21	MRN 4297 - 5A	21/03/2022	MR	Crush	600	3.9%	32.0
22	MRN 4297 - 5A	21/03/2022	MR	Crush	600	3.9%	32.0
23	MRN 4297 - 5A	21/03/2022	MR	Crush	600	7.9%	48.0
24	MRN 4297 - 5A	21/03/2022	MR	Crush	600	6.5%	43.0
25	MRN 4297 - 5A	21/03/2022	MR	Crush	600	9.3%	53.0
26	MRN 4297 - 6	24/03/2022	MR	Crush	600	9.9%	55.0
27	MRN 4297 - 6	24/03/2022	MR	Crush	600	14.5%	68.0
28	MRN 4297 - 6	24/03/2022	MR	Crush	600	2.4%	24.0
29	MRN 4297 - 6	24/03/2022	MR	Crush	600	13.9%	66.0
30	MRN 4297 - 6	24/03/2022	MR	Crush	600	20.5%	83.0
31	MRN 4297 - 6	24/03/2022	MR	Crush	600	7.0%	45.0
32	MRN 4297 - 6	24/03/2022	MR	Crush	600	3.2%	28.0
33	MRN 4297 - 6	24/03/2022	MR	Crush	600	4.2%	33.0
34	MRN 4297 - 6	24/03/2022	MR	Crush	600	5.3%	38.0
35	MRN 4297 - 6	24/03/2022	MR	Crush	600	5.3%	38.0

COLLYHURST VILLAGE : GEOTECHNICAL TESTING SUMMARY

EQUIVALENT CBR DATA

TEST REF	REPORT REF	DATE	LAB	MATERIAL	PLATE DIA (mm)	CBR	SUBGRADE MODULUS (k_{762})
36	MRN 4297 - 6	24/03/2022	MR	Crush	600	4.6%	35.0
37	MRN 4297 - 6	24/03/2022	MR	Crush	600	28.9%	101.0
28 (retest)	MRN 4297 - 6	24/03/2022	MR	Crush	600	9.7%	54.0
38 [3 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	8.3%	49.0
39 [7 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	11.3%	59.0
40 [32 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	16.9%	74.0
41 [33 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	7.5%	47.0
42 [36 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	21.9%	86.0
43 [21 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	12.3%	62.0
44 [22 retest]	MRN 4297 - 7	30/03/2022	MR	Crush	600	12.8%	63.0

COLLYHURST VILLAGE : GEOTECHNICAL TESTING SUMMARY

COMPACTION CORE-CUTTERS

TEST REF	DATE	LAB	BULK DENSITY	MOISTURE CONTENT	DRY DENSITY	VOID RATIO	AIR VOIDS
CC1	27/06/2021	LKR	2.044	16.9%	1.748	0.43	0.5%
CC2	27/06/2021	LKR	2.068	16.0%	1.782	0.40	0.2%
CC3	27/06/2021	LKR	2.135	19.7%	1.784	0.40	-6.5%
CC4	27/06/2021	LKR	2.063	15.9%	1.780	0.40	0.5%
CC5	27/06/2021	LKR	2.075	16.7%	1.779	0.41	-0.8%
CC6	27/06/2021	LKR	2.034	17.6%	1.730	0.45	0.4%
CC7	27/06/2021	LKR	2.104	16.8%	1.801	0.39	-2.3%
CC8	27/06/2021	LKR	2.091	18.4%	1.765	0.42	-3.1%
CC9	27/06/2021	LKR	2.077	15.4%	1.800	0.39	0.3%
CC10	27/06/2021	LKR	1.989	16.2%	1.712	0.46	3.8%
CC11	14/09/2021	LKR	2.038	17.3%	1.737	0.44	0.5%
CC12	14/09/2021	LKR	2.029	18.3%	1.714	0.46	0.0%
CC13	14/09/2021	LKR	2.080	18.6%	1.754	0.43	-2.8%
CC14	14/09/2021	LKR	2.015	18.5%	1.700	0.47	0.5%
CC15	14/09/2021	LKR	1.977	15.5%	1.712	0.46	5.0%
CC16	14/09/2021	LKR	2.055	13.7%	1.807	0.38	2.9%
CC17	21/09/2021	LKR	1.964	19.6%	1.642	0.52	2.1%
CC18	21/09/2021	LKR	2.177	15.0%	1.892	0.32	-4.1%
CC19	21/09/2021	LKR	2.173	17.0%	1.858	0.35	-5.9%
CC20	21/09/2021	LKR	2.169	15.4%	1.880	0.33	-4.2%
CC21	21/09/2021	LKR	2.183	15.3%	1.893	0.32	-4.7%

Appendix 7 : Geochemical Test Certificates

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

Final Report

Report No.:	21-23312-1
Initial Date of Issue:	13-Jul-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Peter Dunn
Project	LKR 201044 Collyhurst

Quotation No.:		**Date Received:**	07-Jul-2021
Order No.:	LKR 201044	**Date Instructed:**	07-Jul-2021
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	13-Jul-2021
Date Approved:	13-Jul-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR 201044 Collyhurst

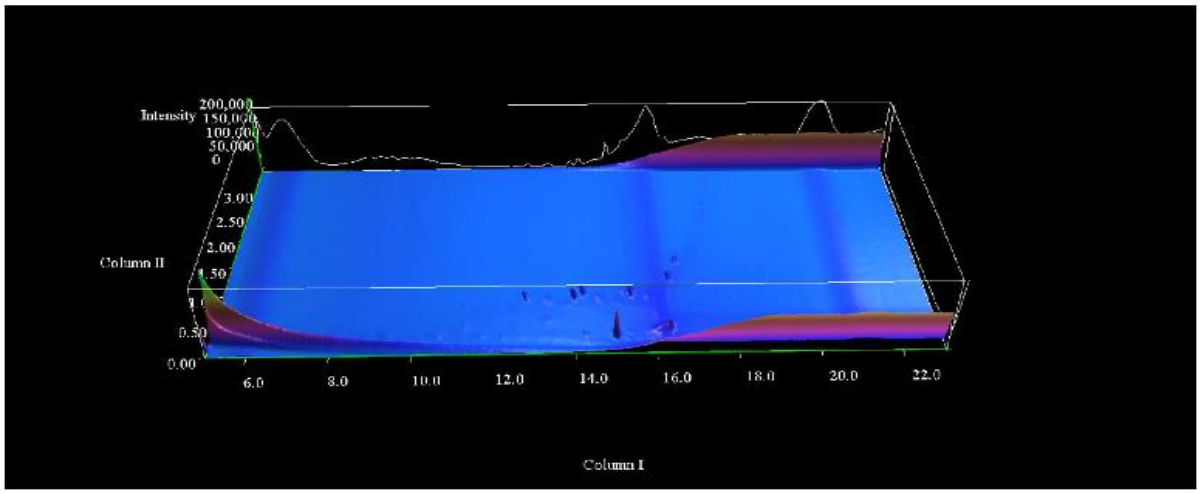
Client: LK Consult		**Chemtest Job No.:**			21-23312	21-23312	21-23312
Quotation No.:		**Chemtest Sample ID.:**			1235953	1235954	1235955
Order No.: LKR 201044		Client Sample Ref.:			TS01	TS02	TS03
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			05-Jul-2021	05-Jul-2021	05-Jul-2021
		Asbestos Lab:			DURHAM	DURHAM	DURHAM
Determinand	**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
Moisture	N	2030	%	0.020	24	27	24
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached
pH	M	2010		4.0	7.7	7.8	7.8
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.1	0.91	1.0
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.021	0.061	0.018
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	1.5	2.2	2.2
Arsenic	M	2450	mg/kg	1.0	21	19	23
Cadmium	M	2450	mg/kg	0.10	10	11	12
Chromium	M	2450	mg/kg	1.0	67	81	82
Copper	M	2450	mg/kg	0.50	120	120	130
Mercury	M	2450	mg/kg	0.10	4.5	4.9	5.7
Nickel	M	2450	mg/kg	0.50	26	25	28
Lead	M	2450	mg/kg	0.50	270	270	520
Selenium	M	2450	mg/kg	0.20	0.64	0.59	0.72
Vanadium	U	2450	mg/kg	5.0	26	24	29
Zinc	M	2450	mg/kg	0.50	220	230	270
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	13	9.1	9.1
Diesel Present	N	2670		N/A	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	56	< 1.0	86
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	56	< 5.0	86
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

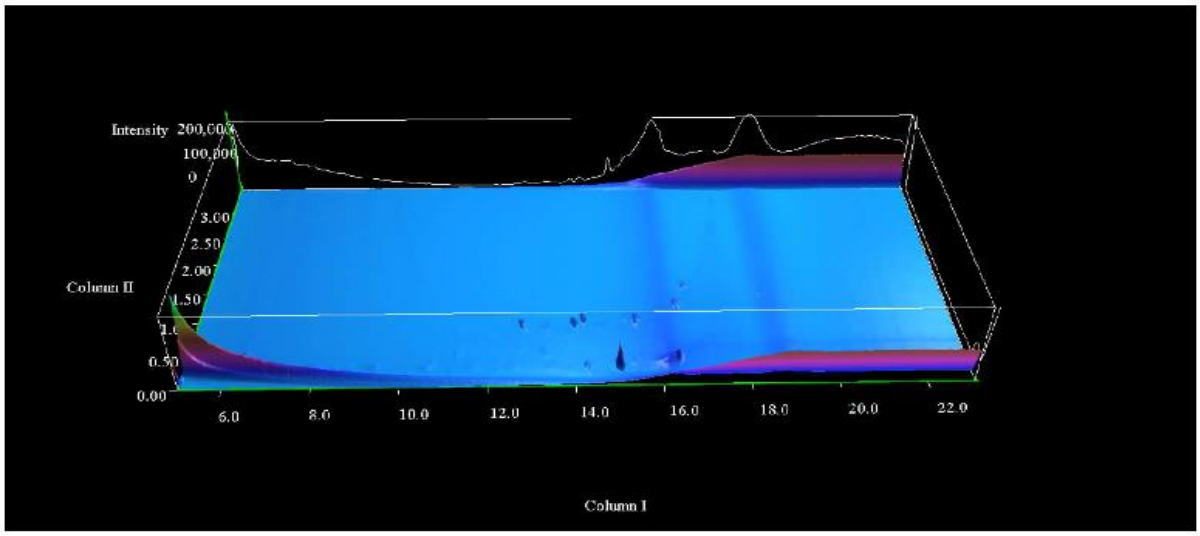
Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-23312	21-23312	21-23312
Quotation No.:		**Chemtest Sample ID.:**			1235953	1235954	1235955
Order No.: LKR 201044		Client Sample Ref.:			TS01	TS02	TS03
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			05-Jul-2021	05-Jul-2021	05-Jul-2021
		Asbestos Lab:			DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	20
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	11	< 1.0	88
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	11	< 5.0	110
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	67	< 10	190
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.2	0.81	0.71
Acenaphthylene	N	2800	mg/kg	0.10	0.30	0.30	0.18
Acenaphthene	M	2800	mg/kg	0.10	0.42	0.50	0.85
Fluorene	M	2800	mg/kg	0.10	0.38	0.46	0.54
Phenanthrene	M	2800	mg/kg	0.10	3.6	4.6	4.2
Anthracene	M	2800	mg/kg	0.10	0.78	0.91	0.98
Fluoranthene	M	2800	mg/kg	0.10	5.9	7.5	0.60
Pyrene	M	2800	mg/kg	0.10	5.6	6.7	5.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.7	3.2	2.8
Chrysene	M	2800	mg/kg	0.10	2.9	3.3	2.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.6	4.1	3.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.4	1.5	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.3	3.9	3.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.1	2.4	2.0
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.57	0.32	0.40
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.0	2.5	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	37	43	32
Total Phenols	M	2920	mg/kg	0.10	< 0.10	0.13	< 0.10

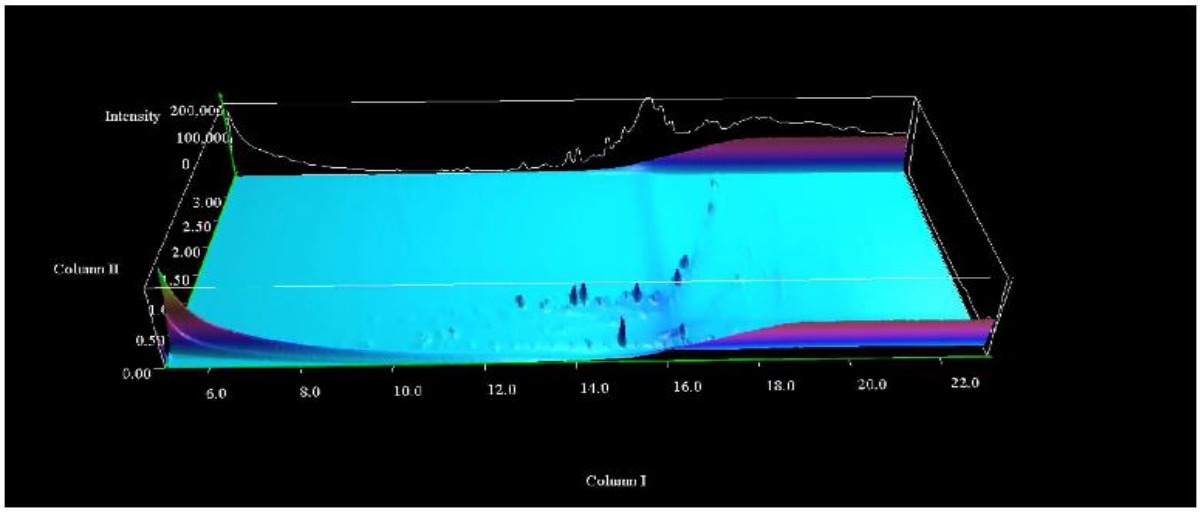
TPH Chromatogram on Soil Sample: 1235953



TPH Chromatogram on Soil Sample: 1235954



TPH Chromatogram on Soil Sample: 1235955



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-23312	1235953	S		TS01			No	PAH
21-23312	1235954	S		TS02			No	N/A
21-23312	1235955	S		TS03			No	PAH

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

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

Final Report

Report No.:	21-30471-1
Initial Date of Issue:	10-Sep-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Peter Dunn
Project	LKR201044 Collyhurst

Quotation No.:		**Date Received:**	03-Sep-2021
Order No.:	LKR201044/PD	**Date Instructed:**	03-Sep-2021
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	09-Sep-2021
Date Approved:	10-Sep-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR201044 Collyhurst

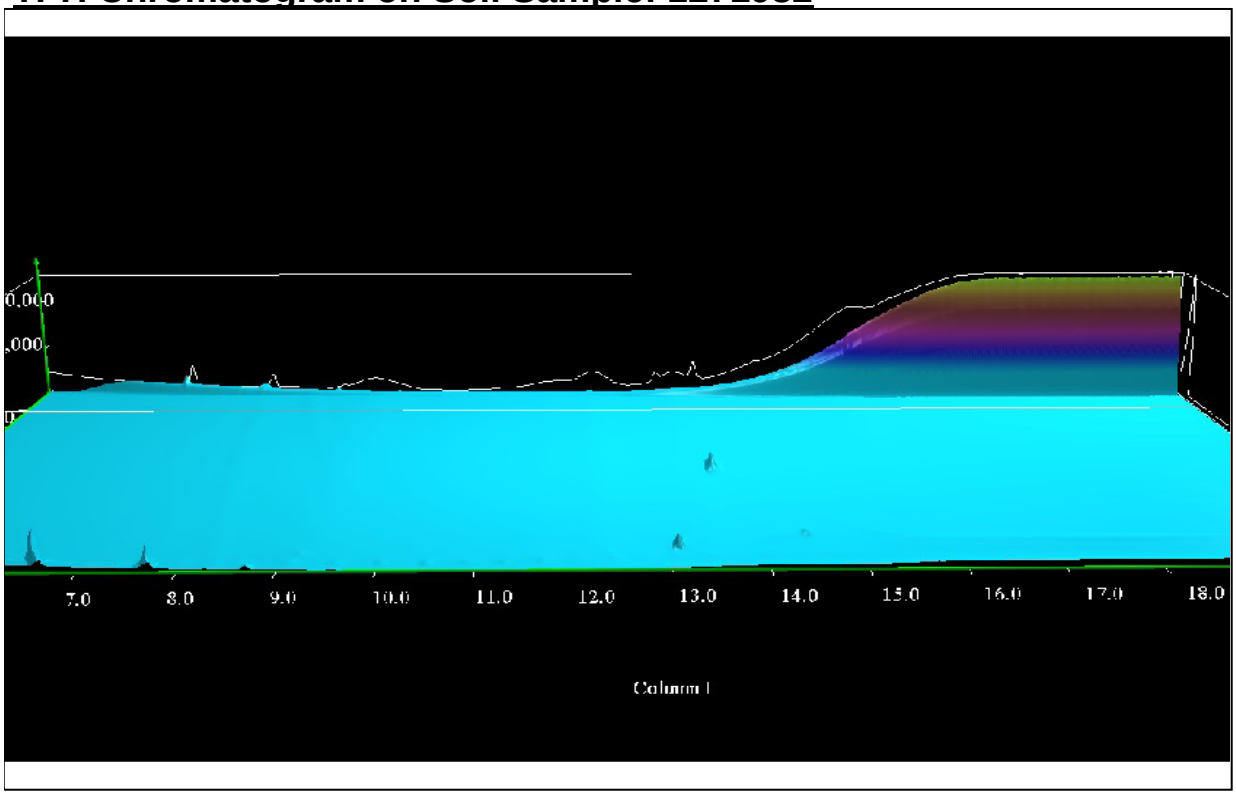
Client: LK Consult				**Chemtest Job No.:**	21-30471	21-30471	21-30471	21-30471	21-30471	21-30471
Quotation No.:				**Chemtest Sample ID.:**	1271932	1271933	1271934	1271935	1271936	1271937
				Sample Location:	SS101	SS102	SS103	SS104	SS105	SS106
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Date Sampled:	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**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
Moisture	N	2030	%	0.020	7.6	6.0	13	13	13	14
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones and Roots	Stones and Roots	Stones	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.7	8.6	8.6	8.5	8.5	8.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	0.43	< 0.40	0.49
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.017	< 0.010	0.014	0.016	< 0.010	0.019
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	9.2	5.8	7.9	12	12	5.9
Cadmium	M	2450	mg/kg	0.10	0.16	0.12	0.32	0.38	0.44	0.20
Chromium	M	2450	mg/kg	1.0	24	18	19	23	22	15
Copper	M	2450	mg/kg	0.50	24	17	23	34	47	30
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	0.17	0.31	0.47	0.11
Nickel	M	2450	mg/kg	0.50	34	25	25	29	27	20
Lead	M	2450	mg/kg	0.50	23	18	46	86	100	33
Selenium	M	2450	mg/kg	0.20	0.20	< 0.20	< 0.20	0.20	0.30	< 0.20
Vanadium	U	2450	mg/kg	5.0	25	17	18	23	23	15
Zinc	M	2450	mg/kg	0.50	62	44	72	81	76	56
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	2.0	2.5	2.4	3.4	5.6	2.4
Diesel Present	N	2670		N/A	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	9.7	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

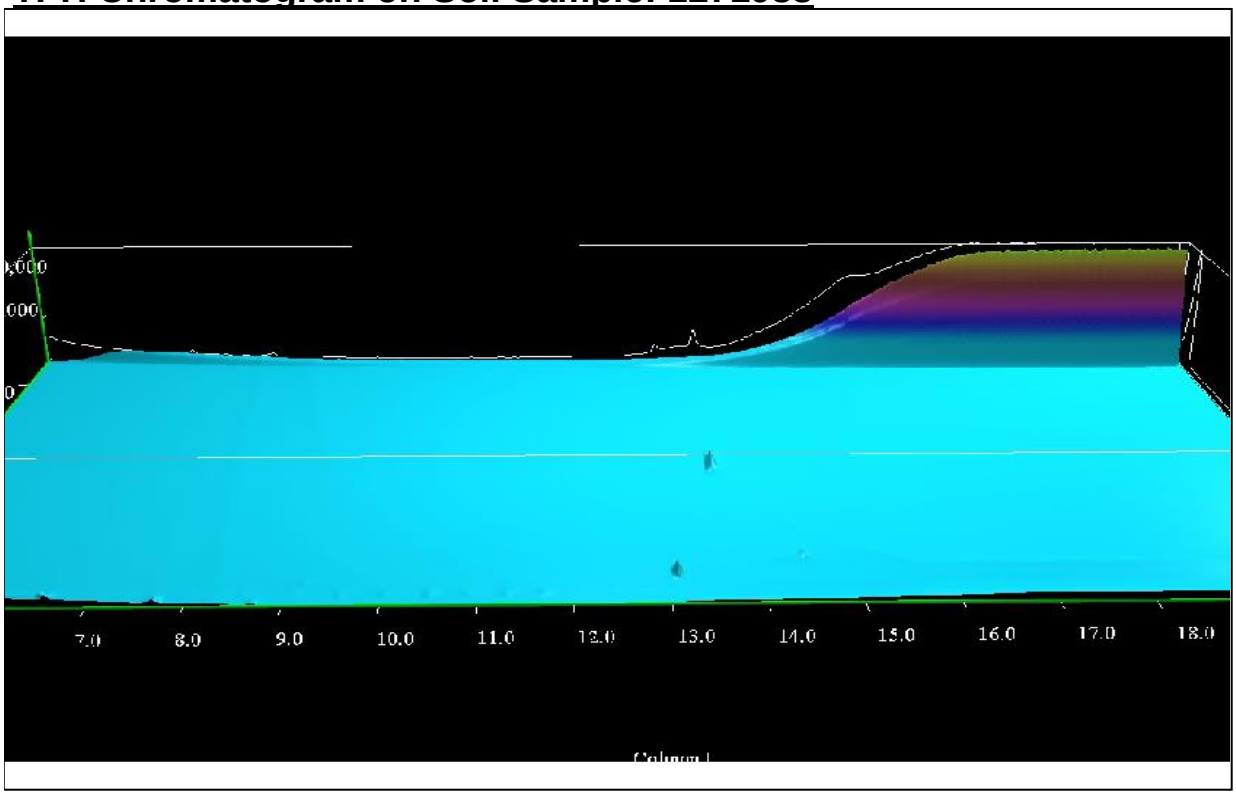
Project: LKR201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-30471	21-30471	21-30471	21-30471	21-30471	21-30471
Quotation No.:		**Chemtest Sample ID.:**			1271932	1271933	1271934	1271935	1271936	1271937
		Sample Location:			SS101	SS102	SS103	SS104	SS105	SS106
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	34	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	170	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	200	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	210	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.23	0.74	0.36	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.11	0.36	0.11	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.18	1.4	0.28	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15	1.6	0.56	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.55	0.61	1.5	10	2.7	1.7
Anthracene	M	2800	mg/kg	0.10	0.18	0.21	0.43	2.6	0.74	0.45
Fluoranthene	M	2800	mg/kg	0.10	0.54	0.41	1.8	9.1	3.6	2.2
Pyrene	M	2800	mg/kg	0.10	0.50	0.47	1.8	9.0	3.4	1.9
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.39	0.65	1.0	3.8	1.6	1.3
Chrysene	M	2800	mg/kg	0.10	0.54	0.62	0.88	3.8	1.4	0.89
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.67	0.35	1.3	3.8	2.0	1.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.48	0.17	0.44	1.3	0.54	0.66
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.50	0.26	0.83	2.9	1.5	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.40	< 0.10	0.69	2.2	1.5	0.84
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.25	< 0.10	0.39	0.42	0.32	0.47
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.24	< 0.10	0.75	1.9	0.94	0.49
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.2	3.8	13	55	22	14
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

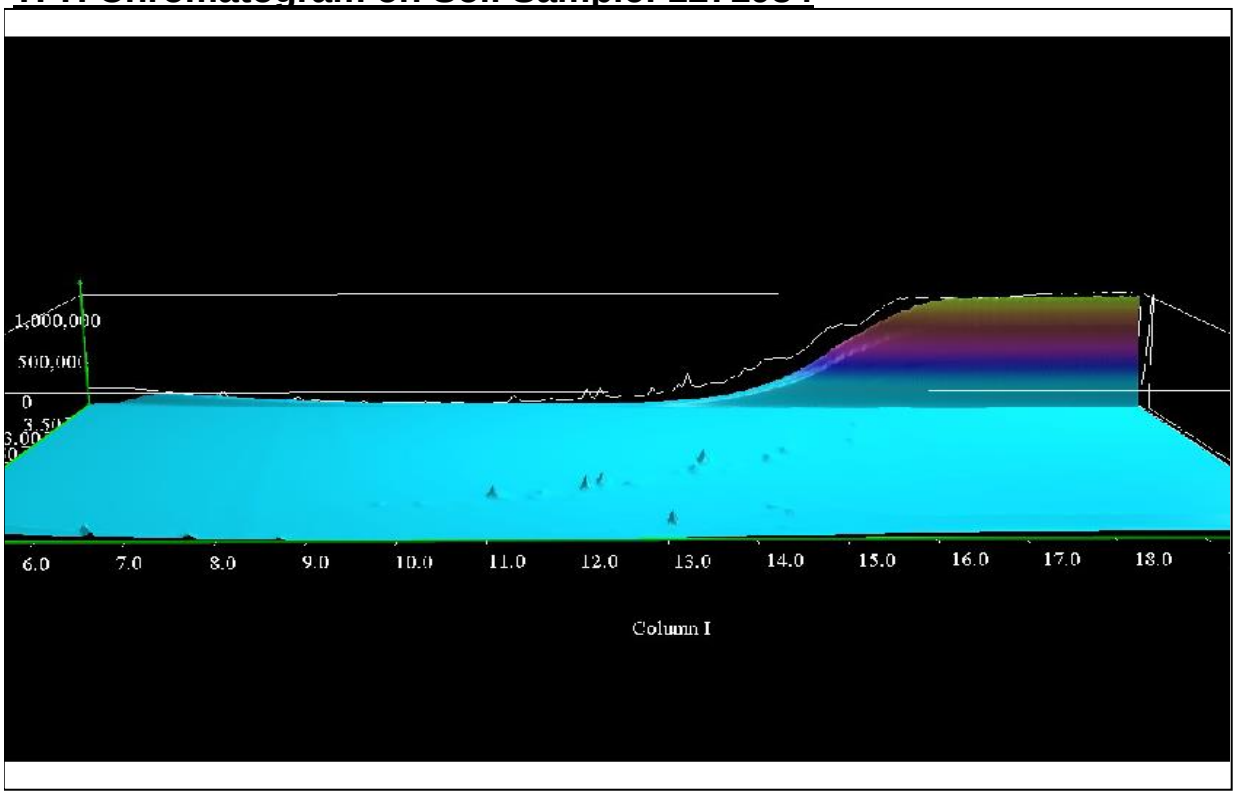
TPH Chromatogram on Soil Sample: 1271932



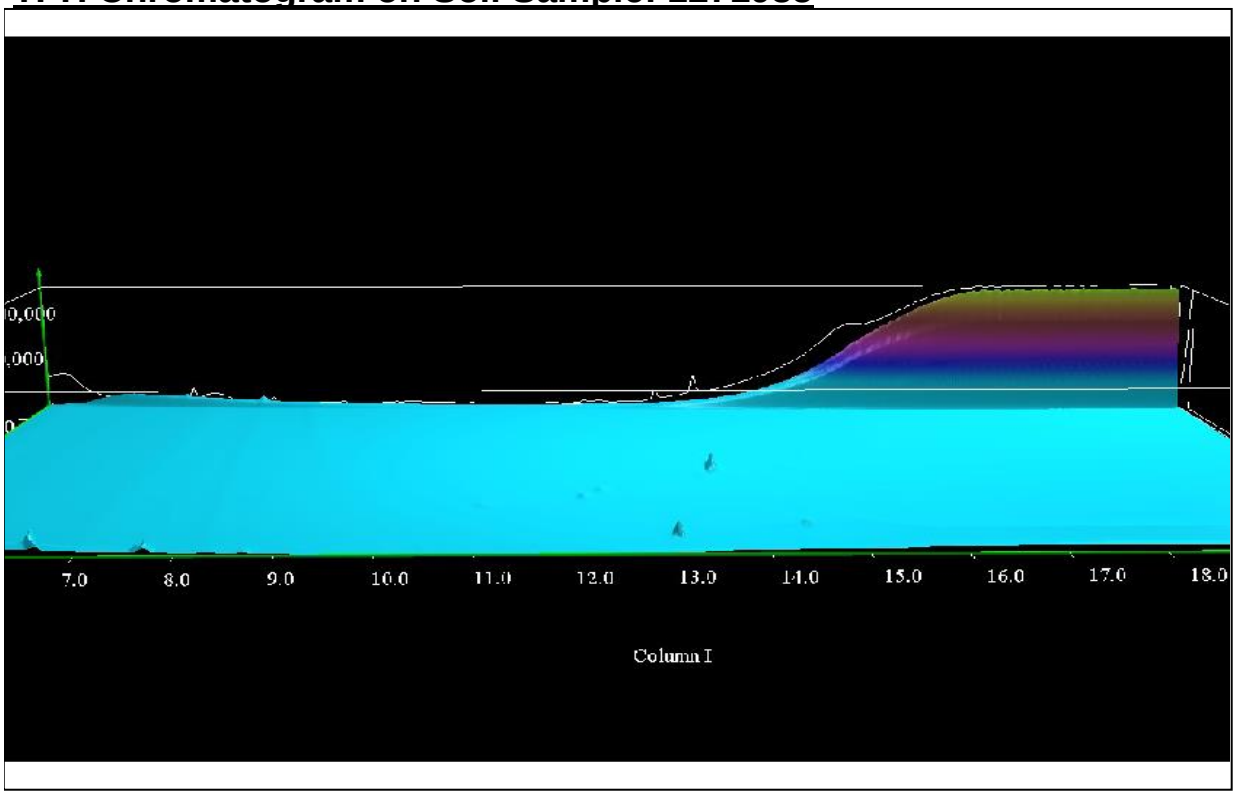
TPH Chromatogram on Soil Sample: 1271933



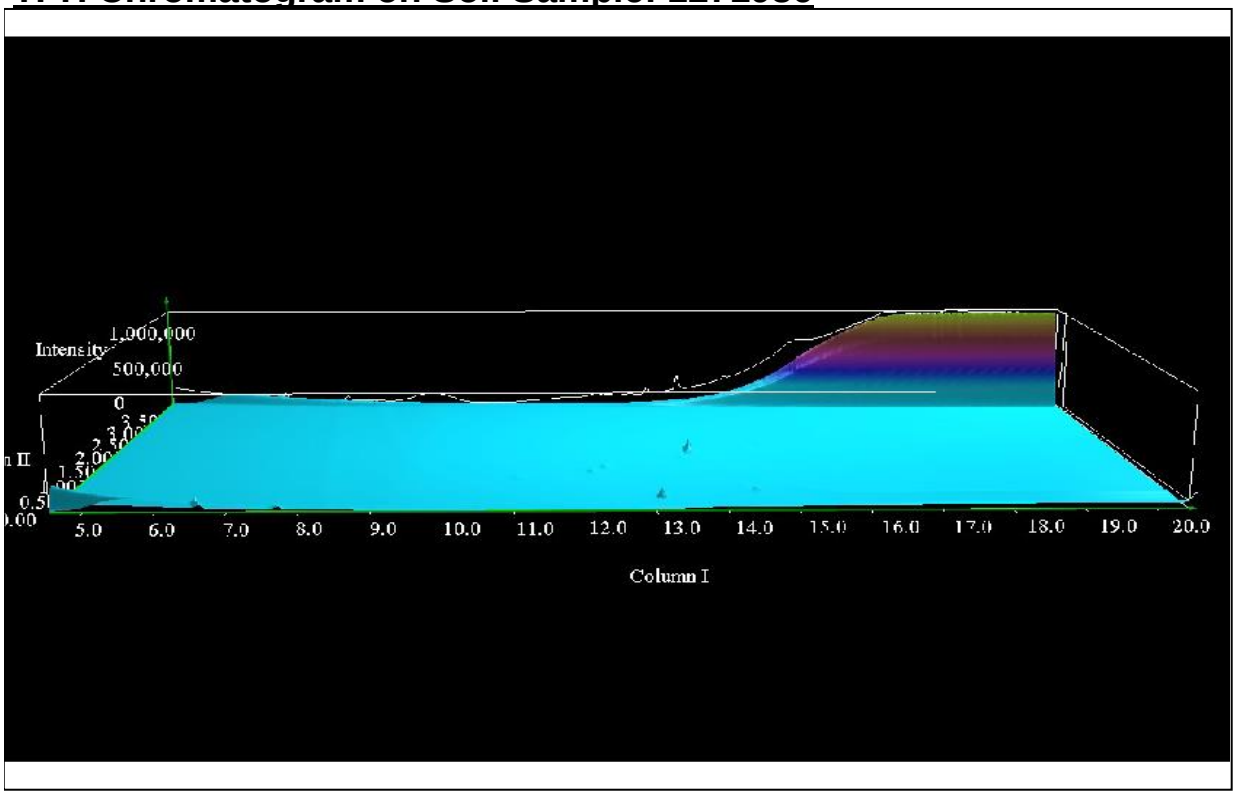
TPH Chromatogram on Soil Sample: 1271934



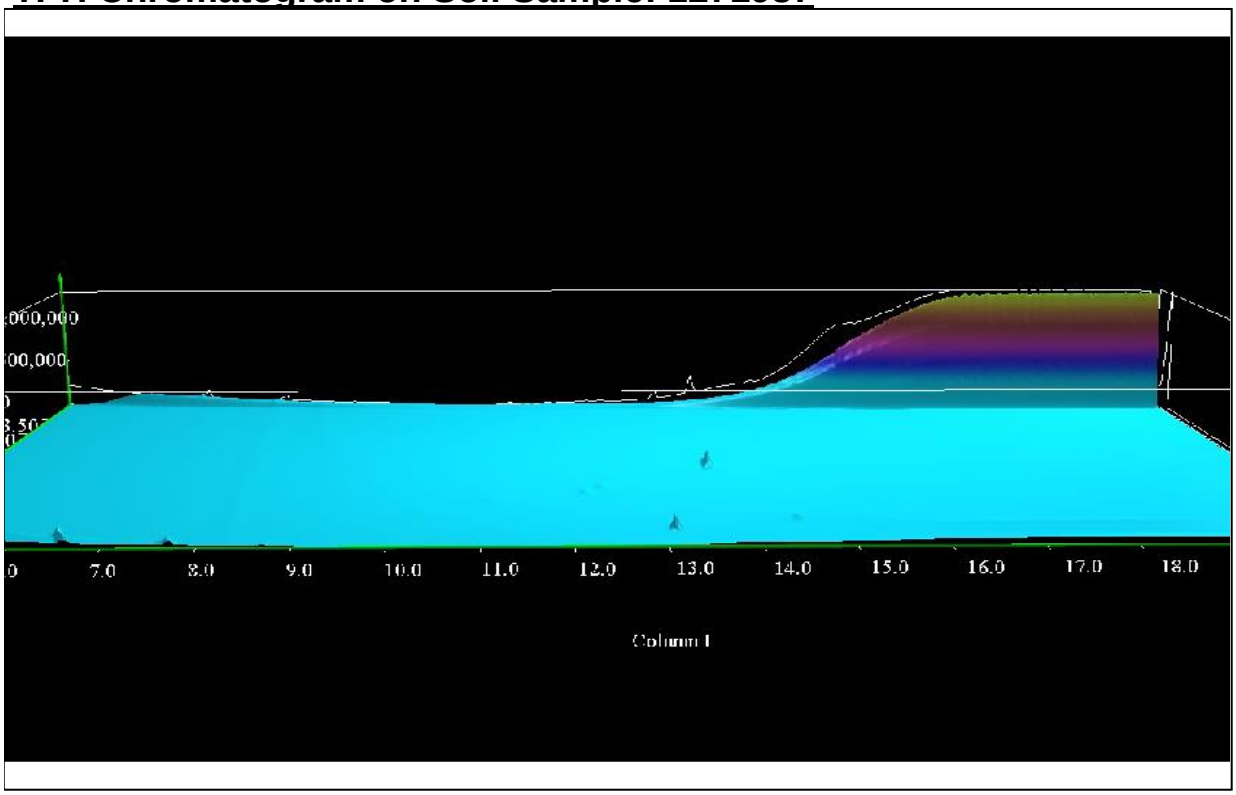
TPH Chromatogram on Soil Sample: 1271935



TPH Chromatogram on Soil Sample: 1271936



TPH Chromatogram on Soil Sample: 1271937



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-30471	1271932	S	SS101				No	N/A
21-30471	1271933	S	SS102				No	N/A
21-30471	1271934	S	SS103				No	PAH
21-30471	1271935	S	SS104				No	N/A
21-30471	1271936	S	SS105				No	N/A
21-30471	1271937	S	SS106				No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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.:	21-33192-1
Initial Date of Issue:	30-Sep-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Peter Dunn
Project	LKR 201044 Collyhurst

Quotation No.:		**Date Received:**	24-Sep-2021
Order No.:	LKR201044/PD	**Date Instructed:**	24-Sep-2021
No. of Samples:	30		
Turnaround (Wkdays):	5	**Results Due:**	30-Sep-2021
Date Approved:	30-Sep-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192
Quotation No.:		**Chemtest Sample ID.:**			1285590	1285591	1285592	1285593	1285594	1285595	1285596	1285597	1285598
		Sample Location:			2	3	4	6	7	8	9	11	14
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Moisture	N	2030	%	0.020	10	2.9	3.7	3.6	3.5	5.3	3.9	4.8	5.2
Soil Colour	N	2040		N/A	Grey	Grey	Grey	Grey	Brown	Grey	Brown	Grey	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010	0.019	0.010	< 0.010	< 0.010	< 0.010	0.024	0.024
Sulphate (Total)	M	2430	%	0.010	0.053	0.053	0.080	0.051	0.043	0.057	0.054	0.066	0.023
Total Organic Carbon	M	2625	%	0.20	4.2	1.1	1.3	1.7	1.0	1.2	1.0	1.0	1.0

Results - Soil

Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192
Quotation No.:		**Chemtest Sample ID.:**			1285599	1285600	1285601	1285602	1285603	1285604	1285605	1285606	1285607
		Sample Location:			17	22	23	24	25	26	27	29	31
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Moisture	N	2030	%	0.020	2.8	3.6	4.9	3.8	4.6	5.3	5.3	3.7	5.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.011	0.016	0.019	0.012	0.027	0.013	0.010	< 0.010	0.023
Sulphate (Total)	M	2430	%	0.010	0.029	0.035	0.030	0.050	0.043	0.051	0.047	0.044	0.043
Total Organic Carbon	M	2625	%	0.20	1.9	0.86	0.90	0.90	1.0	2.8	1.0	1.0	1.0

Results - Soil

Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192	21-33192
Quotation No.:		**Chemtest Sample ID.:**			1285608	1285609	1285610	1285611	1285612	1285613	1285614	1285615	1285616
		Sample Location:			36	38	41	42	43	44	45	47	55
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Moisture	N	2030	%	0.020	2.1	3.9	2.3	3.7	20	3.2	2.2	3.1	3.0
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Sand	Gravel	Gravel	Gravel	Gravel
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.022	0.026	0.015	0.047	0.014	0.022	< 0.010	< 0.010	0.017
Sulphate (Total)	M	2430	%	0.010	0.049	0.054	0.032	0.046	0.060	0.040	0.033	0.029	0.038
Total Organic Carbon	M	2625	%	0.20	2.2	0.90	0.60	0.80	0.90	1.2	1.0	0.80	1.8

Results - Soil

Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-33192	21-33192	21-33192
Quotation No.:		**Chemtest Sample ID.:**			1285617	1285618	1285619
		Sample Location:			57	59	60
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			22-Sep-2021	22-Sep-2021	22-Sep-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020	3.5	12	2.3
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Sand	Gravel
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.011	0.026	0.011
Sulphate (Total)	M	2430	%	0.010	0.045	0.059	0.029
Total Organic Carbon	M	2625	%	0.20	1.9	0.90	0.80

Test Methods

SOP	Title	Parameters included	Method summary
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 <37°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
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.

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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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.:	21-38842-1
Initial Date of Issue:	11-Nov-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Peter Dunn Richard Clarke
Project	LKR201044 Collyhurst

Quotation No.:		**Date Received:**	05-Nov-2021
Order No.:	LKR201044/PD	**Date Instructed:**	05-Nov-2021
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	11-Nov-2021
Date Approved:	11-Nov-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR201044 Collyhurst

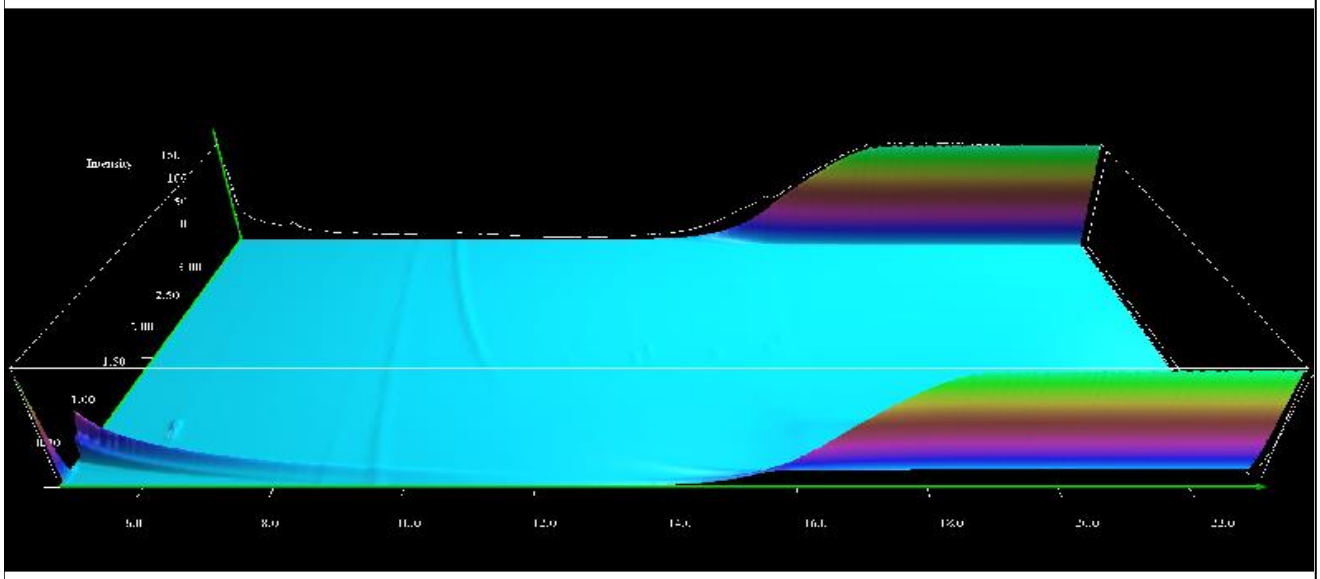
Client: LK Consult			**Chemtest Job No.:**		21-38842	21-38842	21-38842	21-38842	21-38842	21-38842	21-38842	21-38842
Quotation No.:			**Chemtest Sample ID.:**		1313849	1313850	1313851	1313852	1313853	1313854	1313855	1313856
			Sample Location:		CR07	CR08	CR09	CR10	CR11	CR12	CR13	CR14
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Date Sampled:		02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**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	12	12	13	12	13	9.7	13	11
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	10.8	9.9	9.9	10.1	10.2	9.5	11.2	10.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.47	0.57	0.48	0.52	0.47	< 0.40	0.55	0.52
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.15	0.090	0.057	0.11	0.071	0.13	0.15	0.19
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	14	12	13	11	9.3	39	14	18
Cadmium	M	2450	mg/kg	0.10	0.51	0.50	0.74	0.45	0.34	1.4	0.42	2.4
Chromium	M	2450	mg/kg	1.0	23	20	22	18	14	22	21	26
Copper	M	2450	mg/kg	0.50	43	56	43	39	31	40	34	71
Mercury	M	2450	mg/kg	0.10	0.44	0.37	0.31	0.33	0.15	< 0.10	0.23	0.65
Nickel	M	2450	mg/kg	0.50	24	23	23	23	17	57	22	28
Lead	M	2450	mg/kg	0.50	160	250	80	75	56	43	59	110
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	21	22	20	20	17	27	20	26
Zinc	M	2450	mg/kg	0.50	68	82	65	67	58	120	52	81
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	4.1	5.6	5.6	10	4.8	2.7	2.9	3.8
Diesel Present	N	2670		N/A	False	False	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

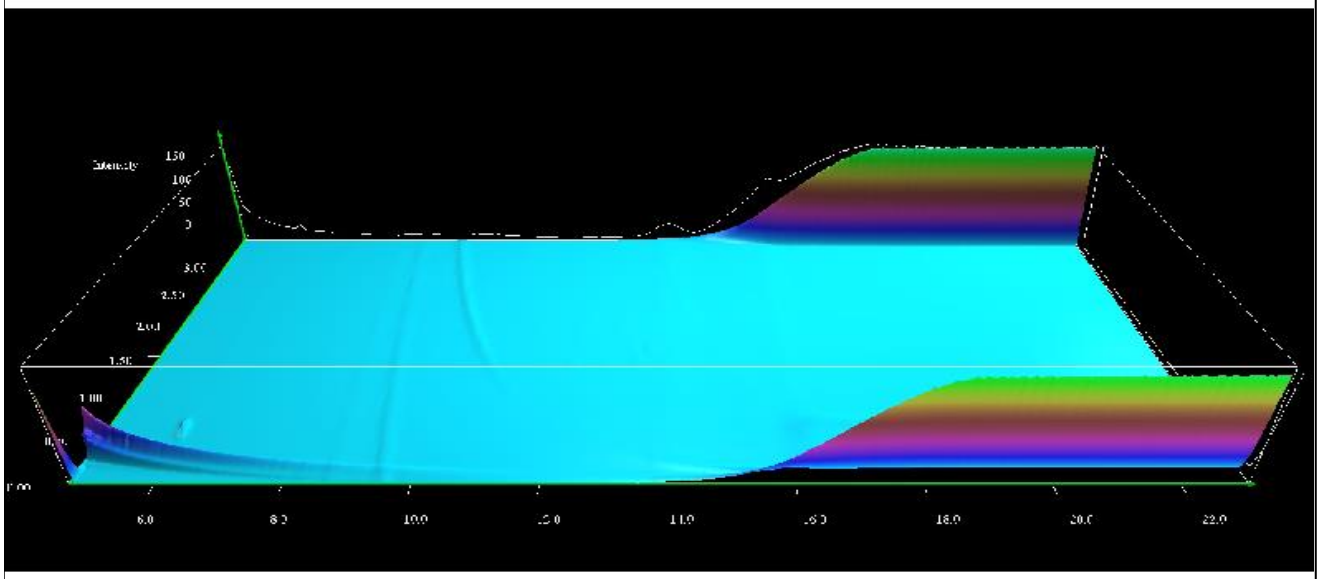
Project: LKR201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-38842	21-38842	21-38842	21-38842	21-38842	21-38842	21-38842	21-38842
Quotation No.:		**Chemtest Sample ID.:**			1313849	1313850	1313851	1313852	1313853	1313854	1313855	1313856
		Sample Location:			CR07	CR08	CR09	CR10	CR11	CR12	CR13	CR14
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021	02-Nov-2021
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.41	0.38	0.94	3.9	< 0.10	< 0.10	1.7	0.76
Acenaphthylene	N	2800	mg/kg	0.10	0.25	0.13	0.15	1.0	< 0.10	< 0.10	0.11	0.24
Acenaphthene	M	2800	mg/kg	0.10	0.54	0.39	1.3	1.4	< 0.10	< 0.10	1.3	0.85
Fluorene	M	2800	mg/kg	0.10	0.49	0.41	1.1	2.1	< 0.10	< 0.10	1.0	0.72
Phenanthrene	M	2800	mg/kg	0.10	3.9	3.2	8.7	14	4.3	< 0.10	6.0	6.9
Anthracene	M	2800	mg/kg	0.10	1.0	0.85	2.0	3.2	1.0	< 0.10	1.6	1.8
Fluoranthene	M	2800	mg/kg	0.10	6.3	4.0	9.1	11	4.8	< 0.10	6.6	10
Pyrene	M	2800	mg/kg	0.10	6.1	3.8	8.2	11	4.2	< 0.10	5.7	9.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	3.3	2.0	4.2	5.3	2.0	< 0.10	2.7	5.2
Chrysene	M	2800	mg/kg	0.10	3.4	2.1	4.0	5.3	2.1	< 0.10	2.4	4.7
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	4.7	2.6	4.8	5.4	2.3	< 0.10	3.5	6.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.9	1.1	1.7	1.9	0.78	< 0.10	1.3	2.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.9	2.0	4.0	5.0	2.1	< 0.10	2.5	5.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.7	1.3	2.6	2.7	1.2	< 0.10	1.8	4.0
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.57	0.31	0.50	0.71	0.24	< 0.10	0.42	0.73
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.7	1.5	2.5	2.7	1.2	< 0.10	1.7	3.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	42	26	56	77	26	< 2.0	40	63
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

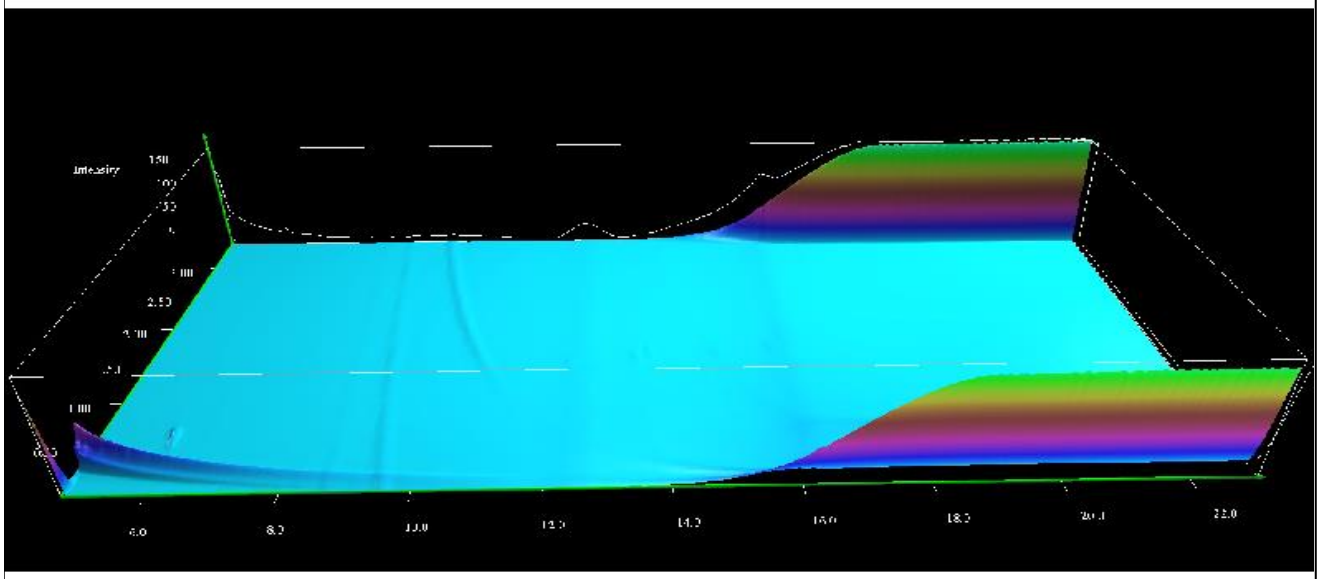
TPH Chromatogram on Soil Sample: 1313849



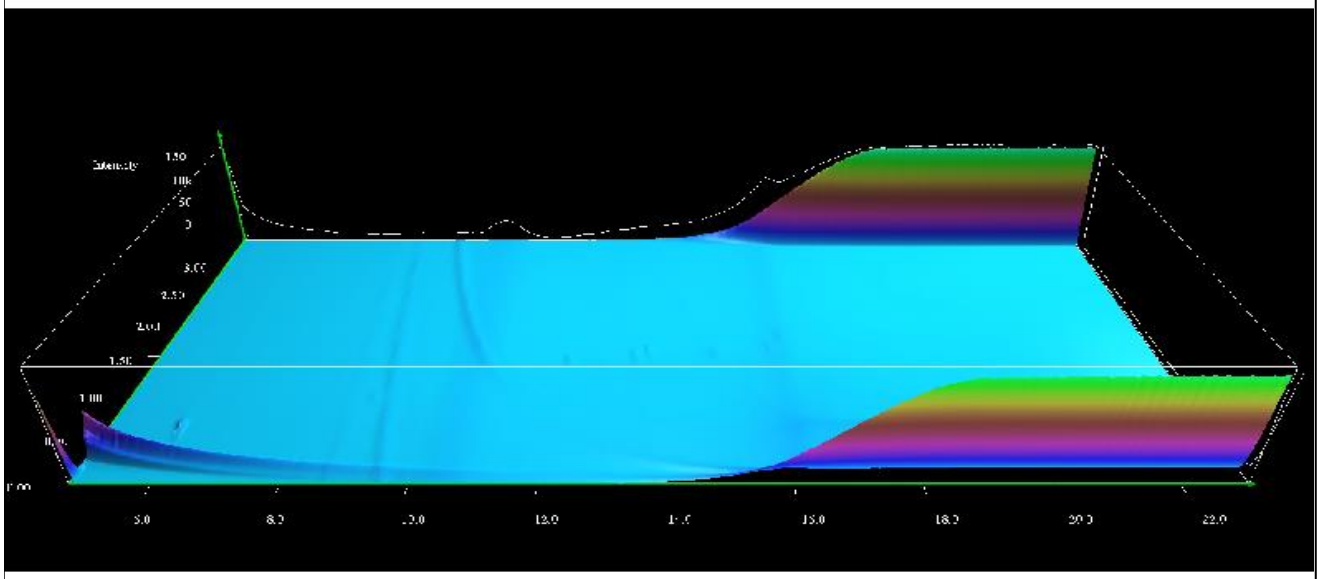
TPH Chromatogram on Soil Sample: 1313850



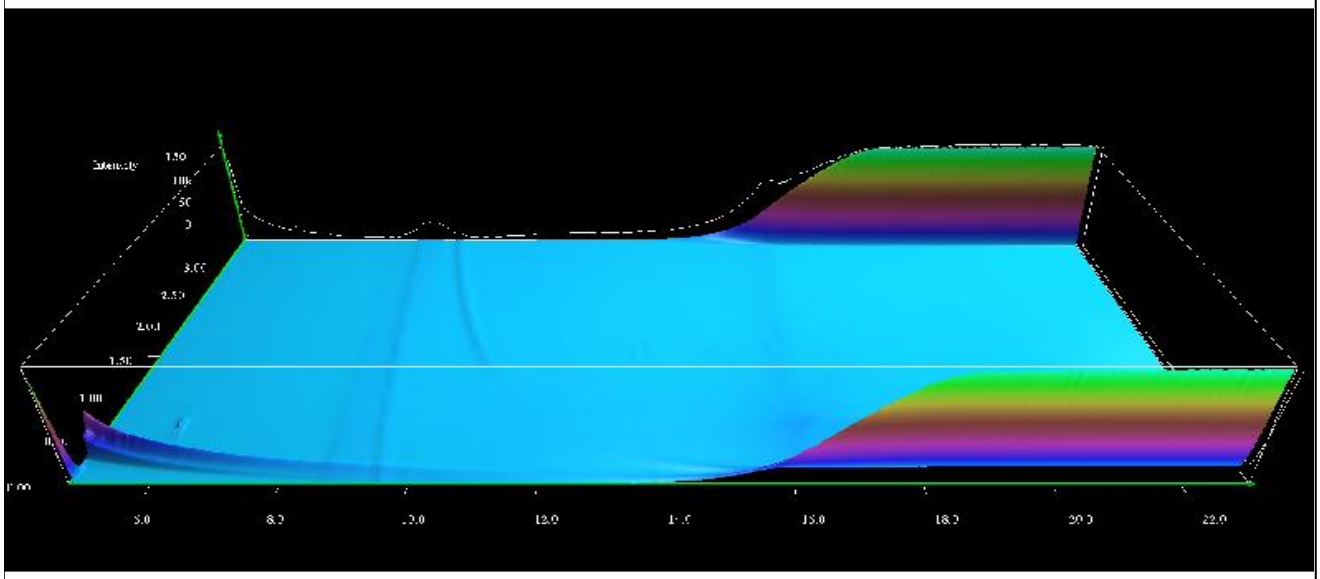
TPH Chromatogram on Soil Sample: 1313851



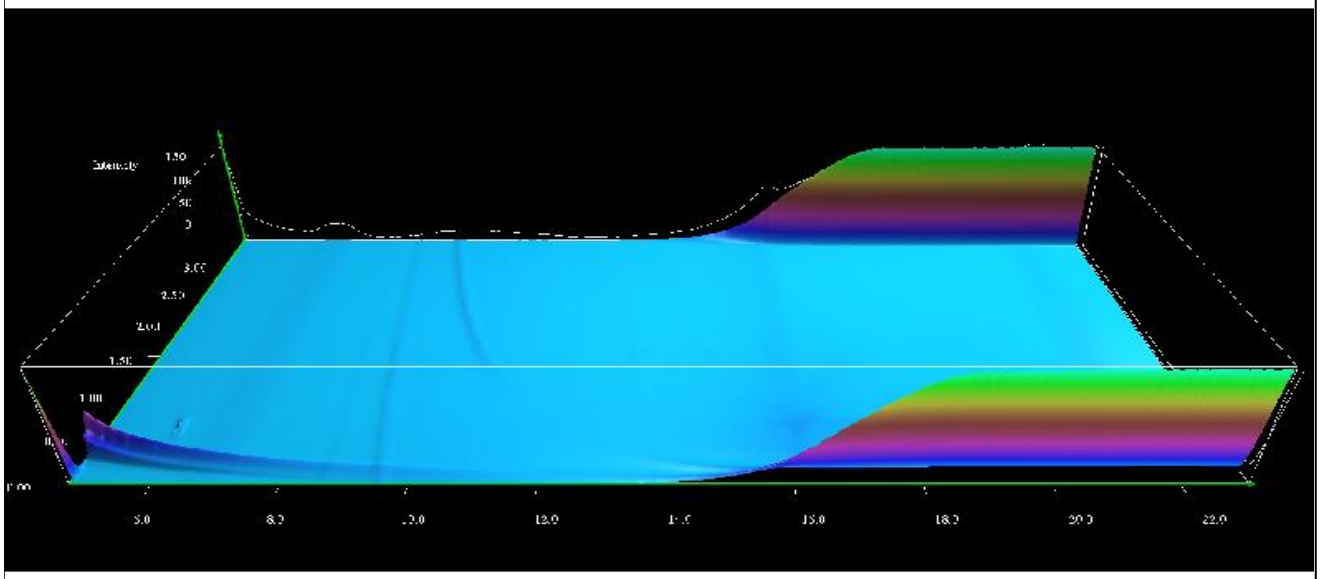
TPH Chromatogram on Soil Sample: 1313852



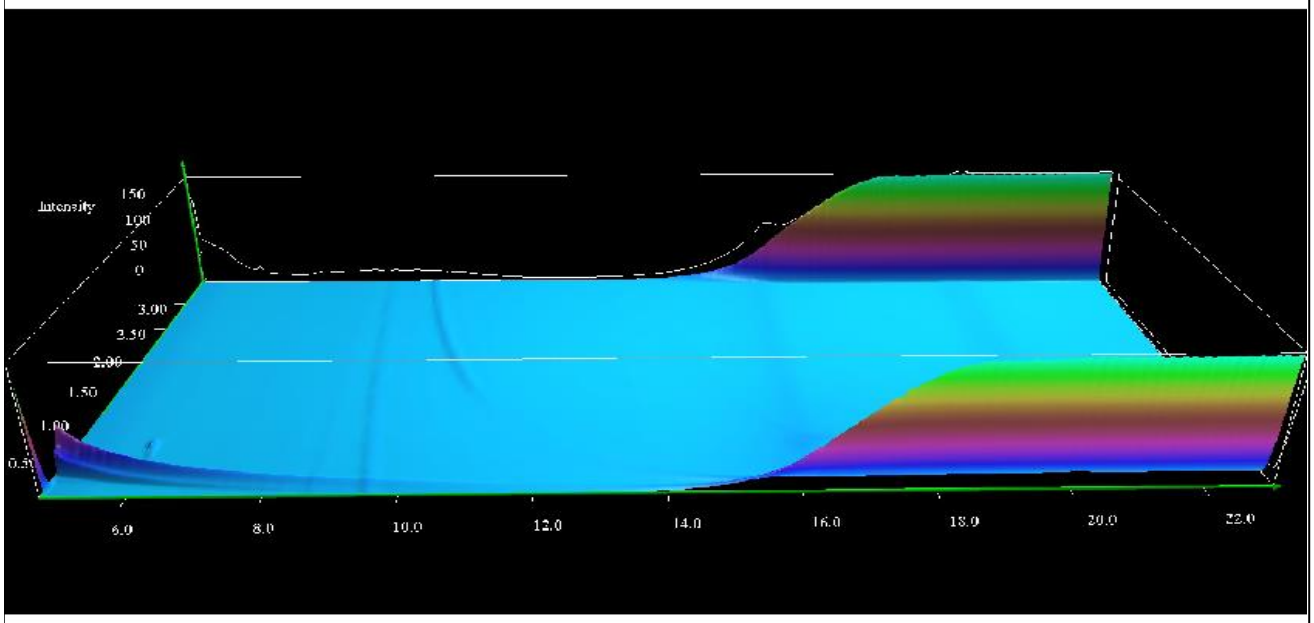
TPH Chromatogram on Soil Sample: 1313853



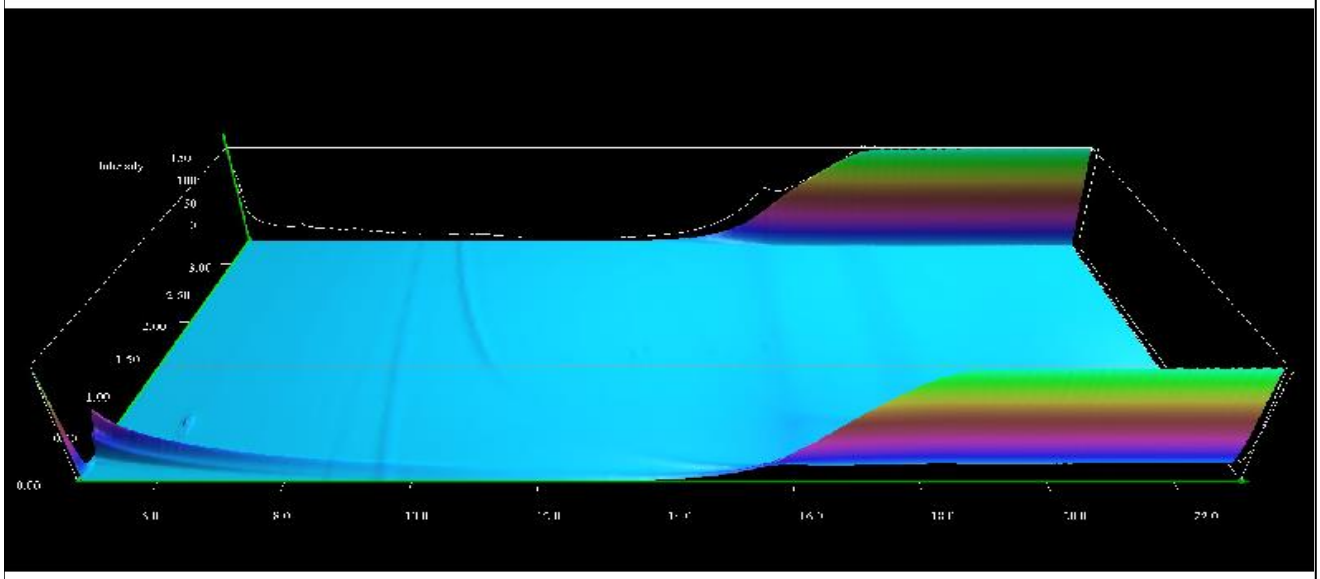
TPH Chromatogram on Soil Sample: 1313854



TPH Chromatogram on Soil Sample: 1313855



TPH Chromatogram on Soil Sample: 1313856



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-38842	1313849	S	CR07				No	N/A
21-38842	1313850	S	CR08				No	N/A
21-38842	1313851	S	CR09				No	N/A
21-38842	1313852	S	CR10				No	N/A
21-38842	1313853	S	CR11				No	N/A
21-38842	1313854	S	CR12				No	N/A
21-38842	1313855	S	CR13				No	N/A
21-38842	1313856	S	CR14				No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

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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

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customerservices@chemtest.com

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

Final Report

Report No.:	21-42230-1
Initial Date of Issue:	07-Dec-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Peter Dunn Richard Clarke
Project	LKR 20 1044 Collyhurst

Quotation No.:		**Date Received:**	01-Dec-2021
Order No.:	LKR201044/RC	**Date Instructed:**	01-Dec-2021
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	07-Dec-2021
Date Approved:	07-Dec-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-42230	21-42230	21-42230	21-42230
Quotation No.:		**Chemtest Sample ID.:**			1330696	1330697	1330698	1330699
Order No.: LKR201044/RC		Client Sample Ref.:			SS107	SS108	SS109	SS110
		Sample Location:			SP	SP	SP	SP
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Date Sampled:			30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**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
Moisture	N	2030	%	0.020	17	18	16	18
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	9.0	9.0	9.0	8.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	9.1	7.2	5.6	8.6
Cadmium	M	2450	mg/kg	0.10	0.37	0.34	0.25	0.32
Chromium	M	2450	mg/kg	1.0	32	27	18	27
Copper	M	2450	mg/kg	0.50	34	26	11	16
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	40	33	26	36
Lead	M	2450	mg/kg	0.50	35	21	21	33
Selenium	M	2450	mg/kg	0.20	0.23	< 0.20	0.38	0.64
Vanadium	U	2450	mg/kg	5.0	33	28	18	27
Zinc	M	2450	mg/kg	0.50	76	71	45	60
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.9	1.6	1.6	1.4
Diesel Present	N	2670		N/A	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst

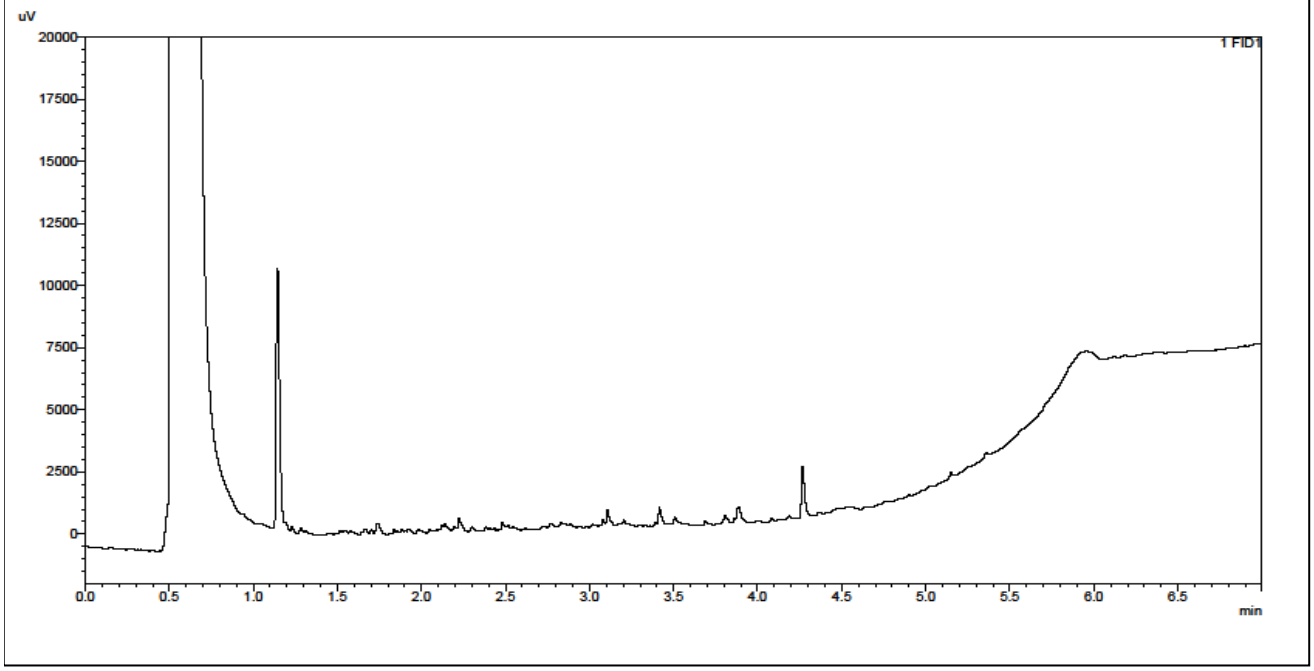
Client: LK Consult		**Chemtest Job No.:**			21-42230	21-42230	21-42230	21-42230
Quotation No.:		**Chemtest Sample ID.:**			1330696	1330697	1330698	1330699
Order No.: LKR201044/RC		Client Sample Ref.:			SS107	SS108	SS109	SS110
		Sample Location:			SP	SP	SP	SP
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Date Sampled:			30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.19	< 0.10	< 0.10	0.14
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	0.12
Fluorene	M	2800	mg/kg	0.10	0.20	< 0.10	< 0.10	0.11
Phenanthrene	M	2800	mg/kg	0.10	0.70	0.46	0.65	0.43
Anthracene	M	2800	mg/kg	0.10	0.26	0.20	0.14	0.14
Fluoranthene	M	2800	mg/kg	0.10	0.71	0.48	0.79	0.52
Pyrene	M	2800	mg/kg	0.10	0.65	0.51	0.69	0.53
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.42	< 0.10	0.31	0.24
Chrysene	M	2800	mg/kg	0.10	0.42	< 0.10	0.27	0.29
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.29	< 0.10	0.32	0.25
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.32	< 0.10	0.13	0.13
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.45	< 0.10	0.23	0.26
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.46	< 0.10	< 0.10	0.27
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.35	< 0.10	< 0.10	0.30
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	0.27
Total Of 16 PAH's	N	2800	mg/kg	2.0	6.0	< 2.0	3.5	4.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

TPH Chromatogram on Soil Sample: 1330696

<Sample Information>

Sample Name : 1330696 21-42230
Data Filename : 2021-12-01_01122021_1330696 21-42230_067.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 34
Date Acquired : 01/12/2021 22:20:53
Date Processed : 01/12/2021

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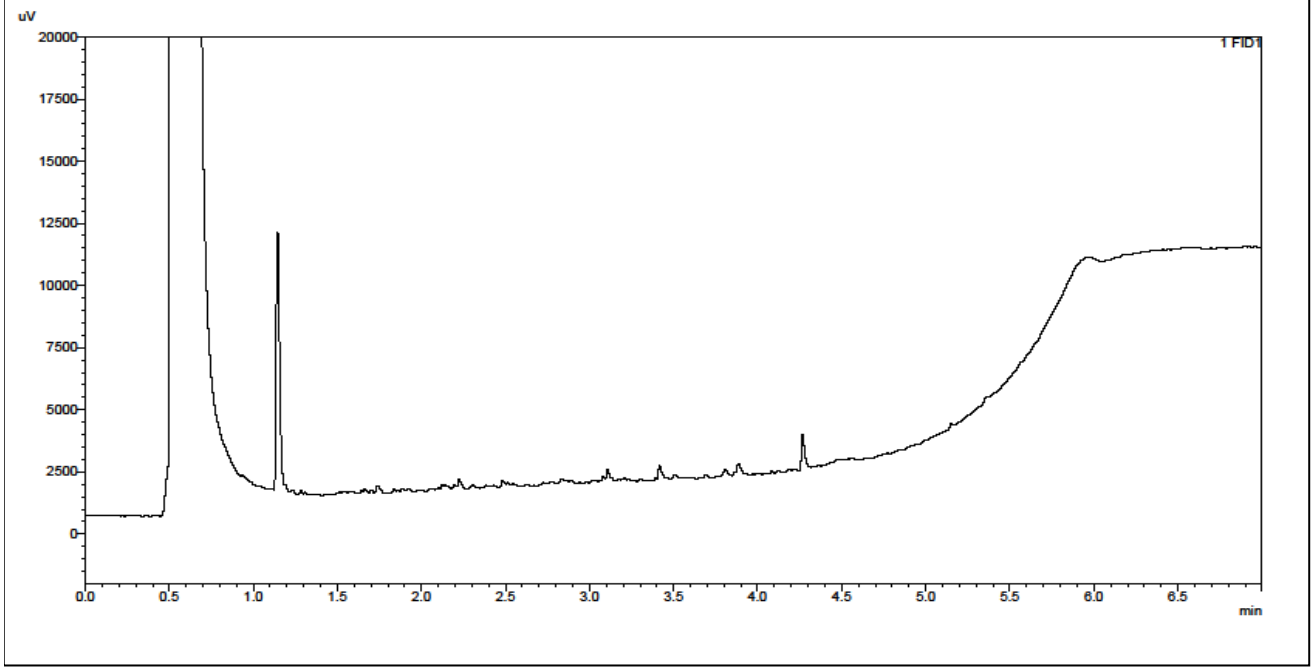


TPH Chromatogram on Soil Sample: 1330697

<Sample Information>

Sample Name : 1330697 21-42230
Data Filename : 2021-12-01_01122021_1330697 21-42230_069.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 35
Date Acquired : 01/12/2021 22:33:27
Date Processed : 01/12/2021

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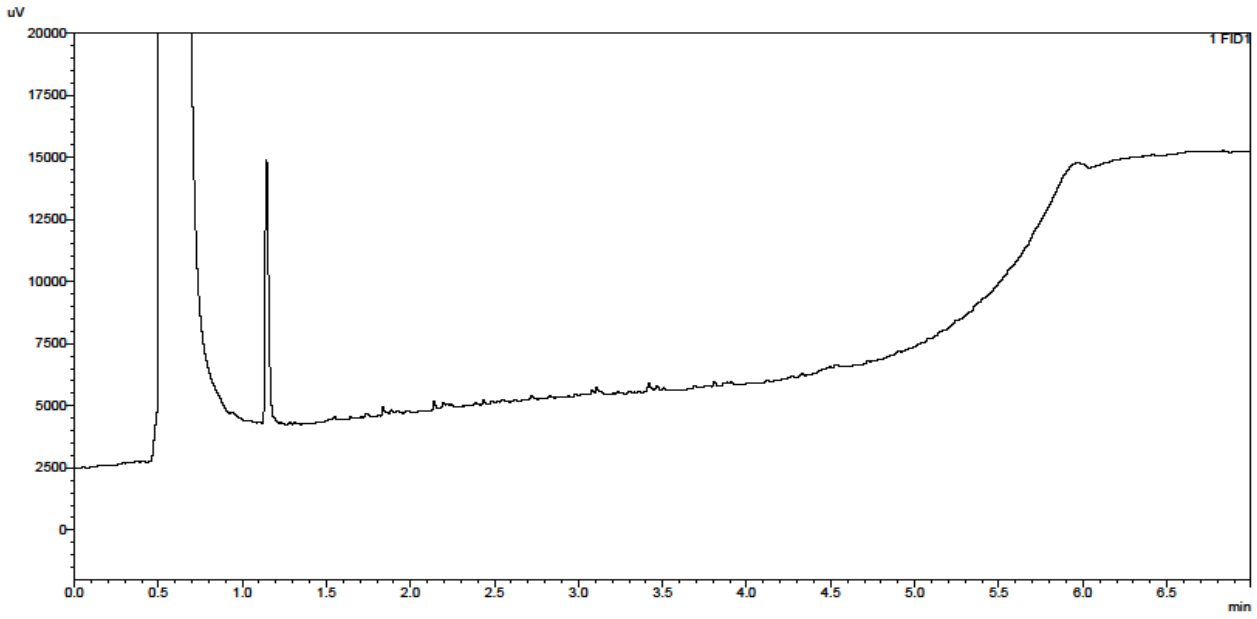


TPH Chromatogram on Soil Sample: 1330698

<Sample Information>

Sample Name : 1330698 21-42230
Data Filename : 2021-12-01_01122021_1330698 21-42230_071.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 36
Date Acquired : 01/12/2021 22:46:09
Date Processed : 01/12/2021

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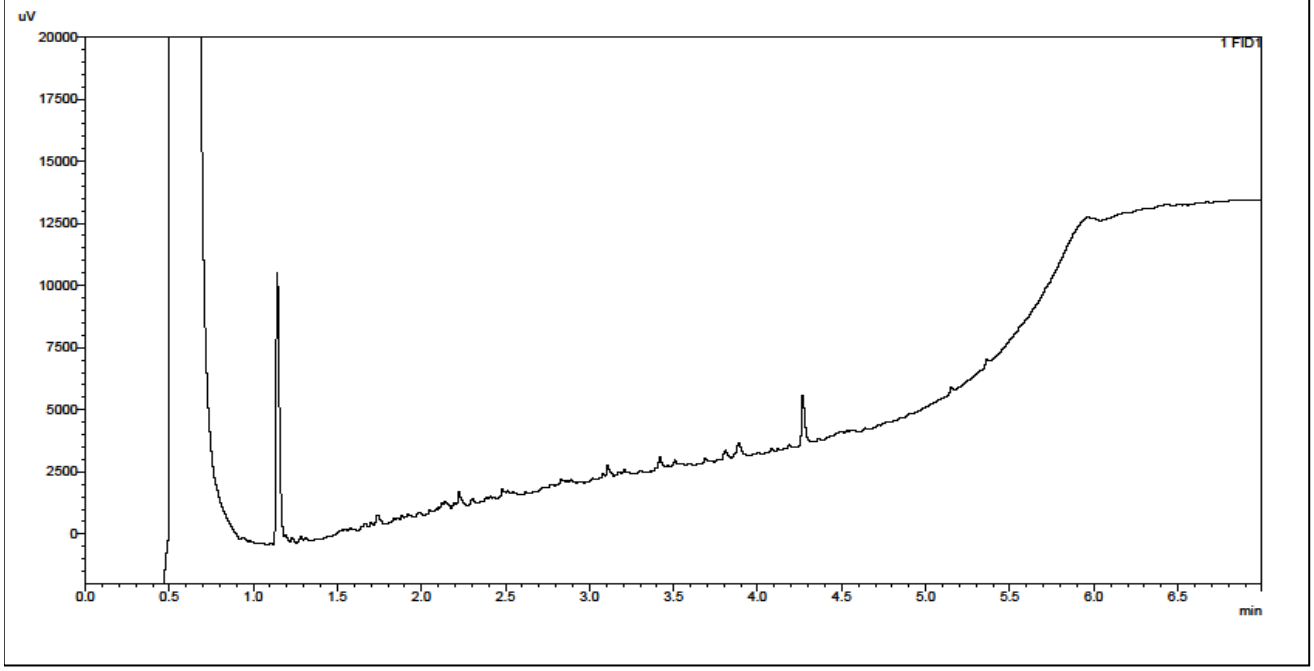


TPH Chromatogram on Soil Sample: 1330699

<Sample Information>

Sample Name : 1330699 21-42230
Data Filename : 2021-12-01_01122021_1330699 21-42230_073.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 37
Date Acquired : 01/12/2021 22:58:59
Date Processed : 01/12/2021

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-42230	1330696	S	SP	SS107			No	N/A
21-42230	1330697	S	SP	SS108			No	N/A
21-42230	1330698	S	SP	SS109			No	N/A
21-42230	1330699	S	SP	SS110			No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

Amended Report

Report No.:	22-02908-3		
Initial Date of Issue:	02-Feb-2022	**Date of Re-Issue:**	04-Feb-2022
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Richard Clarke		
Project	Collyhurst, LKR 201044		
Quotation No.:		**Date Received:**	27-Jan-2022
Order No.:	738858	**Date Instructed:**	27-Jan-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Feb-2022
Date Approved:	02-Feb-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: Collyhurst, LKR 201044

Client: LK Consult			**Chemtest Job No.:**		22-02908
Quotation No.:			**Chemtest Sample ID.:**		1360114
Order No.: 738858			Client Sample Ref.:		CR202
			Sample Type:		SOIL
			Date Sampled:		26-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**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	0.001
Total Asbestos	U	2192	%	0.001	0.001
Moisture	N	2030	%	0.020	14
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Gravel
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	11.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.87
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.70
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	7.9
Cadmium	M	2450	mg/kg	0.10	0.73
Chromium	M	2450	mg/kg	1.0	13
Copper	M	2450	mg/kg	0.50	91
Mercury	M	2450	mg/kg	0.10	0.18
Nickel	M	2450	mg/kg	0.50	12
Lead	M	2450	mg/kg	0.50	71
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	16
Zinc	M	2450	mg/kg	0.50	60
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.6
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 98
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 98
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: Collyhurst, LKR 201044

Client: LK Consult			**Chemtest Job No.:**		22-02908
Quotation No.:			**Chemtest Sample ID.:**		1360114
Order No.: 738858			Client Sample Ref.:		CR202
			Sample Type:		SOIL
			Date Sampled:		26-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 26
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 300
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 330
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 430
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	2.6
Acenaphthylene	N	2800	mg/kg	0.10	0.15
Acenaphthene	M	2800	mg/kg	0.10	1.2
Fluorene	M	2800	mg/kg	0.10	0.79
Phenanthrene	M	2800	mg/kg	0.10	5.9
Anthracene	M	2800	mg/kg	0.10	1.7
Fluoranthene	M	2800	mg/kg	0.10	11
Pyrene	M	2800	mg/kg	0.10	8.7
Benzo[a]anthracene	M	2800	mg/kg	0.10	4.1
Chrysene	M	2800	mg/kg	0.10	4.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	6.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	4.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	3.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.76
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	3.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	60
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1360114

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TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-02908	1360114	S		CR202			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1360114	CR202			26-Jan-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

Amended Report

Report No.:	22-02909-3		
Initial Date of Issue:	02-Feb-2022	**Date of Re-Issue:**	04-Feb-2022
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Richard Clarke		
Project	Collyhurst, LKR 201044		
Quotation No.:		**Date Received:**	27-Jan-2022
Order No.:	738858	**Date Instructed:**	27-Jan-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Feb-2022
Date Approved:	02-Feb-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: Collyhurst, LKR 201044

Client: LK Consult			**Chemtest Job No.:**		22-02909
Quotation No.:			**Chemtest Sample ID.:**		1360121
Order No.: 738858			Client Sample Ref.:		CR201
			Sample Type:		SOIL
			Date Sampled:		26-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	11
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Gravel
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	12.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.3
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.30
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	11
Cadmium	M	2450	mg/kg	0.10	0.40
Chromium	M	2450	mg/kg	1.0	19
Copper	M	2450	mg/kg	0.50	27
Mercury	M	2450	mg/kg	0.10	0.19
Nickel	M	2450	mg/kg	0.50	17
Lead	M	2450	mg/kg	0.50	71
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	27
Zinc	M	2450	mg/kg	0.50	60
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.3
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 89
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 89
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: Collyhurst, LKR 201044

Client: LK Consult			**Chemtest Job No.:**		22-02909
Quotation No.:			**Chemtest Sample ID.:**		1360121
Order No.: 738858			Client Sample Ref.:		CR201
			Sample Type:		SOIL
			Date Sampled:		26-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 37
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 500
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 530
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 620
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	1.8
Acenaphthylene	N	2800	mg/kg	0.10	0.12
Acenaphthene	M	2800	mg/kg	0.10	1.3
Fluorene	M	2800	mg/kg	0.10	0.86
Phenanthrene	M	2800	mg/kg	0.10	6.5
Anthracene	M	2800	mg/kg	0.10	1.8
Fluoranthene	M	2800	mg/kg	0.10	8.9
Pyrene	M	2800	mg/kg	0.10	6.7
Benzo[a]anthracene	M	2800	mg/kg	0.10	3.1
Chrysene	M	2800	mg/kg	0.10	3.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	4.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.2
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.49
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	48
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1360121

\\NM-FILESERVER\Job Paperwork\SampData\SOIL\1360121.PDF

TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-02909	1360121	S		CR201			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1360121	CR201			26-Jan-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

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U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

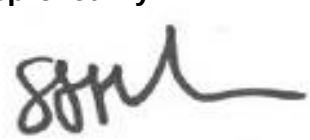
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-03430-1
Initial Date of Issue:	04-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	01-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	01-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	07-Feb-2022
Date Approved:	04-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-03430
Quotation No.:			**Chemtest Sample ID.:**		1362574
Order No.: LKR 201044/RC			Client Sample Ref.:		CR04
			Sample Type:		SOIL
			Date Sampled:		31-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	9.8
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones and Roots
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.72
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	0.60
Arsenic	M	2450	mg/kg	1.0	17
Cadmium	M	2450	mg/kg	0.10	0.26
Chromium	M	2450	mg/kg	1.0	16
Copper	M	2450	mg/kg	0.50	41
Mercury	M	2450	mg/kg	0.10	0.56
Nickel	M	2450	mg/kg	0.50	13
Lead	M	2450	mg/kg	0.50	120
Selenium	M	2450	mg/kg	0.20	1.0
Vanadium	U	2450	mg/kg	5.0	24
Zinc	M	2450	mg/kg	0.50	72
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.5
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

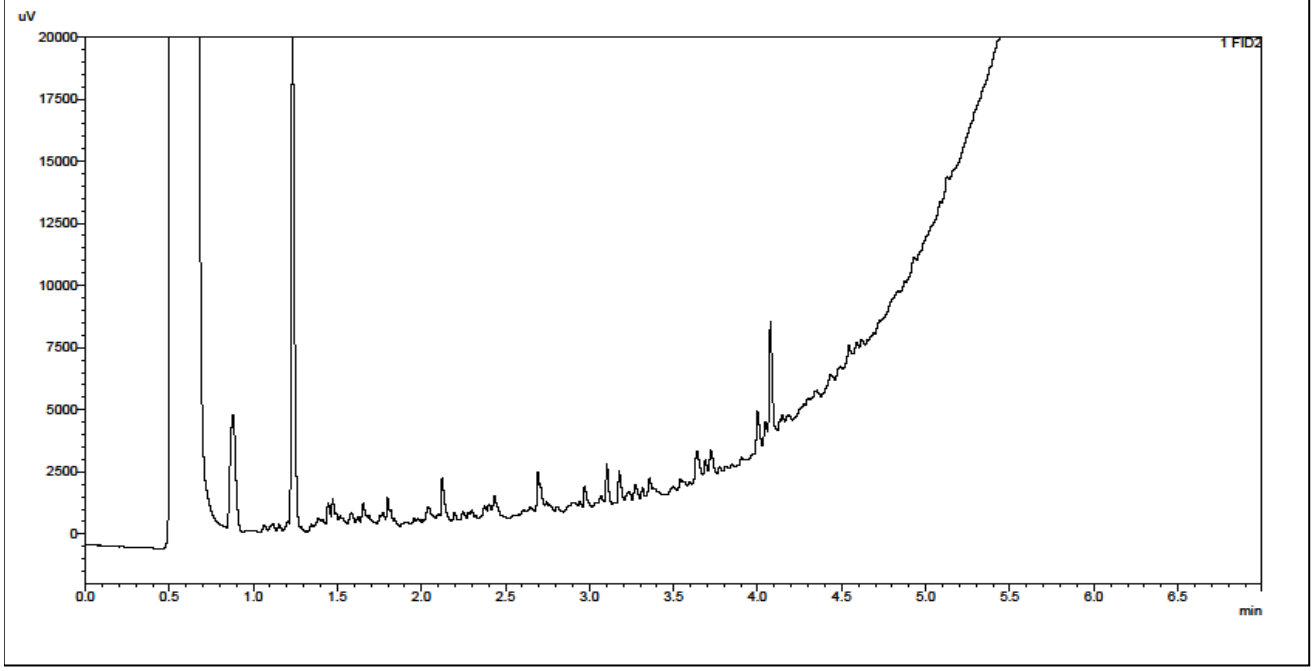
Client: LK Consult			**Chemtest Job No.:**		22-03430
Quotation No.:			**Chemtest Sample ID.:**		1362574
Order No.: LKR 201044/RC			Client Sample Ref.:		CR04
			Sample Type:		SOIL
			Date Sampled:		31-Jan-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] < 10
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	0.72
Acenaphthylene	N	2800	mg/kg	0.10	0.23
Acenaphthene	M	2800	mg/kg	0.10	2.1
Fluorene	M	2800	mg/kg	0.10	2.3
Phenanthrene	M	2800	mg/kg	0.10	17
Anthracene	M	2800	mg/kg	0.10	6.2
Fluoranthene	M	2800	mg/kg	0.10	26
Pyrene	M	2800	mg/kg	0.10	23
Benzo[a]anthracene	M	2800	mg/kg	0.10	11
Chrysene	M	2800	mg/kg	0.10	10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	12
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	4.8
Benzo[a]pyrene	M	2800	mg/kg	0.10	10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	7.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.2
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	5.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	140
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1362574

<Sample Information>

Sample Name : Back 1362574 22-03430
Data Filename : 2022-02-02_02022022_Back 1362574 22-03430_054.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 102
Date Acquired : 02/02/2022 20:26:28
Date Processed : 02/02/2022

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-03430	1362574	S		CR04			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1362574	CR04			31-Jan-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

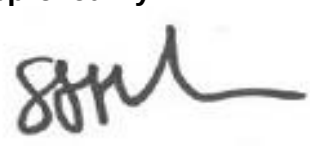
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-03438-1
Initial Date of Issue:	08-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	01-Feb-2022
Order No.:	LKR201044/RC	**Date Instructed:**	01-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	07-Feb-2022
Date Approved:	08-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-03438
Quotation No.:			**Chemtest Sample ID.:**		1362613
Order No.: LKR201044/RC			Client Sample Ref.:		CR203
			Sample Type:		SOIL
			Date Sampled:		31-Jan-2022
			Asbestos Lab:		IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	8.2
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	> 12.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	46
Cadmium	M	2450	mg/kg	0.10	0.60
Chromium	M	2450	mg/kg	1.0	23
Copper	M	2450	mg/kg	0.50	280
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	15
Lead	M	2450	mg/kg	0.50	560
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	26
Zinc	M	2450	mg/kg	0.50	310
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.6
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] 47
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 90
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 140
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

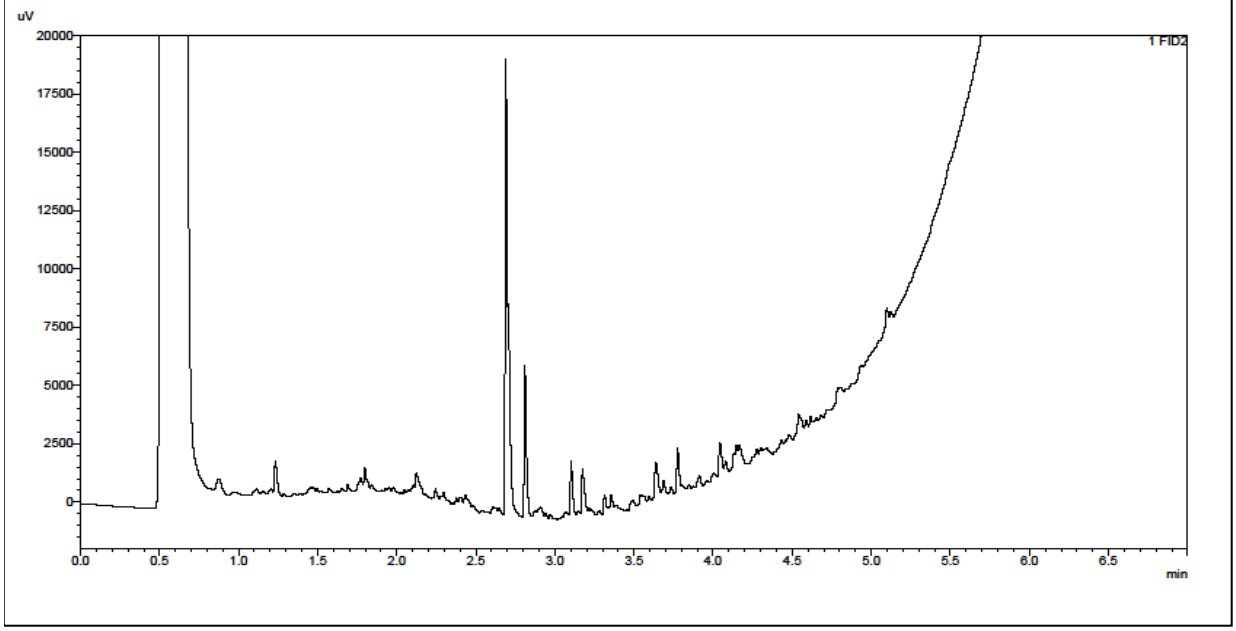
Client: LK Consult			**Chemtest Job No.:**		22-03438
Quotation No.:			**Chemtest Sample ID.:**		1362613
Order No.: LKR201044/RC			Client Sample Ref.:		CR203
			Sample Type:		SOIL
			Date Sampled:		31-Jan-2022
			Asbestos Lab:		IN-TRAN-D
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 140
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.0
Anthracene	M	2800	mg/kg	0.10	0.40
Fluoranthene	M	2800	mg/kg	0.10	2.1
Pyrene	M	2800	mg/kg	0.10	1.7
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.99
Chrysene	M	2800	mg/kg	0.10	1.0
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.69
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.0
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.51
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.75
Total Of 16 PAH's	N	2800	mg/kg	2.0	13
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1362613

<Sample Information>

Sample Name : Back 1362613 22-03438
Data Filename : 2022-02-02_02022022_Back 1362613 22-03438_060.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 105
Date Acquired : 02/02/2022 21:04:12
Date Processed : 02/02/2022

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-03438	1362613	S		CR203			No	PAH

Deviations

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Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1362613	CR203			31-Jan-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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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U/S	Unsuitable Sample
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<	"less than"
>	"greater than"
SOP	Standard operating procedure
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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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
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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)
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customerservices@chemtest.com

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

Final Report

Report No.:	22-06125-1
Initial Date of Issue:	24-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst Manchester

Quotation No.:		**Date Received:**	18-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	18-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	24-Feb-2022
Date Approved:	24-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst Manchester

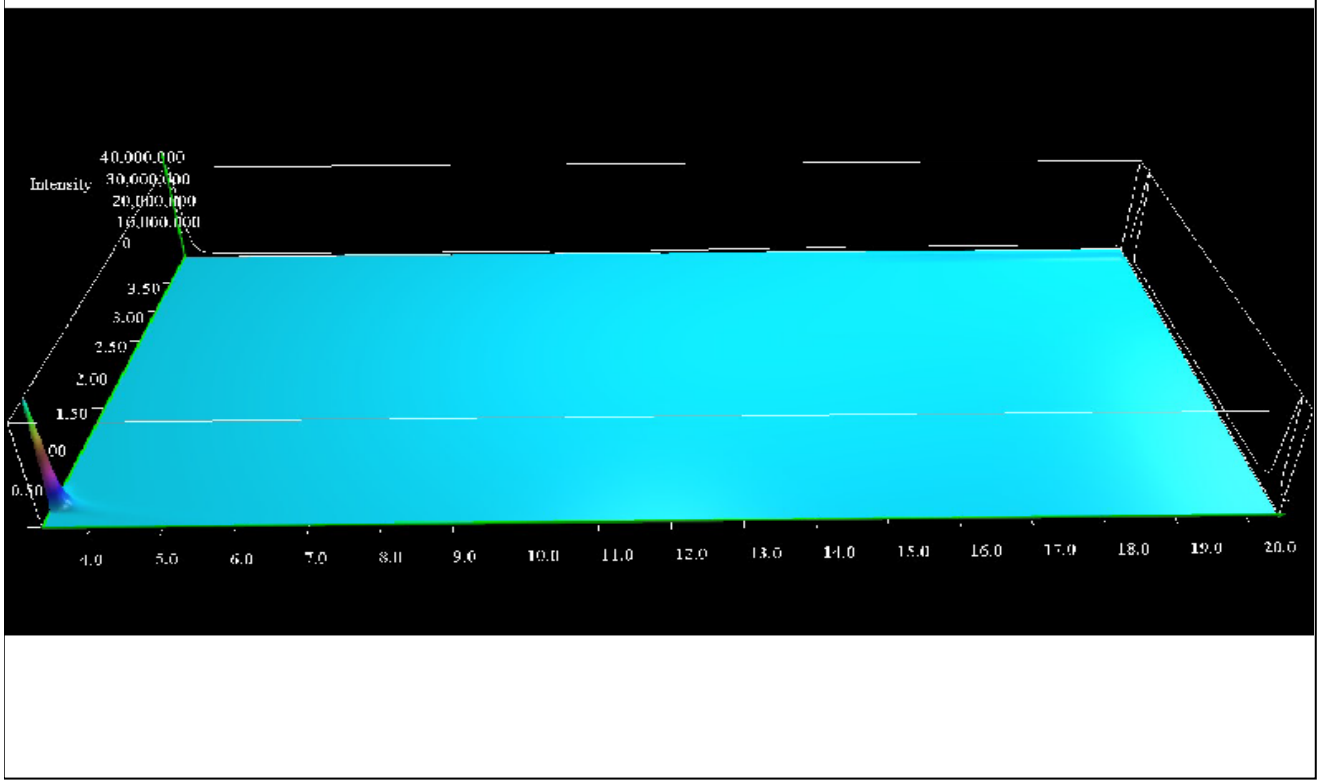
Client: LK Consult			**Chemtest Job No.:**		22-06125
Quotation No.:			**Chemtest Sample ID.:**		1375033
Order No.: LKR 201044/RC			Client Sample Ref.:		CR17
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	15
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	9.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.65
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	13
Cadmium	M	2450	mg/kg	0.10	0.42
Chromium	M	2450	mg/kg	1.0	18
Copper	M	2450	mg/kg	0.50	43
Mercury	M	2450	mg/kg	0.10	0.29
Nickel	M	2450	mg/kg	0.50	15
Lead	M	2450	mg/kg	0.50	160
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	20
Zinc	M	2450	mg/kg	0.50	140
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.6
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 14
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 78
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 92
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06125
Quotation No.:			**Chemtest Sample ID.:**		1375033
Order No.: LKR 201044/RC			Client Sample Ref.:		CR17
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 150
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 150
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 240
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	0.42
Acenaphthylene	N	2800	mg/kg	0.10	0.14
Acenaphthene	M	2800	mg/kg	0.10	0.43
Fluorene	M	2800	mg/kg	0.10	0.35
Phenanthrene	M	2800	mg/kg	0.10	2.6
Anthracene	M	2800	mg/kg	0.10	0.64
Fluoranthene	M	2800	mg/kg	0.10	3.6
Pyrene	M	2800	mg/kg	0.10	3.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.4
Chrysene	M	2800	mg/kg	0.10	0.86
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.47
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.29
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	20
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1375033



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06125	1375033	S		CR17			No	Heavy Oil

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1375033	CR17			16-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

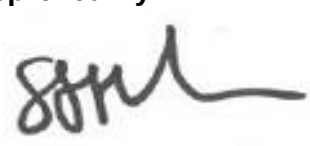
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06127-1
Initial Date of Issue:	24-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	18-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	18-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	24-Feb-2022
Date Approved:	24-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

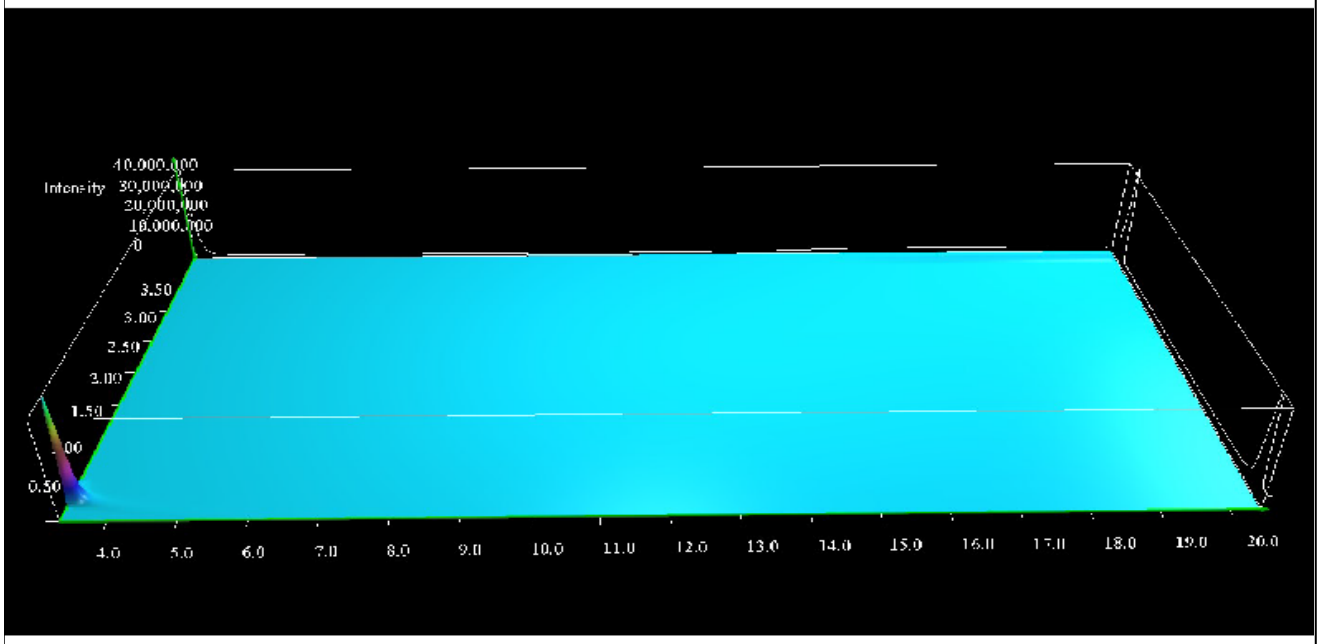
Client: LK Consult			**Chemtest Job No.:**		22-06127
Quotation No.:			**Chemtest Sample ID.:**		1375035
Order No.: LKR 201044/RC			Client Sample Ref.:		CR16
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	16
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.8
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.83
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.6
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	10
Cadmium	M	2450	mg/kg	0.10	0.50
Chromium	M	2450	mg/kg	1.0	20
Copper	M	2450	mg/kg	0.50	41
Mercury	M	2450	mg/kg	0.10	0.25
Nickel	M	2450	mg/kg	0.50	17
Lead	M	2450	mg/kg	0.50	99
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	20
Zinc	M	2450	mg/kg	0.50	120
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.3
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 16
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 16
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06127
Quotation No.:			**Chemtest Sample ID.:**		1375035
Order No.: LKR 201044/RC			Client Sample Ref.:		CR16
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 23
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 280
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 300
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 320
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	3.4
Anthracene	M	2800	mg/kg	0.10	1.2
Fluoranthene	M	2800	mg/kg	0.10	3.8
Pyrene	M	2800	mg/kg	0.10	3.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.7
Chrysene	M	2800	mg/kg	0.10	1.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	15
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1375035



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06127	1375035	S		CR16			No	Heavy Oil

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1375035	CR16			16-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

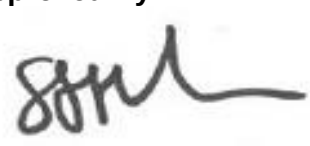
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06128-1
Initial Date of Issue:	24-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	18-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	18-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	24-Feb-2022
Date Approved:	24-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

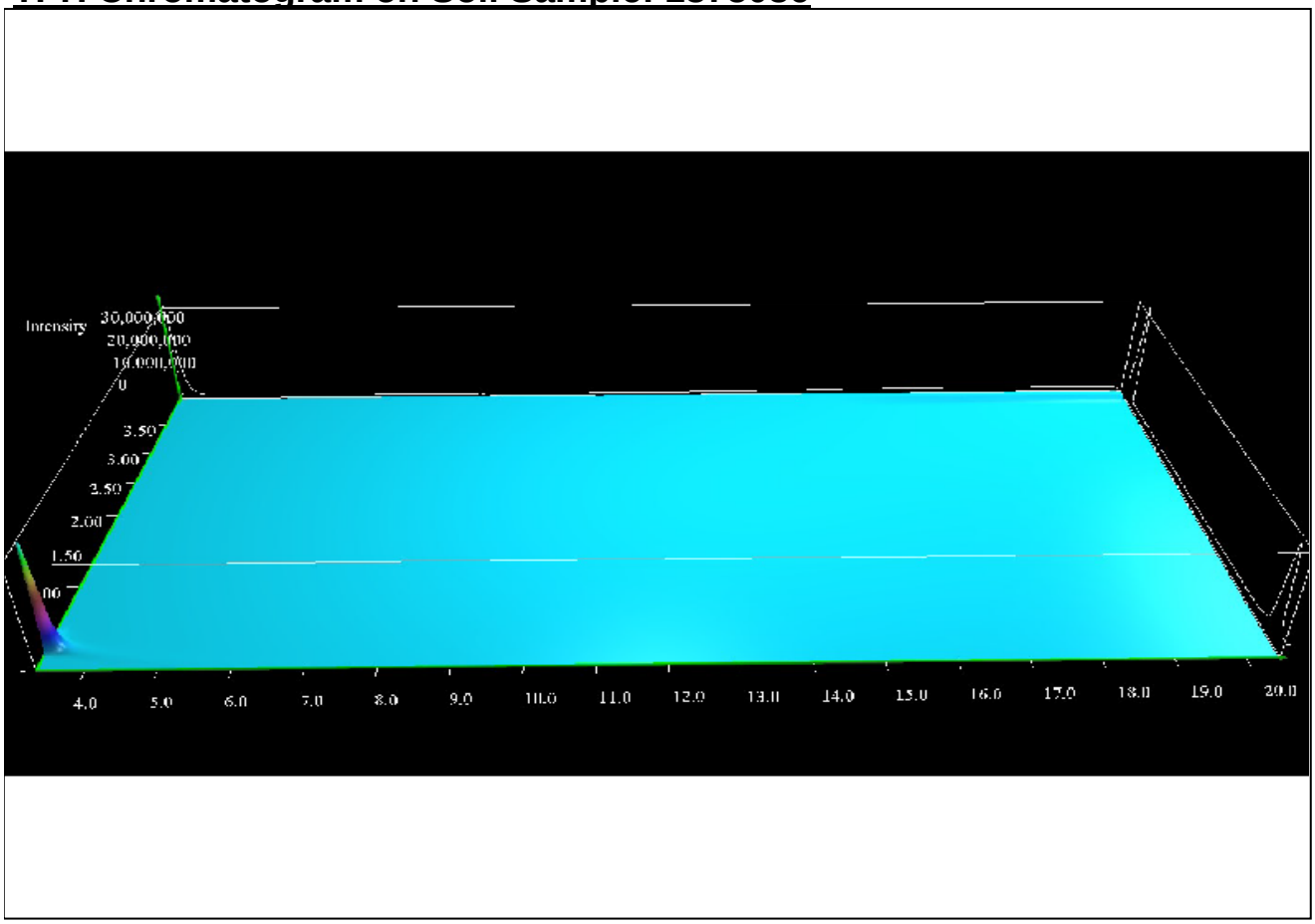
Client: LK Consult			**Chemtest Job No.:**		22-06128
Quotation No.:			**Chemtest Sample ID.:**		1375036
Order No.: LKR 201044/RC			Client Sample Ref.:		CR15
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	16
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	9.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.87
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	15
Cadmium	M	2450	mg/kg	0.10	0.45
Chromium	M	2450	mg/kg	1.0	17
Copper	M	2450	mg/kg	0.50	37
Mercury	M	2450	mg/kg	0.10	0.31
Nickel	M	2450	mg/kg	0.50	18
Lead	M	2450	mg/kg	0.50	140
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	21
Zinc	M	2450	mg/kg	0.50	140
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.8
Diesel Present	N	2670		N/A	True
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 37
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 21
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 58
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06128
Quotation No.:			**Chemtest Sample ID.:**		1375036
Order No.: LKR 201044/RC			Client Sample Ref.:		CR15
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 58
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.5
Anthracene	M	2800	mg/kg	0.10	0.41
Fluoranthene	M	2800	mg/kg	0.10	2.2
Pyrene	M	2800	mg/kg	0.10	2.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0
Chrysene	M	2800	mg/kg	0.10	0.83
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.2
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.40
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.94
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.27
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.83
Total Of 16 PAH's	N	2800	mg/kg	2.0	13
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1375036



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06128	1375036	S		CR15			Yes	Weathered Diesel

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1375036	CR15			16-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

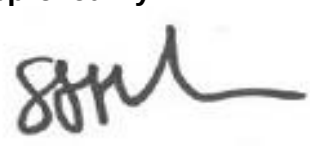
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06129-1
Initial Date of Issue:	24-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	18-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	18-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	24-Feb-2022
Date Approved:	24-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

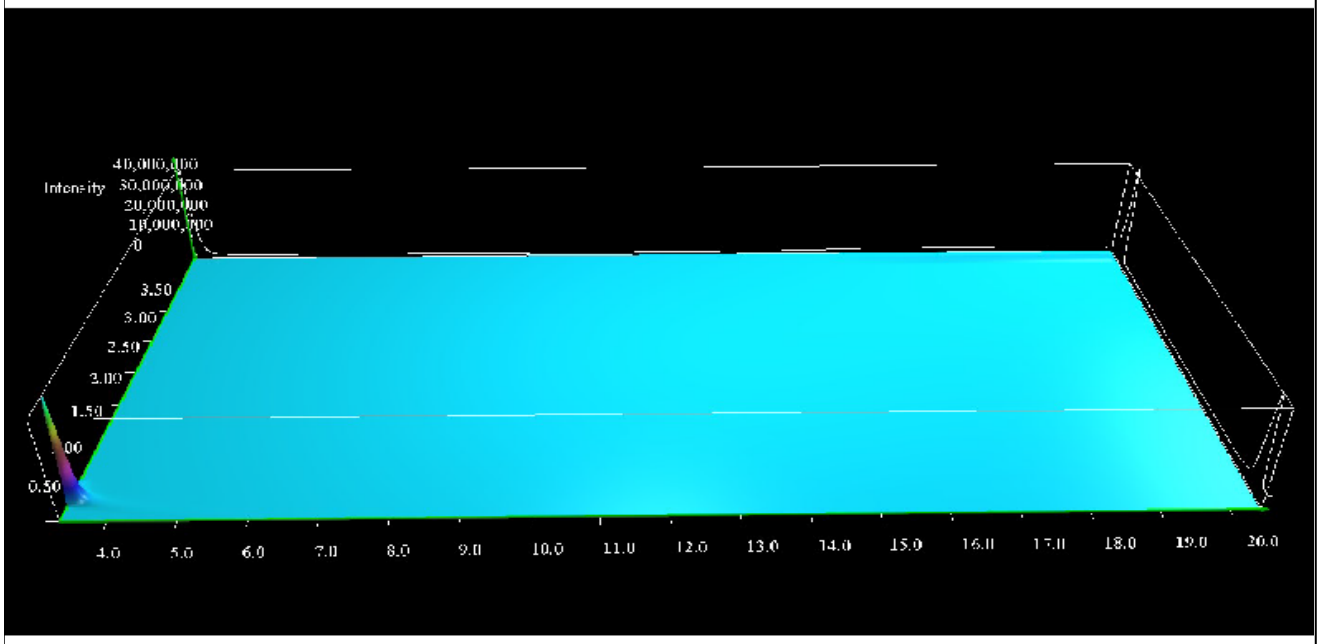
Client: LK Consult			**Chemtest Job No.:**		22-06129
Quotation No.:			**Chemtest Sample ID.:**		1375037
Order No.: LKR 201044/RC			Client Sample Ref.:		CR18
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	16
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.78
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	8.8
Cadmium	M	2450	mg/kg	0.10	0.28
Chromium	M	2450	mg/kg	1.0	11
Copper	M	2450	mg/kg	0.50	26
Mercury	M	2450	mg/kg	0.10	0.18
Nickel	M	2450	mg/kg	0.50	10
Lead	M	2450	mg/kg	0.50	68
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	14
Zinc	M	2450	mg/kg	0.50	76
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.2
Diesel Present	N	2670		N/A	True
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 20
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 7.8
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 18
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 47
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] 25
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 10

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06129
Quotation No.:			**Chemtest Sample ID.:**		1375037
Order No.: LKR 201044/RC			Client Sample Ref.:		CR18
			Sample Type:		SOIL
			Date Sampled:		16-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 35
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 81
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	6.6
Anthracene	M	2800	mg/kg	0.10	2.6
Fluoranthene	M	2800	mg/kg	0.10	7.4
Pyrene	M	2800	mg/kg	0.10	6.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	23
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1375037



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06129	1375037	S		CR18			Yes	Weathered Diesel

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1375037	CR18			16-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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
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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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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.:	22-06489-1
Initial Date of Issue:	25-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst

Quotation No.:		**Date Received:**	22-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	22-Feb-2022
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	28-Feb-2022
Date Approved:	25-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst

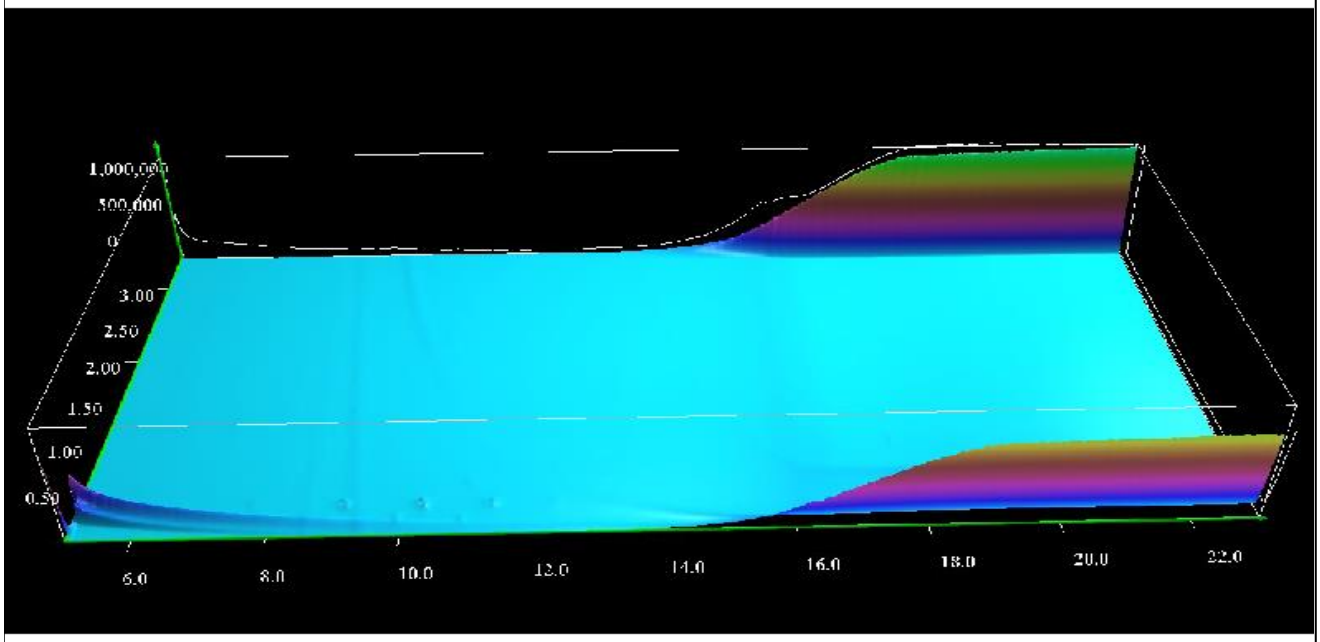
Client: LK Consult		**Chemtest Job No.:**			22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489
Quotation No.:		**Chemtest Sample ID.:**			1376696	1376697	1376698	1376699	1376700	1376701	1376702	1376703
Order No.: LKR 201044/RC		Client Sample Ref.:			SS111	SS112	SS113	SS114	SS115	SS116	SS117	SS118
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**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	23	21	22	22	23	26	24	25
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	None	None	None	None	None	None	None	None
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.8	8.6	8.7	8.7	8.7	8.6	8.7	8.8
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	5.9	0.42	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	1.5
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.53	0.055	0.15	0.041	0.037	0.046	0.047	0.28
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	6.2	3.7	2.5	5.6	4.7	4.7	7.0	5.0
Cadmium	M	2450	mg/kg	0.10	0.10	0.14	< 0.10	0.11	0.10	0.15	< 0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	22	16	11	25	22	25	22	17
Copper	M	2450	mg/kg	0.50	21	15	10	21	19	23	16	16
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10
Nickel	M	2450	mg/kg	0.50	30	22	15	34	30	33	26	24
Lead	M	2450	mg/kg	0.50	11	8.2	6.4	10	9.3	10	30	7.7
Selenium	M	2450	mg/kg	0.20	< 0.20	0.21	< 0.20	< 0.20	< 0.20	0.26	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	22	15	9.8	23	19	23	22	17
Zinc	M	2450	mg/kg	0.50	47	36	24	51	45	49	85	36
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	3.1	1.7	2.2	1.4	2.1	1.6	1.7	2.1
Diesel Present	N	2670		N/A	False	False	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

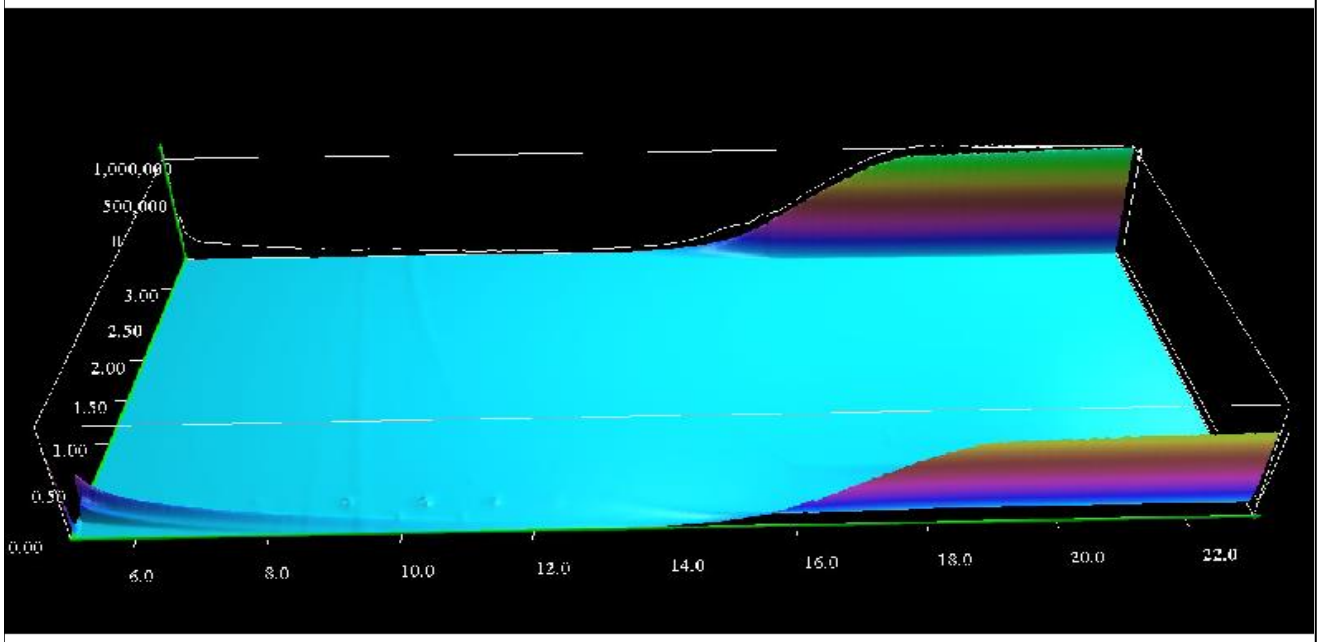
Project: LKR 20 1044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489
Quotation No.:		**Chemtest Sample ID.:**			1376696	1376697	1376698	1376699	1376700	1376701	1376702	1376703
Order No.: LKR 201044/RC		Client Sample Ref.:			SS111	SS112	SS113	SS114	SS115	SS116	SS117	SS118
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	130	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 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	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 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	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.78
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.22
Fluoranthene	M	2800	mg/kg	0.10	0.18	< 0.10	0.47	< 0.10	< 0.10	< 0.10	0.32	0.80
Pyrene	M	2800	mg/kg	0.10	0.22	< 0.10	0.49	< 0.10	< 0.10	< 0.10	0.33	0.96
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.33
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.52
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 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	< 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	< 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	< 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	< 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	< 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	< 2.0	3.6
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

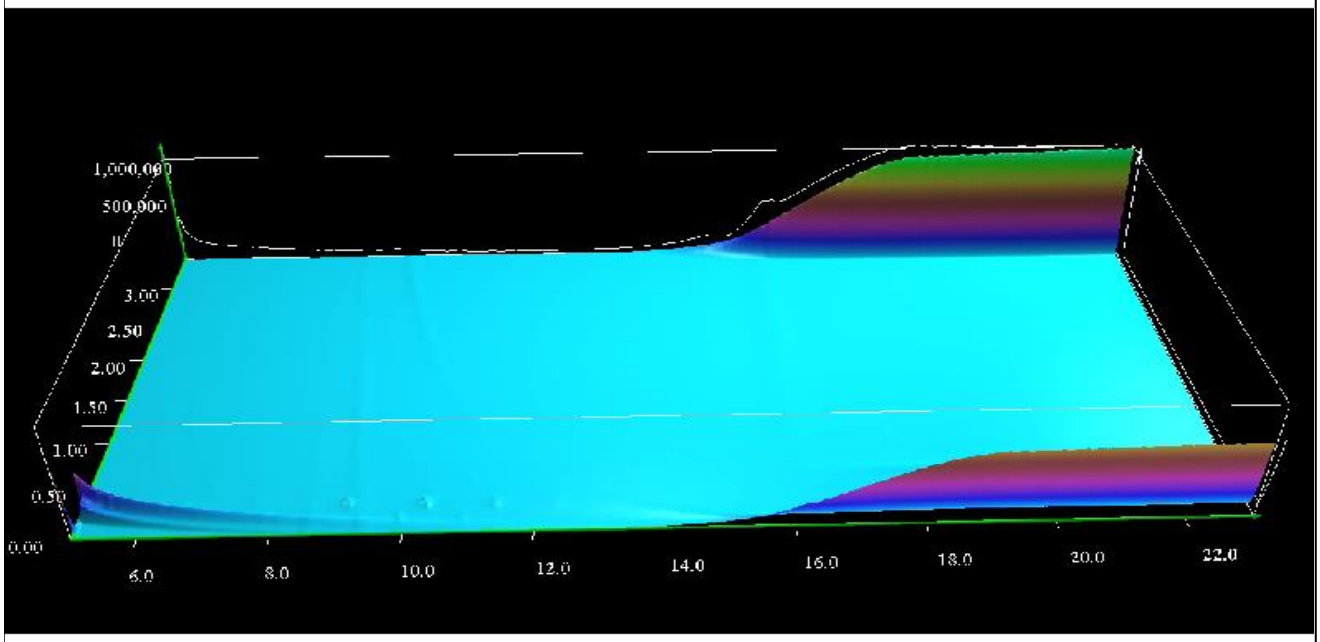
TPH Chromatogram on Soil Sample: 1376696



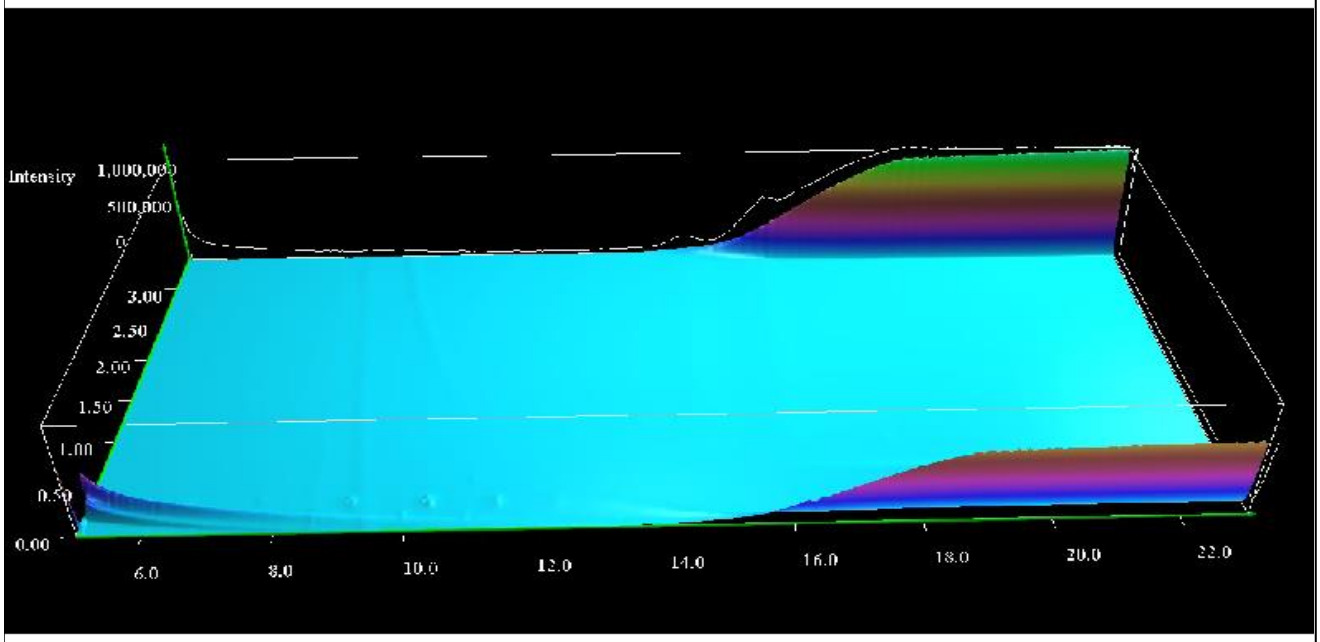
TPH Chromatogram on Soil Sample: 1376697



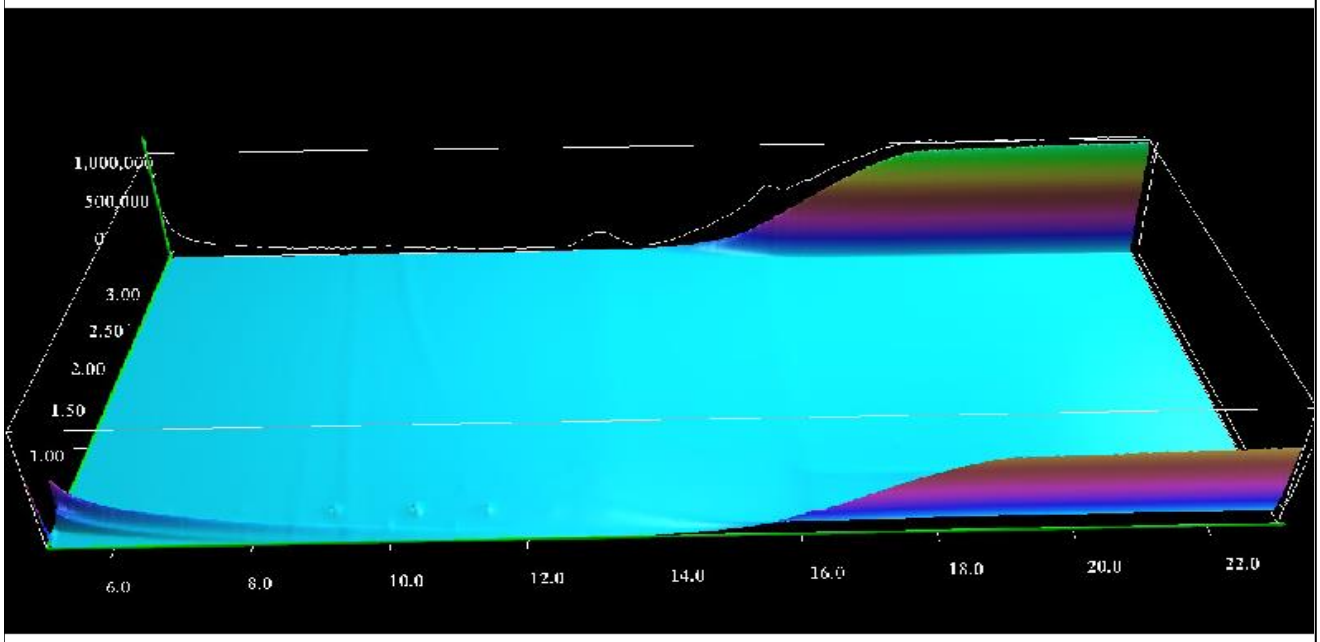
TPH Chromatogram on Soil Sample: 1376698



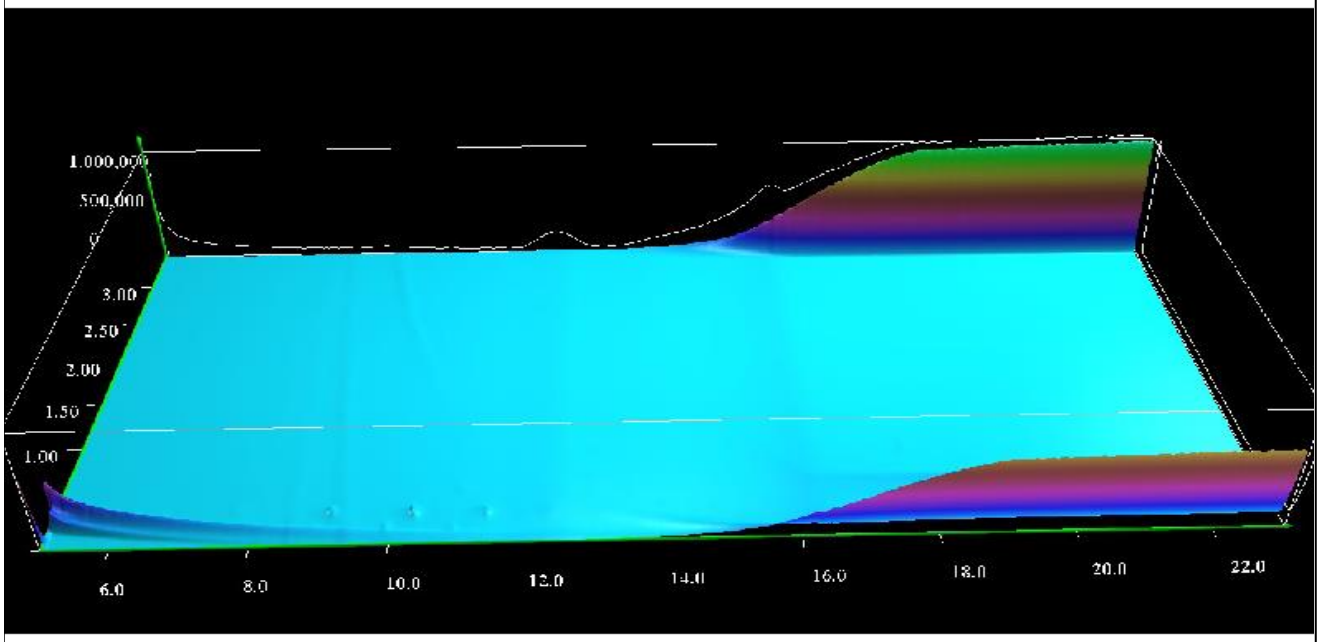
TPH Chromatogram on Soil Sample: 1376699



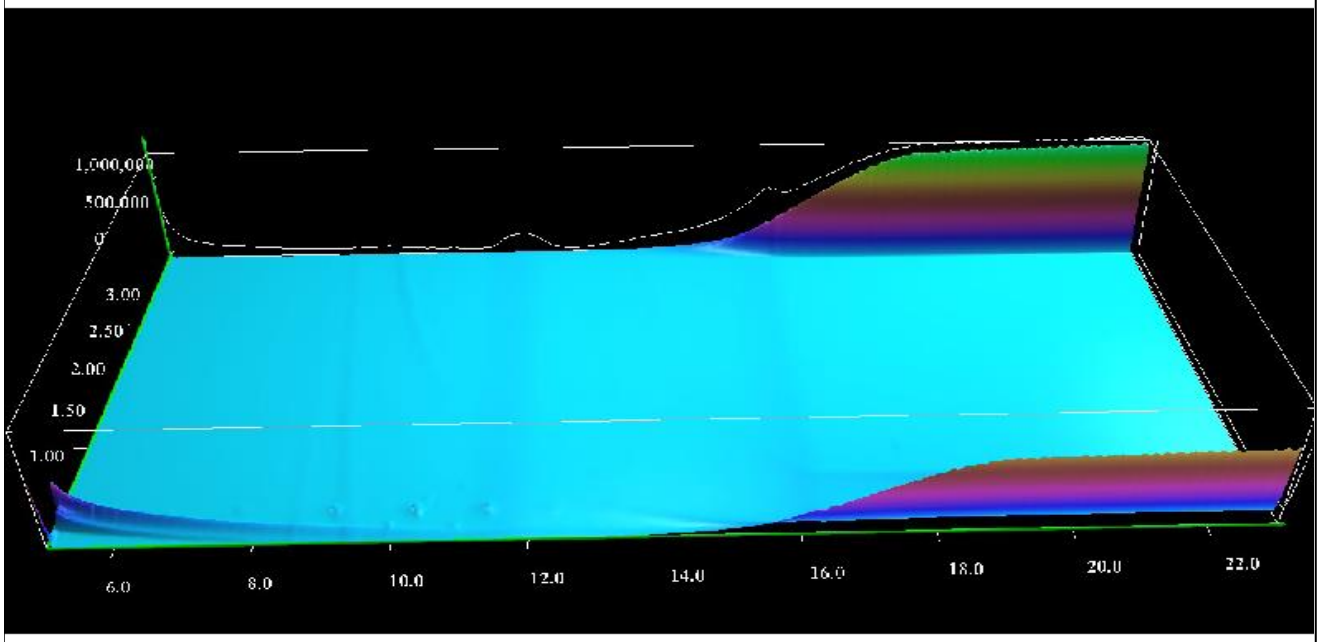
TPH Chromatogram on Soil Sample: 1376700



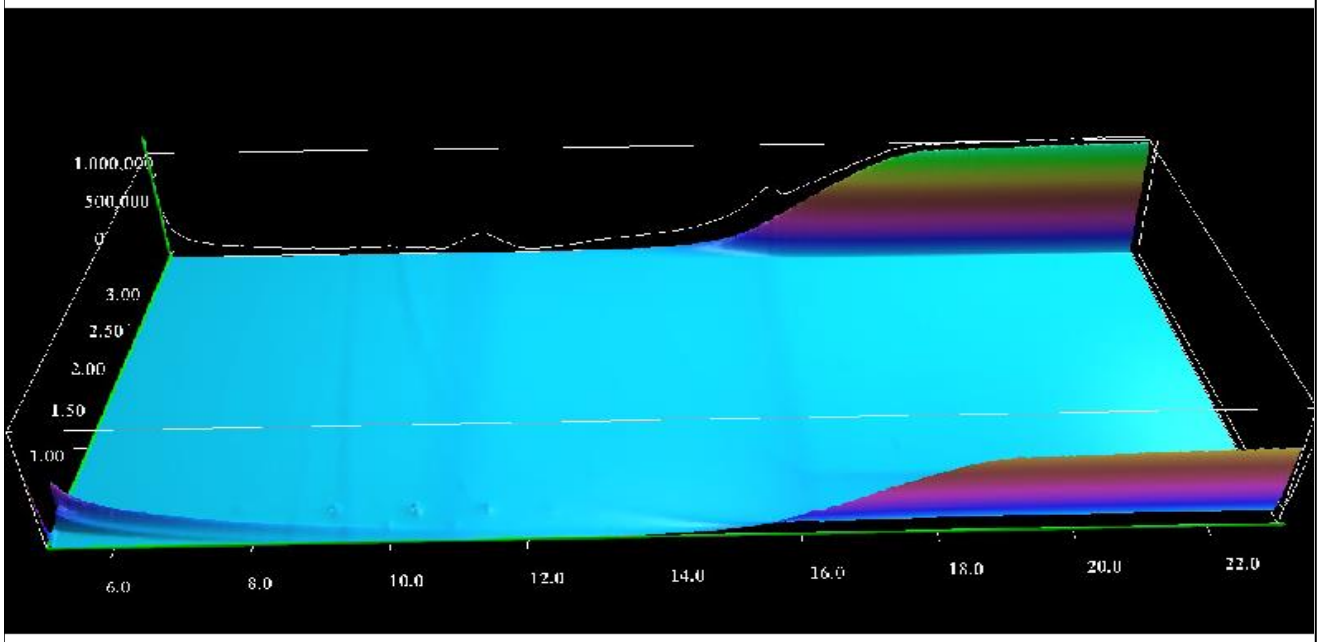
TPH Chromatogram on Soil Sample: 1376701



TPH Chromatogram on Soil Sample: 1376702



TPH Chromatogram on Soil Sample: 1376703



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06489	1376696	S		SS111			No	N/A
22-06489	1376697	S		SS112			No	N/A
22-06489	1376698	S		SS113			No	N/A
22-06489	1376699	S		SS114			No	N/A
22-06489	1376700	S		SS115			No	N/A
22-06489	1376701	S		SS116			No	N/A
22-06489	1376702	S		SS117			No	N/A
22-06489	1376703	S		SS118			No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

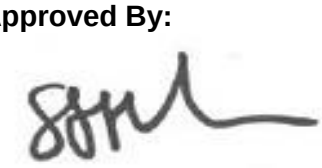
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06831-1
Initial Date of Issue:	02-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	02-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

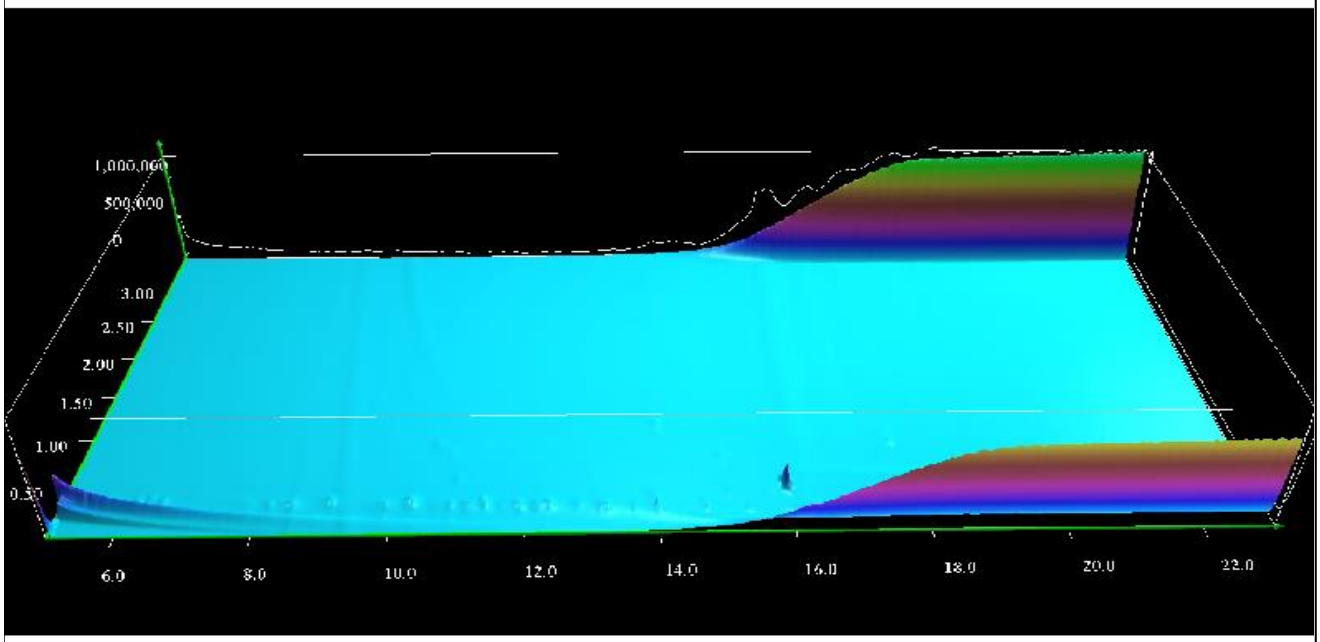
Client: LK Consult			**Chemtest Job No.:**		22-06831
Quotation No.:			**Chemtest Sample ID.:**		1378192
Order No.: LKR 201044/RC			Client Sample Ref.:		CR206
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	7.8
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	11.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.93
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.0
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	12
Cadmium	M	2450	mg/kg	0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	18
Copper	M	2450	mg/kg	0.50	17
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	15
Lead	M	2450	mg/kg	0.50	23
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	18
Zinc	M	2450	mg/kg	0.50	45
Chromium (Hexavalent)	N	2490	mg/kg	0.50	1.1
Organic Matter	M	2625	%	0.40	1.3
Diesel Present	N	2670		N/A	True
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 5.9
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 18
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 66
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 90
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06831
Quotation No.:			**Chemtest Sample ID.:**		1378192
Order No.: LKR 201044/RC			Client Sample Ref.:		CR206
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 52
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 52
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 140
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	2.3
Anthracene	M	2800	mg/kg	0.10	0.42
Fluoranthene	M	2800	mg/kg	0.10	2.5
Pyrene	M	2800	mg/kg	0.10	2.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.1
Chrysene	M	2800	mg/kg	0.10	1.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.37
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	13
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378192



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06831	1378192	S		CR206			Yes	Weathered Diesel

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378192	CR206			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

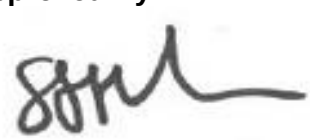
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06854-1
Initial Date of Issue:	01-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	01-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

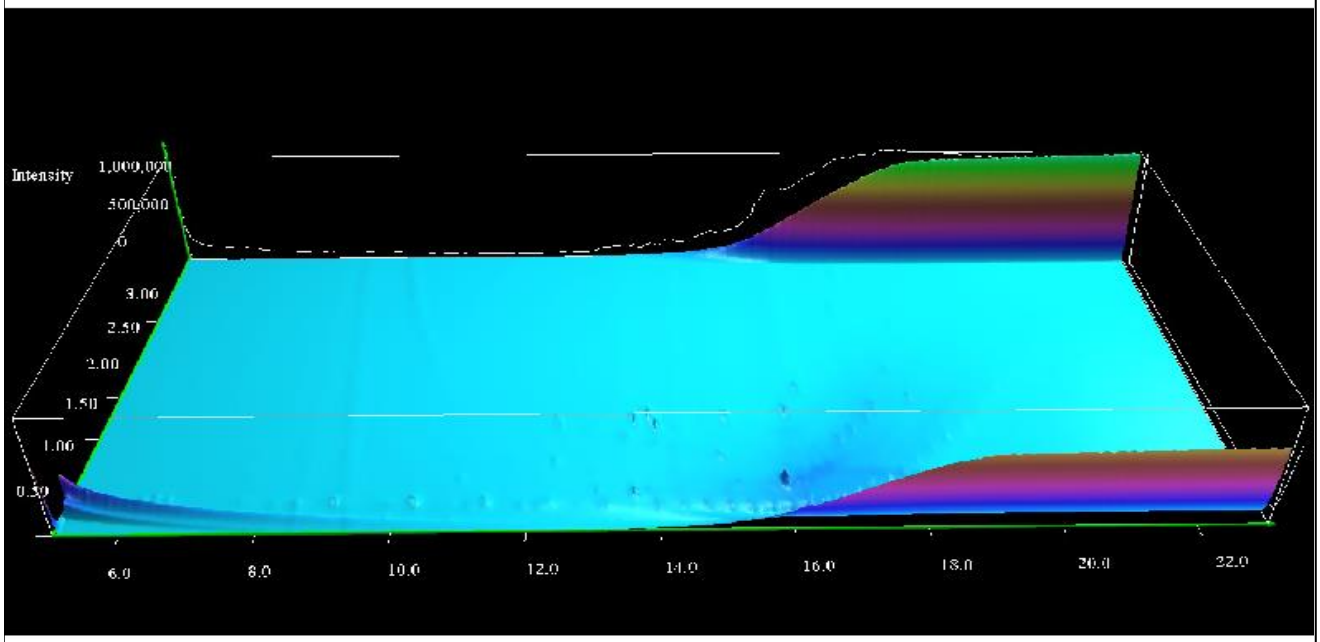
Client: LK Consult			**Chemtest Job No.:**		22-06854
Quotation No.:			**Chemtest Sample ID.:**		1378265
Order No.: LKR 201044/RC			Client Sample Ref.:		CR209
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	13
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones and Roots
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.1
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	20
Cadmium	M	2450	mg/kg	0.10	0.18
Chromium	M	2450	mg/kg	1.0	34
Copper	M	2450	mg/kg	0.50	150
Mercury	M	2450	mg/kg	0.10	0.32
Nickel	M	2450	mg/kg	0.50	34
Lead	M	2450	mg/kg	0.50	120
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	37
Zinc	M	2450	mg/kg	0.50	180
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	4.5
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 8.6
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 290
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 300
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06854
Quotation No.:			**Chemtest Sample ID.:**		1378265
Order No.: LKR 201044/RC			Client Sample Ref.:		CR209
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 18
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 600
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 620
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 910
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	0.28
Acenaphthylene	N	2800	mg/kg	0.10	0.51
Acenaphthene	M	2800	mg/kg	0.10	0.29
Fluorene	M	2800	mg/kg	0.10	0.44
Phenanthrene	M	2800	mg/kg	0.10	3.6
Anthracene	M	2800	mg/kg	0.10	0.93
Fluoranthene	M	2800	mg/kg	0.10	4.4
Pyrene	M	2800	mg/kg	0.10	3.8
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.7
Chrysene	M	2800	mg/kg	0.10	1.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.9
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.65
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.37
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	24
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378265



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06854	1378265	S		CR209			No	Heavy Oil and PAH

Deviations

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Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378265	CR209			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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
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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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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customerservices@chemtest.com

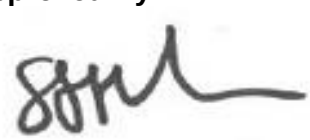
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06857-1
Initial Date of Issue:	01-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	01-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

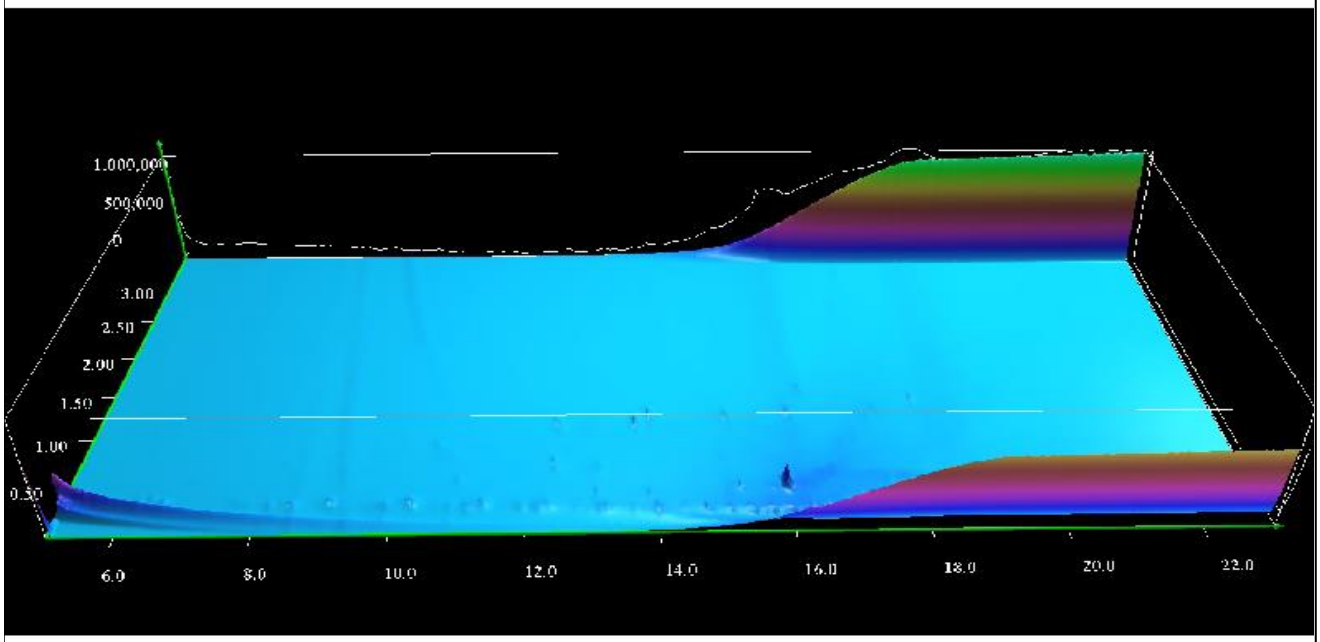
Client: LK Consult			**Chemtest Job No.:**		22-06857
Quotation No.:			**Chemtest Sample ID.:**		1378283
Order No.: LKR 201044/RC			Client Sample Ref.:		CR208
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	11
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.87
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.5
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	11
Cadmium	M	2450	mg/kg	0.10	0.12
Chromium	M	2450	mg/kg	1.0	27
Copper	M	2450	mg/kg	0.50	56
Mercury	M	2450	mg/kg	0.10	0.20
Nickel	M	2450	mg/kg	0.50	17
Lead	M	2450	mg/kg	0.50	140
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	23
Zinc	M	2450	mg/kg	0.50	240
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.8
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 7.2
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 11
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 290
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 310
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06857
Quotation No.:			**Chemtest Sample ID.:**		1378283
Order No.: LKR 201044/RC			Client Sample Ref.:		CR208
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 5.4
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 510
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 520
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 830
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	0.32
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.35
Fluorene	M	2800	mg/kg	0.10	0.28
Phenanthrene	M	2800	mg/kg	0.10	2.4
Anthracene	M	2800	mg/kg	0.10	0.67
Fluoranthene	M	2800	mg/kg	0.10	3.6
Pyrene	M	2800	mg/kg	0.10	3.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.7
Chrysene	M	2800	mg/kg	0.10	1.7
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.2
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.76
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.29
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	22
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378283



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06857	1378283	S		CR208			No	PAH and Heavy Oil

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378283	CR208			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

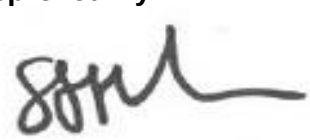
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06858-1
Initial Date of Issue:	01-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	01-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

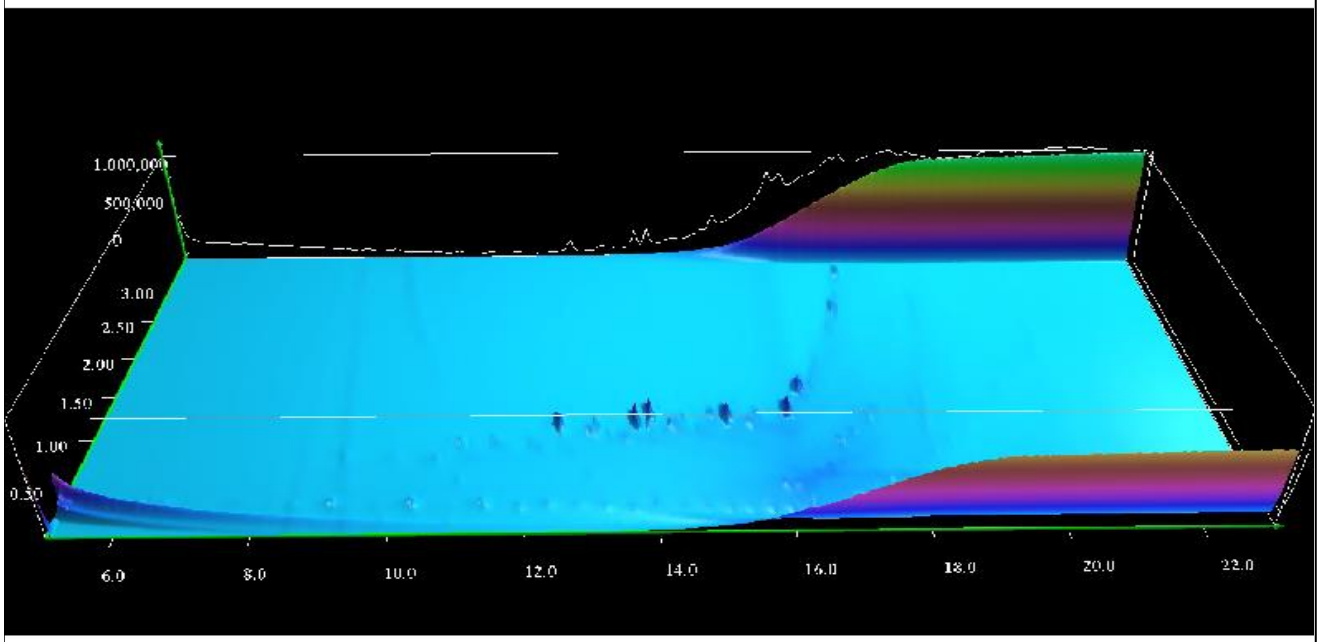
Client: LK Consult			**Chemtest Job No.:**		22-06858
Quotation No.:			**Chemtest Sample ID.:**		1378284
Order No.: LKR 201044/RC			Client Sample Ref.:		CR211
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	12
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones and Roots
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	10.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.60
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.20
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	16
Cadmium	M	2450	mg/kg	0.10	2.0
Chromium	M	2450	mg/kg	1.0	20
Copper	M	2450	mg/kg	0.50	56
Mercury	M	2450	mg/kg	0.10	0.52
Nickel	M	2450	mg/kg	0.50	23
Lead	M	2450	mg/kg	0.50	170
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	26
Zinc	M	2450	mg/kg	0.50	210
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	6.0
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 120
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 120
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06858
Quotation No.:			**Chemtest Sample ID.:**		1378284
Order No.: LKR 201044/RC			Client Sample Ref.:		CR211
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 83
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 1000
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 1100
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 1200
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	2.2
Acenaphthylene	N	2800	mg/kg	0.10	0.43
Acenaphthene	M	2800	mg/kg	0.10	4.0
Fluorene	M	2800	mg/kg	0.10	3.3
Phenanthrene	M	2800	mg/kg	0.10	26
Anthracene	M	2800	mg/kg	0.10	6.2
Fluoranthene	M	2800	mg/kg	0.10	32
Pyrene	M	2800	mg/kg	0.10	28
Benzo[a]anthracene	M	2800	mg/kg	0.10	13
Chrysene	M	2800	mg/kg	0.10	14
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	16
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.5
Benzo[a]pyrene	M	2800	mg/kg	0.10	14
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	7.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.6
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	7.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	180
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378284



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06858	1378284	S		CR211			No	Heavy Oil and PAH

Deviations

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Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378284	CR211			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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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

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customerservices@chemtest.com

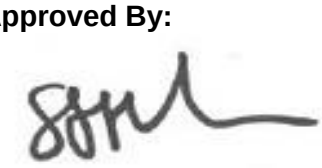
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06860-1
Initial Date of Issue:	02-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Richard Clarke
Project	LKR 10 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	02-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 10 1044 Collyhurst, Manchester

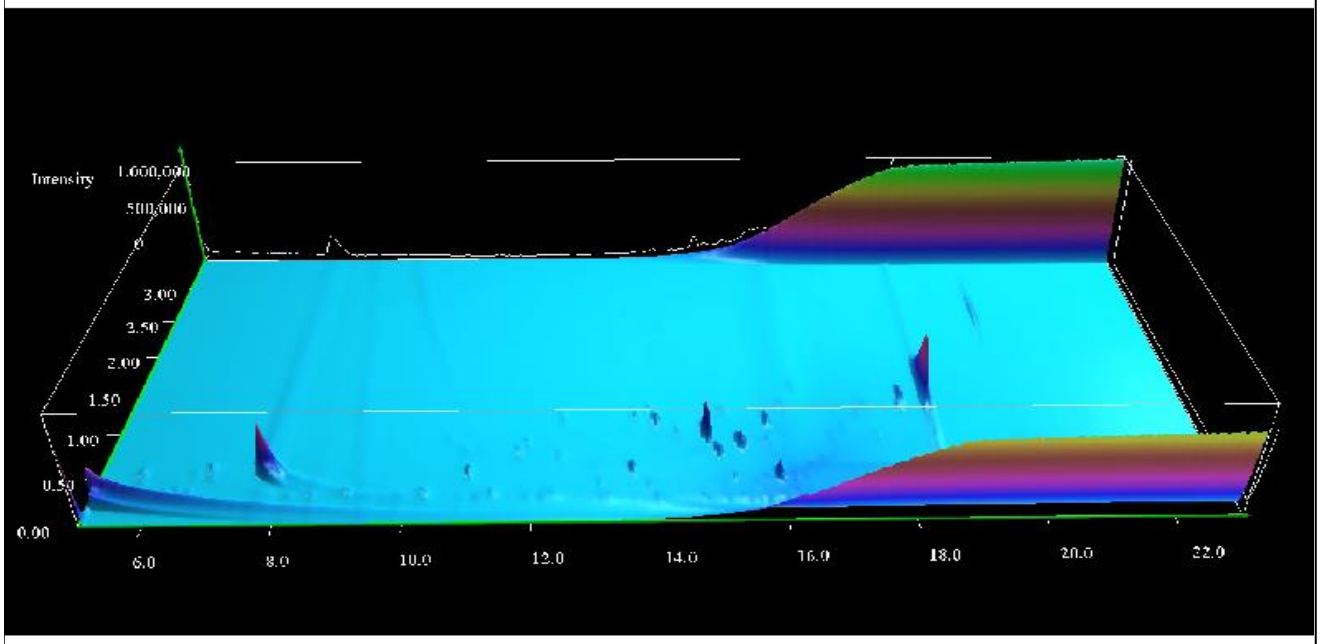
Client: LK Consult			**Chemtest Job No.:**		22-06860
Quotation No.:			**Chemtest Sample ID.:**		1378293
Order No.: LKR 201044/RC			Client Sample Ref.:		CR210
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	17
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Roots and Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	9.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.7
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.6
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	10
Cadmium	M	2450	mg/kg	0.10	0.20
Chromium	M	2450	mg/kg	1.0	22
Copper	M	2450	mg/kg	0.50	55
Mercury	M	2450	mg/kg	0.10	0.33
Nickel	M	2450	mg/kg	0.50	19
Lead	M	2450	mg/kg	0.50	110
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	24
Zinc	M	2450	mg/kg	0.50	220
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.5
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 240
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] 23
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 270
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] 10
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] 180
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 10 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06860
Quotation No.:			**Chemtest Sample ID.:**		1378293
Order No.: LKR 201044/RC			Client Sample Ref.:		CR210
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 6.7
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 28
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 670
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 900
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 1200
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.6
Anthracene	M	2800	mg/kg	0.10	0.41
Fluoranthene	M	2800	mg/kg	0.10	2.6
Pyrene	M	2800	mg/kg	0.10	2.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.2
Chrysene	M	2800	mg/kg	0.10	1.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.52
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.86
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.20
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.70
Total Of 16 PAH's	N	2800	mg/kg	2.0	14
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378293



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06860	1378293	S		CR210			No	Heavy Oil and PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378293	CR210			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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.:	22-06862-1		
Initial Date of Issue:	02-Mar-2022		
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Richard Clarke		
Project	LKR 20 1044 Collyhurst Manchester		
Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	02-Mar-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: LKR 20 1044 Collyhurst Manchester

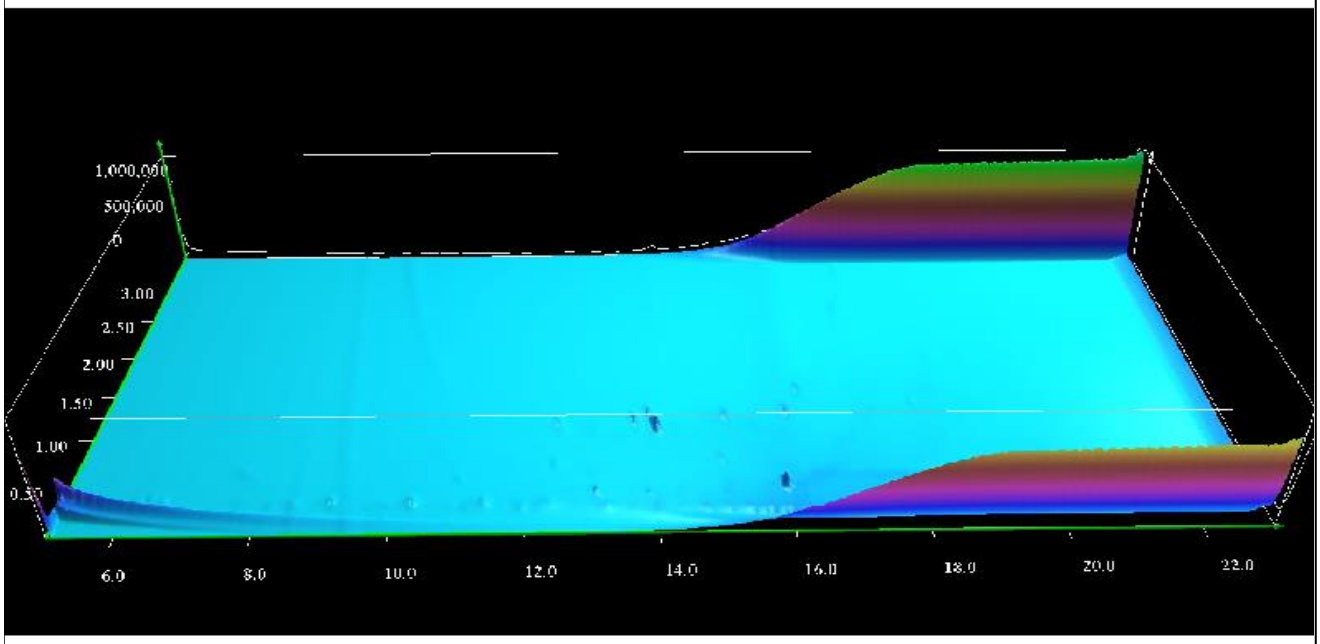
Client: LK Consult			**Chemtest Job No.:**		22-06862
Quotation No.:			**Chemtest Sample ID.:**		1378295
Order No.: LKR 201044/RC			Client Sample Ref.:		CR207
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	9.8
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones, Roots and plastic. ceramic
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	8.4
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.56
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.37
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	3.2
Cadmium	M	2450	mg/kg	0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	11
Copper	M	2450	mg/kg	0.50	8.5
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	9.1
Lead	M	2450	mg/kg	0.50	4.8
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	12
Zinc	M	2450	mg/kg	0.50	17
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.7
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 190
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 190
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06862
Quotation No.:			**Chemtest Sample ID.:**		1378295
Order No.: LKR 201044/RC			Client Sample Ref.:		CR207
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 13
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 290
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 500
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] 17
Ethylbenzene	M	2760	µg/kg	1.0	[C] 2.7
m & p-Xylene	M	2760	µg/kg	1.0	[C] 14
o-Xylene	M	2760	µg/kg	1.0	[C] 12
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378295



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06862	1378295	S		CR207			No	Heavy Oil and PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378295	CR207			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

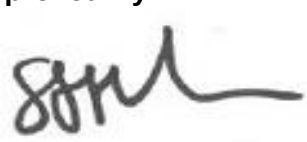
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-06913-1
Initial Date of Issue:	01-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	24-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	24-Feb-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	02-Mar-2022
Date Approved:	01-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

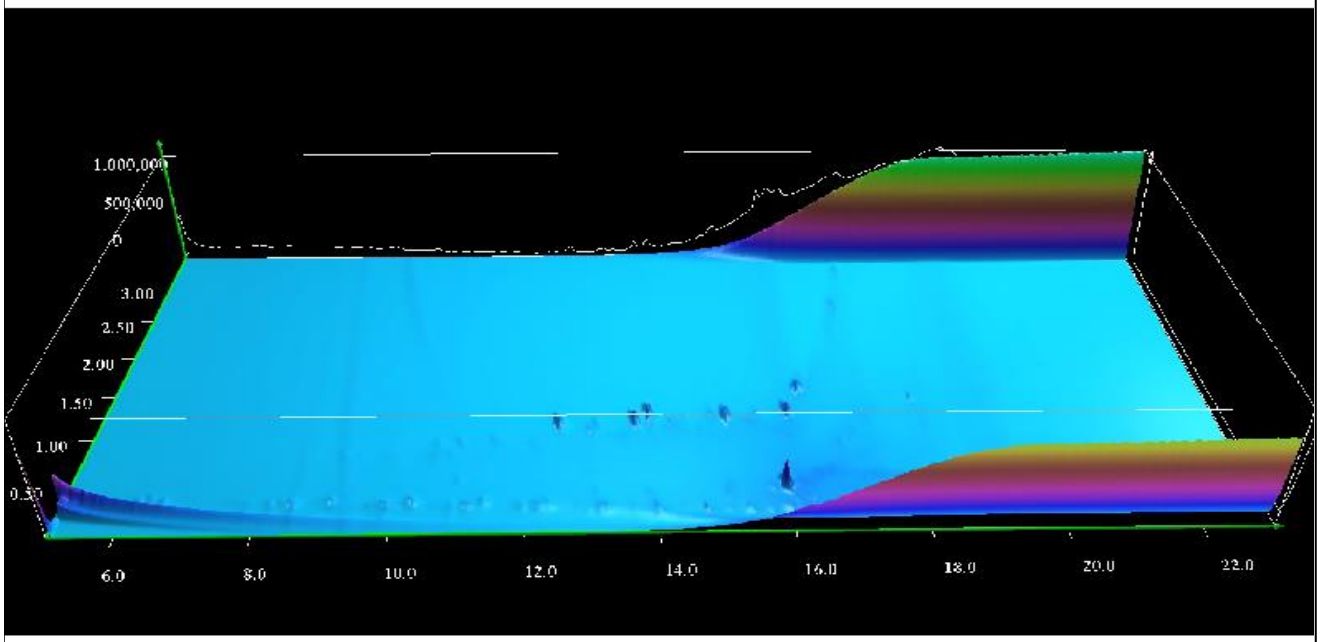
Client: LK Consult			**Chemtest Job No.:**		22-06913
Quotation No.:			**Chemtest Sample ID.:**		1378463
Order No.: LKR 201044/RC			Client Sample Ref.:		CR205
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	9.3
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones and Roots
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	11.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.089
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	5.1
Cadmium	M	2450	mg/kg	0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	3.2
Copper	M	2450	mg/kg	0.50	11
Mercury	M	2450	mg/kg	0.10	0.16
Nickel	M	2450	mg/kg	0.50	5.8
Lead	M	2450	mg/kg	0.50	27
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	5.1
Zinc	M	2450	mg/kg	0.50	13
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	4.5
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] 12
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] 24
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] 8.2
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 200
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-06913
Quotation No.:			**Chemtest Sample ID.:**		1378463
Order No.: LKR 201044/RC			Client Sample Ref.:		CR205
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 30
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 560
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 590
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 830
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	1.2
Acenaphthylene	N	2800	mg/kg	0.10	0.32
Acenaphthene	M	2800	mg/kg	0.10	2.1
Fluorene	M	2800	mg/kg	0.10	1.7
Phenanthrene	M	2800	mg/kg	0.10	12
Anthracene	M	2800	mg/kg	0.10	3.0
Fluoranthene	M	2800	mg/kg	0.10	16
Pyrene	M	2800	mg/kg	0.10	14
Benzo[a]anthracene	M	2800	mg/kg	0.10	6.7
Chrysene	M	2800	mg/kg	0.10	7.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	8.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.9
Benzo[a]pyrene	M	2800	mg/kg	0.10	7.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	4.7
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.86
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	4.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	93
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1378463



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06913	1378463	S		CR205			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1378463	CR205			22-Feb-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

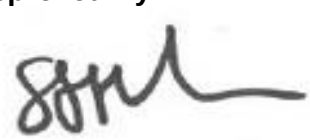
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-10826-1
Initial Date of Issue:	28-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	23-Mar-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	23-Mar-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	29-Mar-2022
Date Approved:	28-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-10826
Quotation No.:			**Chemtest Sample ID.:**		1396491
Order No.: LKR 201044/RC			Client Sample Ref.:		CR212
			Sample Type:		SOIL
			Date Sampled:		22-Mar-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	10
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Loam
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	7.4
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.66
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.36
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	11
Cadmium	M	2450	mg/kg	0.10	0.13
Chromium	M	2450	mg/kg	1.0	7.8
Copper	M	2450	mg/kg	0.50	16
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	9.8
Lead	M	2450	mg/kg	0.50	23
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	15
Zinc	M	2450	mg/kg	0.50	26
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	6.0
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[C] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 150
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 150
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[C] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[C] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

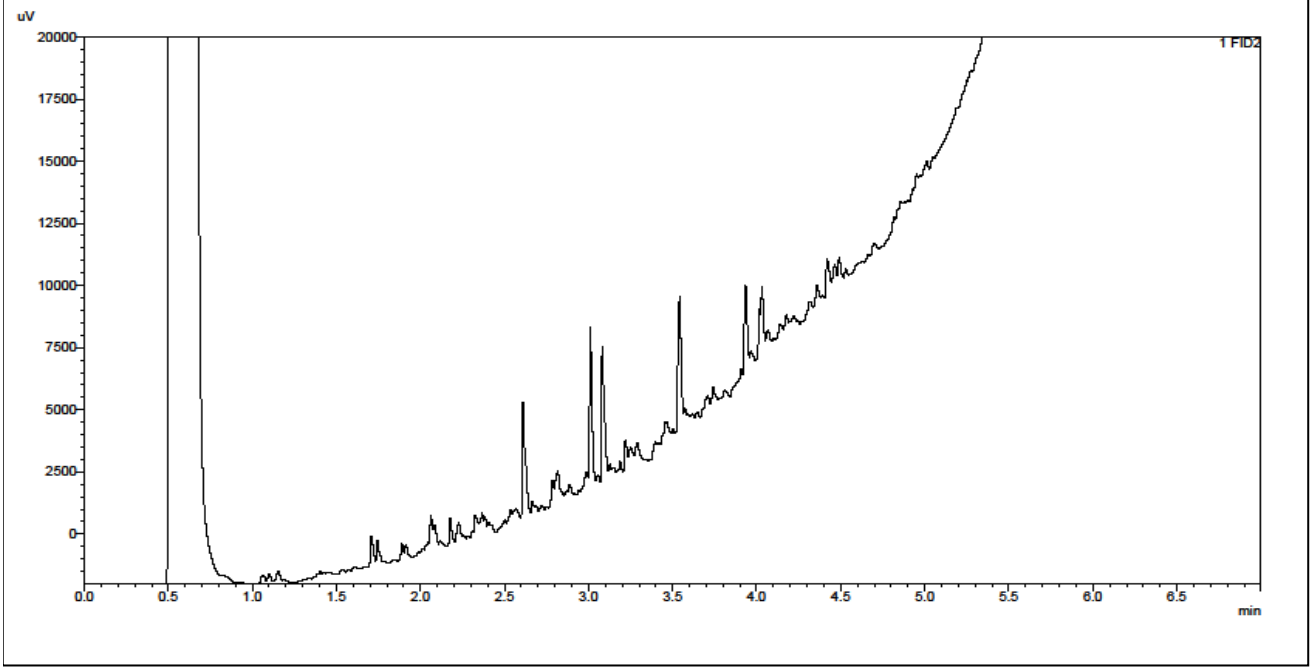
Client: LK Consult			**Chemtest Job No.:**		22-10826
Quotation No.:			**Chemtest Sample ID.:**		1396491
Order No.: LKR 201044/RC			Client Sample Ref.:		CR212
			Sample Type:		SOIL
			Date Sampled:		22-Mar-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[C] 63
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[C] 870
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[C] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[C] 930
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[C] 1100
Benzene	M	2760	µg/kg	1.0	[C] < 1.0
Toluene	M	2760	µg/kg	1.0	[C] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[C] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[C] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[C] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1396491

<Sample Information>

Sample Name : 1396491 22-10826
Data Filename : 2022-03-23_23032022_1396491 22-10826_106.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 128
Date Acquired : 24/03/2022 01:27:32
Date Processed : 24/03/2022

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-10826	1396491	S		CR212			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1396491	CR212			22-Mar-2022	C	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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All water samples will be retained for 14 days from the date of receipt
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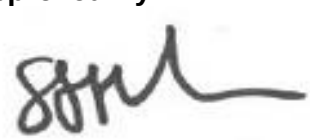
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-10831-1
Initial Date of Issue:	28-Mar-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst, Manchester

Quotation No.:		**Date Received:**	23-Mar-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	23-Mar-2022
No. of Samples:	1		
Turnaround (Wkdays):	5	**Results Due:**	29-Mar-2022
Date Approved:	28-Mar-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

Client: LK Consult			**Chemtest Job No.:**		22-10831
Quotation No.:			**Chemtest Sample ID.:**		1396520
Order No.: LKR 201044/RC			Client Sample Ref.:		CR213
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	9.2
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Loam
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	[B] > 12.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	[B] < 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	[B] 0.30
Cyanide (Free)	M	2300	mg/kg	0.50	[B] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[B] < 0.50
Arsenic	M	2450	mg/kg	1.0	8.4
Cadmium	M	2450	mg/kg	0.10	0.32
Chromium	M	2450	mg/kg	1.0	15
Copper	M	2450	mg/kg	0.50	20
Mercury	M	2450	mg/kg	0.10	0.24
Nickel	M	2450	mg/kg	0.50	13
Lead	M	2450	mg/kg	0.50	59
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	16
Zinc	M	2450	mg/kg	0.50	56
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	[B] 1.6
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[BC] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[BC] 140
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[BC] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[BC] 140
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[BC] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[BC] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[BC] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[BC] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[BC] < 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst, Manchester

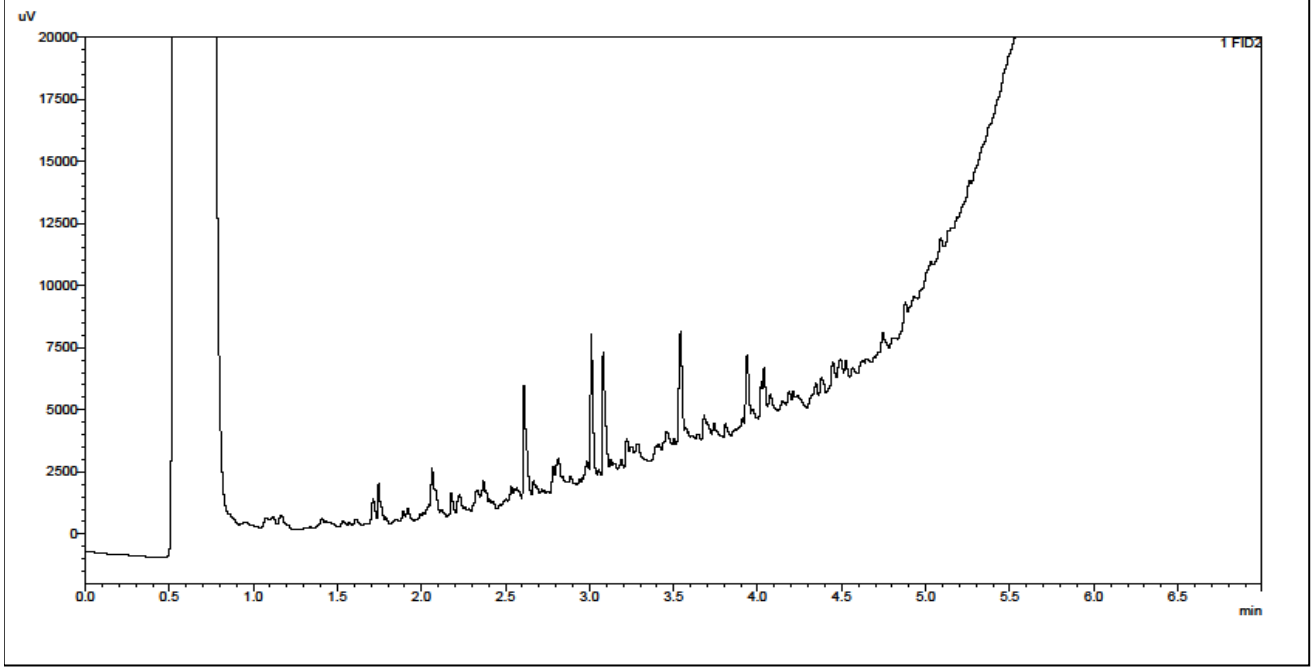
Client: LK Consult			**Chemtest Job No.:**		22-10831
Quotation No.:			**Chemtest Sample ID.:**		1396520
Order No.: LKR 201044/RC			Client Sample Ref.:		CR213
			Sample Type:		SOIL
			Date Sampled:		22-Feb-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[BC] 12
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[BC] 480
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[BC] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[BC] 490
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[BC] 630
Benzene	M	2760	µg/kg	1.0	[BC] < 1.0
Toluene	M	2760	µg/kg	1.0	[BC] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[BC] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[BC] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[BC] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[BC] < 1.0
Naphthalene	M	2800	mg/kg	0.10	0.81
Acenaphthylene	N	2800	mg/kg	0.10	0.22
Acenaphthene	M	2800	mg/kg	0.10	2.8
Fluorene	M	2800	mg/kg	0.10	1.5
Phenanthrene	M	2800	mg/kg	0.10	20
Anthracene	M	2800	mg/kg	0.10	2.8
Fluoranthene	M	2800	mg/kg	0.10	20
Pyrene	M	2800	mg/kg	0.10	17
Benzo[a]anthracene	M	2800	mg/kg	0.10	9.7
Chrysene	M	2800	mg/kg	0.10	9.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	11
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	4.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	9.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	5.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.0
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	4.9
Total Of 16 PAH's	N	2800	mg/kg	2.0	120
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1396520

<Sample Information>

Sample Name : 1396520 22-10831
Data Filename : 2022-03-23_23032022_1396520 22-10831_108.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 129
Date Acquired : 24/03/2022 01:40:04
Date Processed : 24/03/2022

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-10831	1396520	S		CR213			No	PAH

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1396520	CR213			22-Feb-2022	BC	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

Appendix 8 : Geotechnical Test Certificates

Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Particle Size Distribution of Soil by the Hydrometer Method to BS EN ISO 17892-4 2016

Report No:	HS6234 L1883 Hyd	Report Date:	23/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park	Date sample tested:	17/09/2021
	Eton Hill Road	Sample Number:	L1883
	Radcliffe	Client Ref:	Plot 1-3, S30
	Greater Manchester, M26 2ZS		
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

Specimen & Test Details

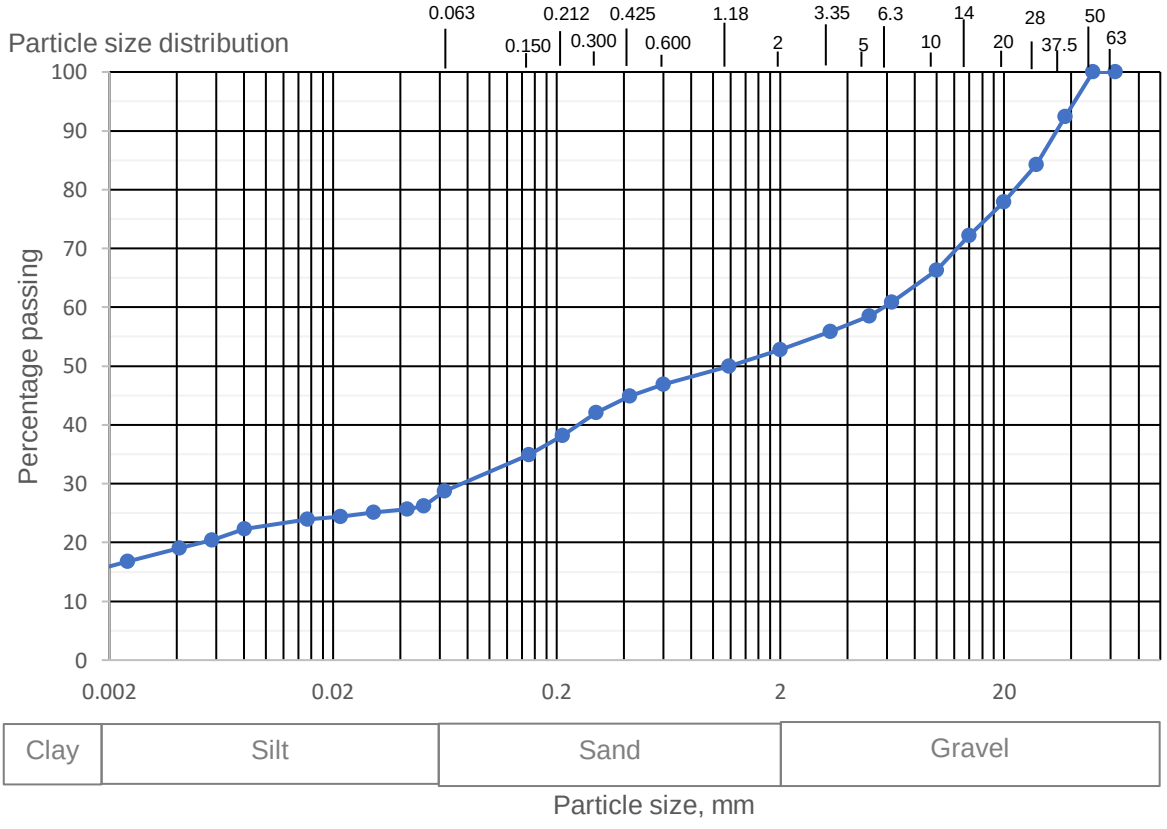
Pre-treatment:	None	Assumed Particle Density, Mg/m^3:	2.65
Sample Description:	Very dark grey very gravelly slightly sandy CLAY with occasional brick dust/rubble		

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4: 2016: Clauses 5.2 and 5.3

Deviations: No deviations from the test method were employed.

Test Results



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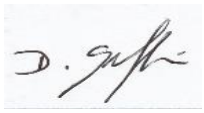
Report No: HS6234 L1883 Hyd

Particle size, mm	Percentage passing
125	100
90	100
75	100
63	100
50	100
37.5	92
28	84
20	78
14	72
10	66
6.3	61
5	59
3.35	56
2	53
1.18	50
0.600	47
0.425	45
0.300	42
0.212	38
0.150	35
0.063	29
0.051	26
0.043	26
0.030	25
0.022	24
0.015	24
0.008	22
0.006	20
0.004	19
0.002	17
0.001	14

Uniformity Coefficient D60:D10, >580

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd



Derek Griffin

Authorised signatory

UKAS TESTING
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Milton Keynes
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Certificate for the Determination of the Particle Size Distribution of Soil by the Hydrometer Method to BS EN ISO 17892-4 2016

Report No:	HS6234 L1884 Hyd	Report Date:	23/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park	Date sample tested:	17/09/2021
	Eton Hill Road	Sample Number:	L1884
	Radcliffe	Client Ref:	Plot 1-3, S15
	Greater Manchester, M26 2ZS		
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

Specimen & Test Details

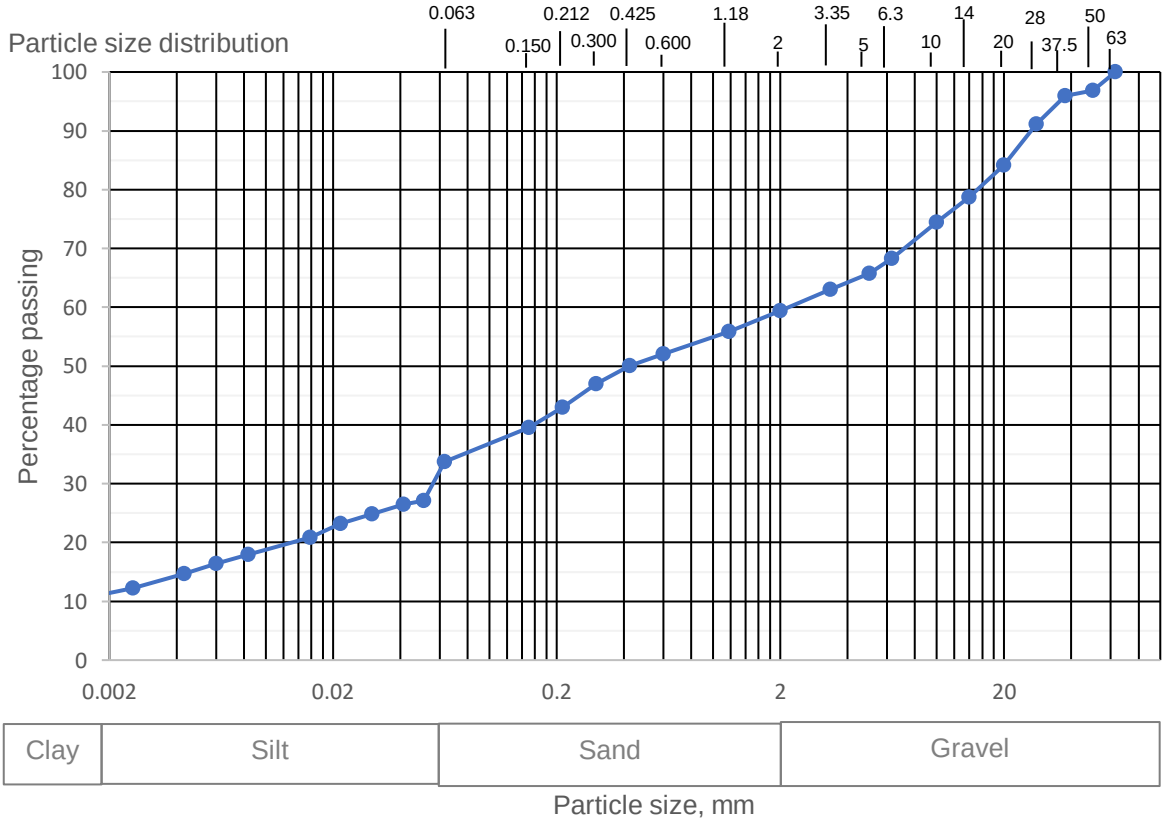
Pre-treatment:	None	Actual Particle Density, Mg/m^3:	2.51
Sample Description:	Very dark grey very gravelly slightly sandy CLAY with occasional brick dust/rubble		

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4: 2016: Clauses 5.2 and 5.3

Deviations: No deviations from the test method were employed.

Test Results



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Report No: HS6234 L1884 Hyd

Particle size, mm	Percentage passing
125	100
90	100
75	100
63	100
50	97
37.5	96
28	91
20	84
14	79
10	74
6.3	68
5	66
3.35	63
2	59
1.18	56
0.600	52
0.425	50
0.300	47
0.212	43
0.150	40
0.063	34
0.051	27
0.041	27
0.030	25
0.022	23
0.016	21
0.008	18
0.006	16
0.004	15
0.003	12
0.001	10

Uniformity Coefficient D60:D10, 1673

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Certificate for the Determination of the Particle Size Distribution of Soil by the Hydrometer Method to BS EN ISO 17892-4 2016

Report No:	HS6234 L1885 Hyd	Report Date:	23/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park	Date sample tested:	17/09/2021
	Eton Hill Road	Sample Number:	L1885
	Radcliffe	Client Ref:	Plot 4-6, S30
	Greater Manchester, M26 2ZS		
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

Specimen & Test Details

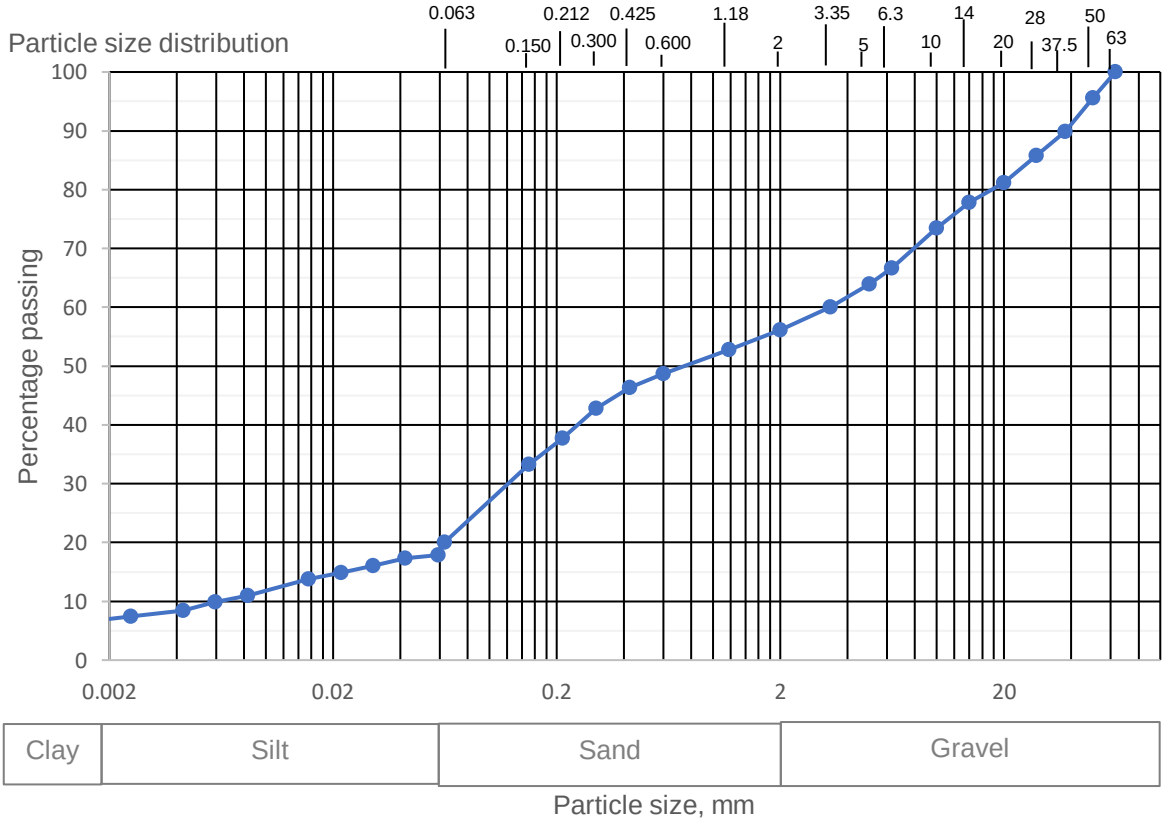
Pre-treatment:	None	Assumed Particle Density, Mg/m^3:	2.65
Sample Description:	Very dark grey gravelly clayey ASH with occasional brick dust/rubble		

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4: 2016: Clauses 5.2 and 5.3

Deviations: No deviations from the test method were employed.

Test Results



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Report No: HS6234 L1885 Hyd

Particle size, mm	Percentage passing
125	100
90	100
75	100
63	100
50	96
37.5	90
28	86
20	81
14	78
10	73
6.3	67
5	64
3.35	60
2	56
1.18	53
0.600	49
0.425	46
0.300	43
0.212	38
0.150	33
0.063	20
0.059	18
0.042	17
0.030	16
0.022	15
0.016	14
0.008	11
0.006	10
0.004	8
0.002	7
0.001	6

Uniformity Coeicient D60:D10, 533

The results relate to the items tested only.

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Certificate for the Determination of the Particle Size Distribution of Soil by the Hydrometer Method to BS EN ISO 17892-4 2016

Report No:	HS6234 L1886 Hyd	Report Date:	23/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park	Date sample tested:	17/09/2021
	Eton Hill Road	Sample Number:	L1886
	Radcliffe	Client Ref:	Plot 4-6, S15
	Greater Manchester, M26 2ZS		
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

Specimen & Test Details

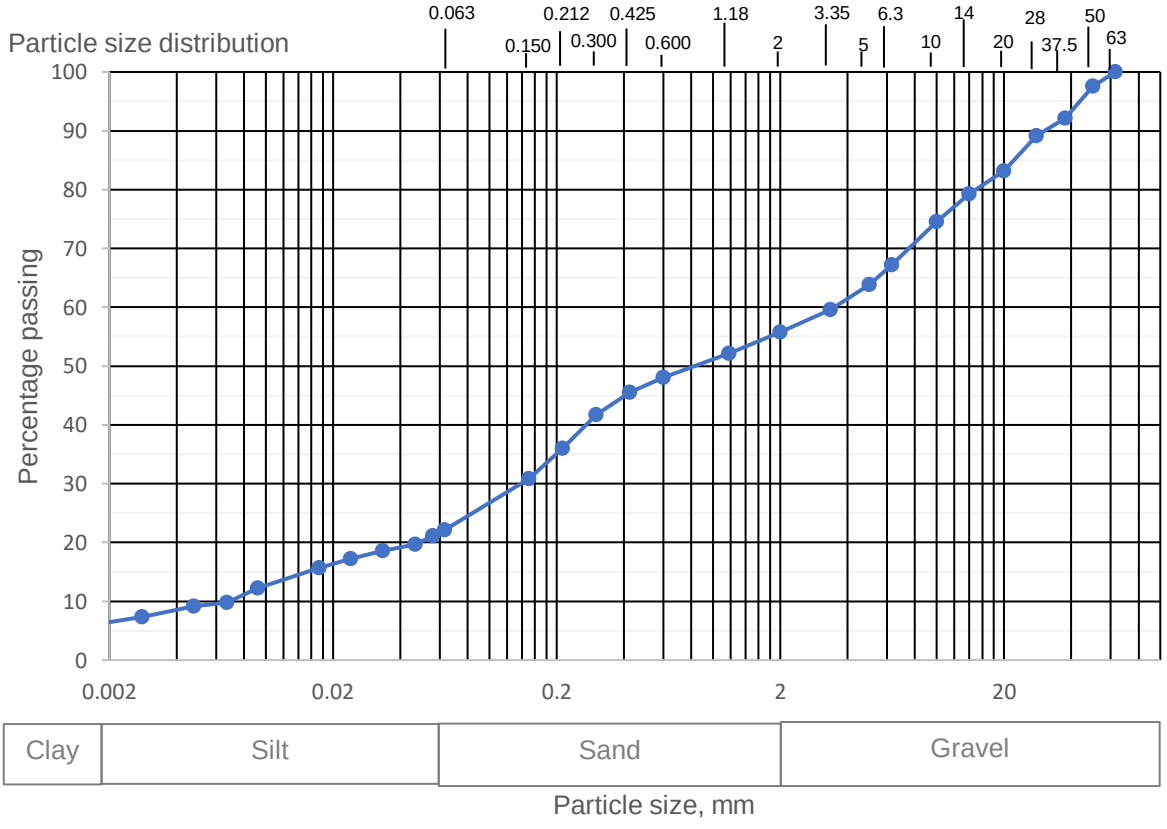
Pre-treatment:	None	Actual Particle Density, Mg/m^3:	2.23
Sample Description:	Very dark grey gravelly clayey ASH with occasional brick dust/rubble		

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4: 2016: Clauses 5.2 and 5.3

Deviations: No deviations from the test method were employed.

Test Results



Hixtra Ltd
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Garamonde Drive
Milton Keynes
MK8 8DD

Report No: HS6234 L1886 Hyd

Particle size, mm	Percentage passing
125	100
90	100
75	100
63	100
50	98
37.5	92
28	89
20	83
14	79
10	75
6.3	67
5	64
3.35	60
2	56
1.18	52
0.600	48
0.425	46
0.300	42
0.212	36
0.150	31
0.063	22
0.056	21
0.047	20
0.033	19
0.024	17
0.017	16
0.009	12
0.007	10
0.005	9
0.003	7
0.001	6

Uniformity Coefficient D60:D10, 505

The results relate to the items tested only.

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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6269 L1921 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 24/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

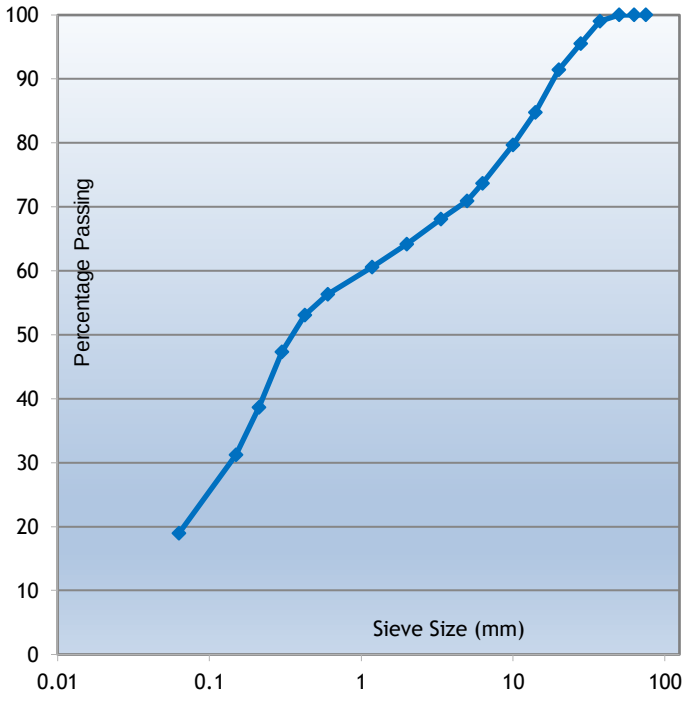
Sample No: L1921
Client Sample ID: 56
Sampled By: Hixtra
Date Received: 22/09/2021
Description: Dark grey gravelly clayey sandy ASH with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	99
28	96
20	91
14	85
10	80
6.3	74
5	71
3.35	68
2	64
1.18	61
0.600	56
0.425	53
0.300	47
0.212	39
0.150	31
0.063	19.0



The results relate to the items tested only.

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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6269 L1922 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 24/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

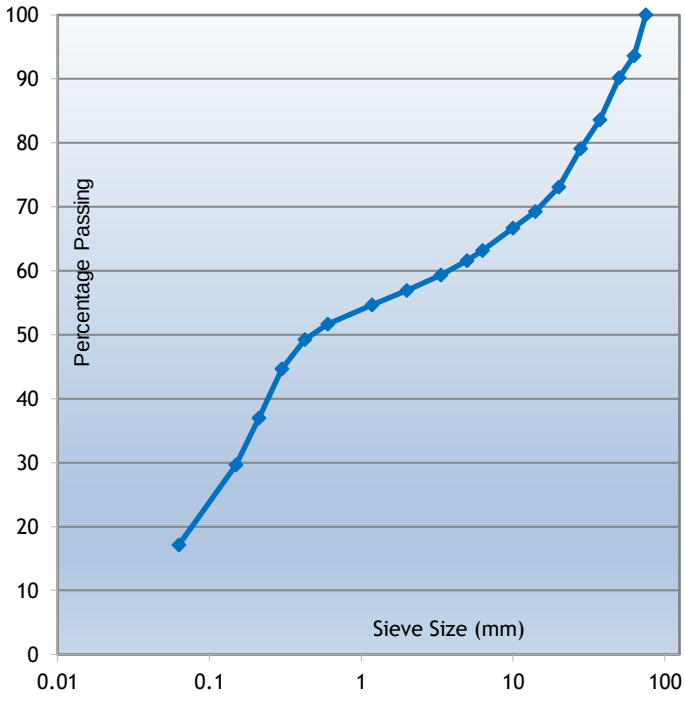
Sample No: L1922
Client Sample ID: 57
Sampled By: Hixtra
Date Received: 22/09/2021
Description: Dark brown gravelly clayey SAND with occasional brick dust/rubble and shell

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	94
50	90
37.5	84
28	79
20	73
14	69
10	67
6.3	63
5	62
3.35	59
2	57
1.18	55
0.600	52
0.425	49
0.300	45
0.212	37
0.150	30
0.063	17.2



The results relate to the items tested only.

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Milton Keynes
MK8 8DD

Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6269 L1923 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

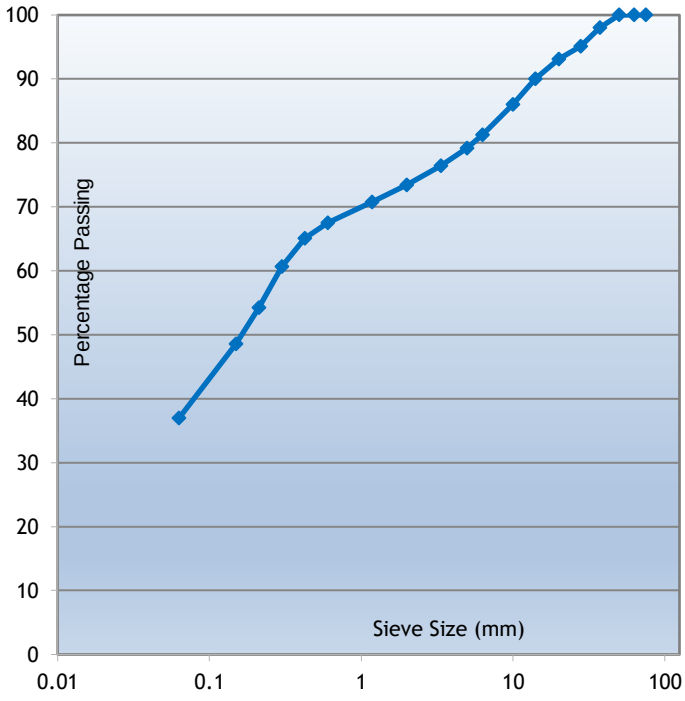
Sample No: L1923
Client Sample ID: 59
Sampled By: Hixtra
Date Received: 22/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	98
28	95
20	93
14	90
10	86
6.3	81
5	79
3.35	76
2	73
1.18	71
0.600	68
0.425	65
0.300	61
0.212	54
0.150	49
0.063	37.0



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Garamonde Drive
Milton Keynes
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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6269 L1923 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

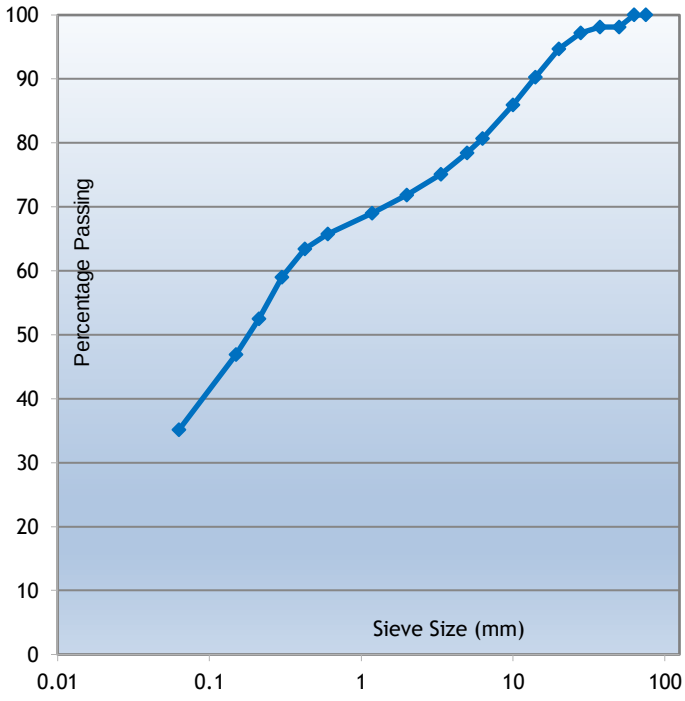
Sample No: L1924
Client Sample ID: 60
Sampled By: Hixtra
Date Received: 22/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	98
37.5	98
28	97
20	95
14	90
10	86
6.3	81
5	78
3.35	75
2	72
1.18	69
0.600	66
0.425	63
0.300	59
0.212	53
0.150	47
0.063	35.1



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Certificate for the Determination of Uniformity Coefficient to SHW, Series 600, Table 6/1, D60:D10

Report No: HS6269 UC
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Sampled by: Hixtra
Date Received: 22/09/2021

Method

Test: Testing was carried out in accordance with Specification for Highway Works, Volume 1, Series 600, Table 6/1.
Deviations: Client requested no sedimentation tests to be carried out. Therefore the D10 could not be determined. Results are a minimum value.

Test Results

Hixtra Sample Number:	Client Reference:	Uniformity Coefficient D60:D10
L1921	56	>17
L1922	57	>61
L1923	59	>5
L1924	60	>5

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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6275 L1947 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

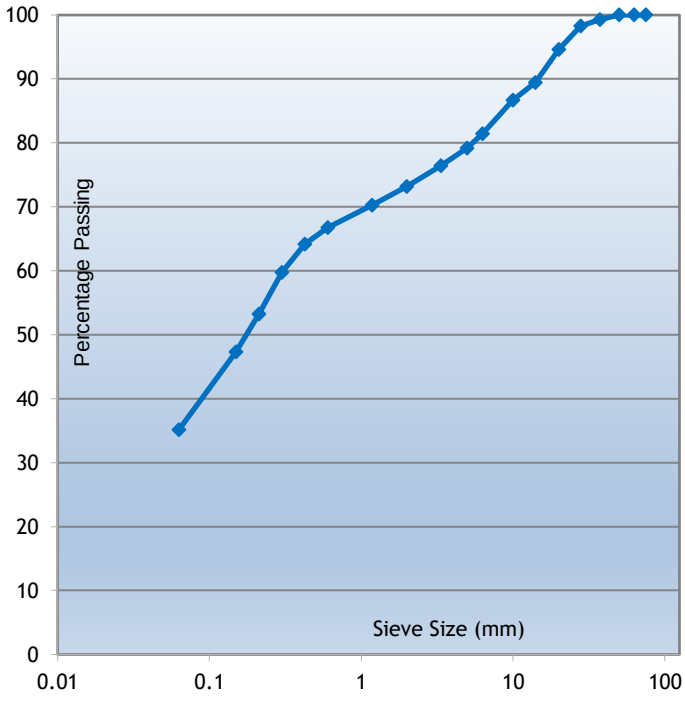
Sample No: L1947
Client Sample ID: 25
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	99
28	98
20	95
14	89
10	87
6.3	81
5	79
3.35	76
2	73
1.18	70
0.600	67
0.425	64
0.300	60
0.212	53
0.150	47
0.063	35.2



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6275 L1948 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

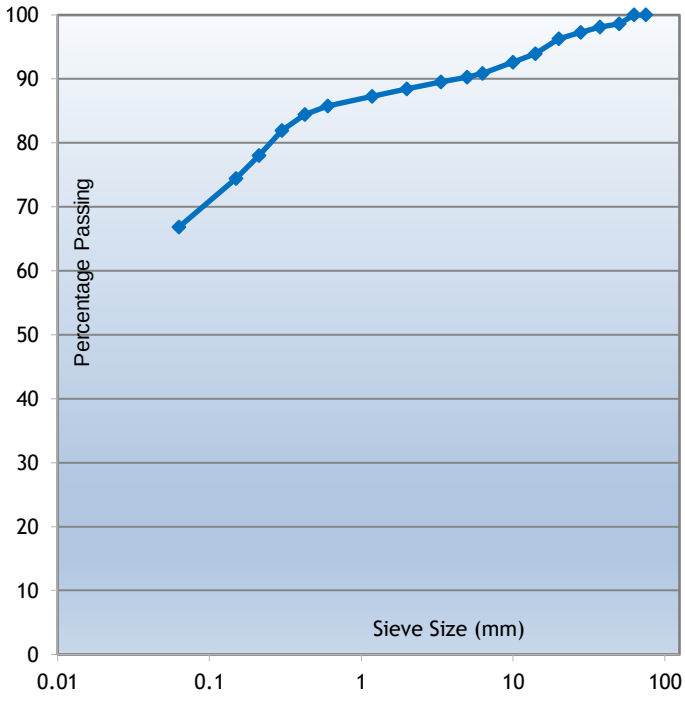
Sample No: L1948
Client Sample ID: 44
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	99
37.5	98
28	97
20	96
14	94
10	93
6.3	91
5	90
3.35	89
2	88
1.18	87
0.600	86
0.425	84
0.300	82
0.212	78
0.150	74
0.063	66.8



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Report No: HS6275 L1949 PSD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 01/10/2021
Date Tested: 28/09/2021

Test Details

Sample No: L1949
Sampled By: Hixtra
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

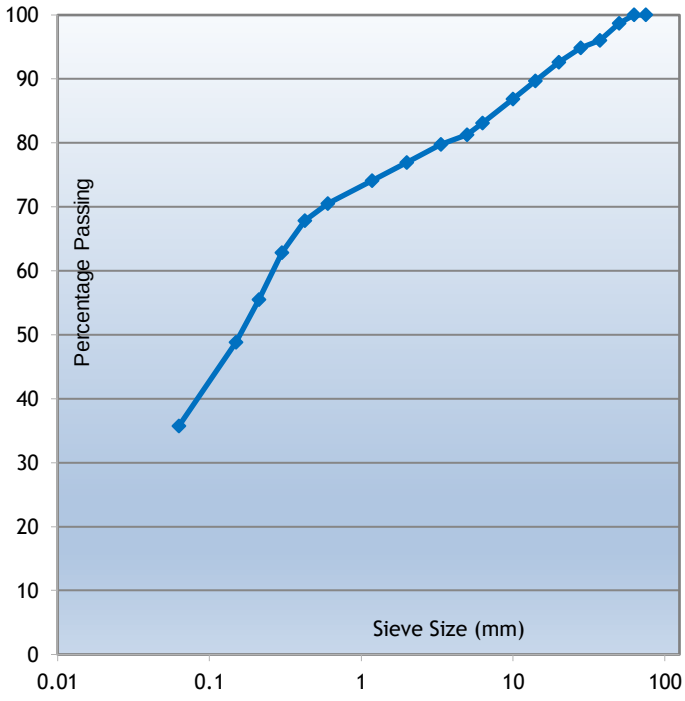
Client Sample ID: 55
Date Received: 23/09/2021

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	99
37.5	96
28	95
20	93
14	90
10	87
6.3	83
5	81
3.35	80
2	77
1.18	74
0.600	70
0.425	68
0.300	63
0.212	55
0.150	49
0.063	35.8



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6275 L1961 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

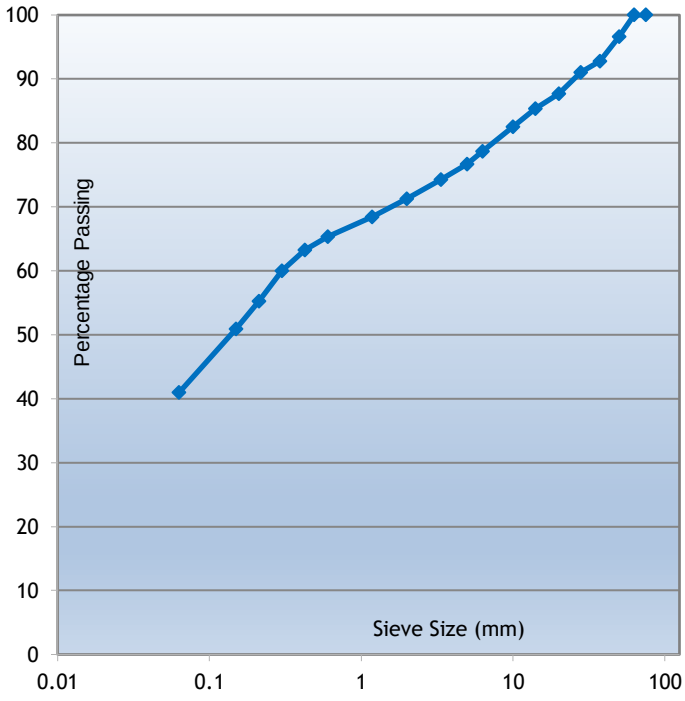
Sample No: L1961
Client Sample ID: 14
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	97
37.5	93
28	91
20	88
14	85
10	83
6.3	79
5	77
3.35	74
2	71
1.18	68
0.600	65
0.425	63
0.300	60
0.212	55
0.150	51
0.063	40.9



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Report No: HS6275 L1962 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 30/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

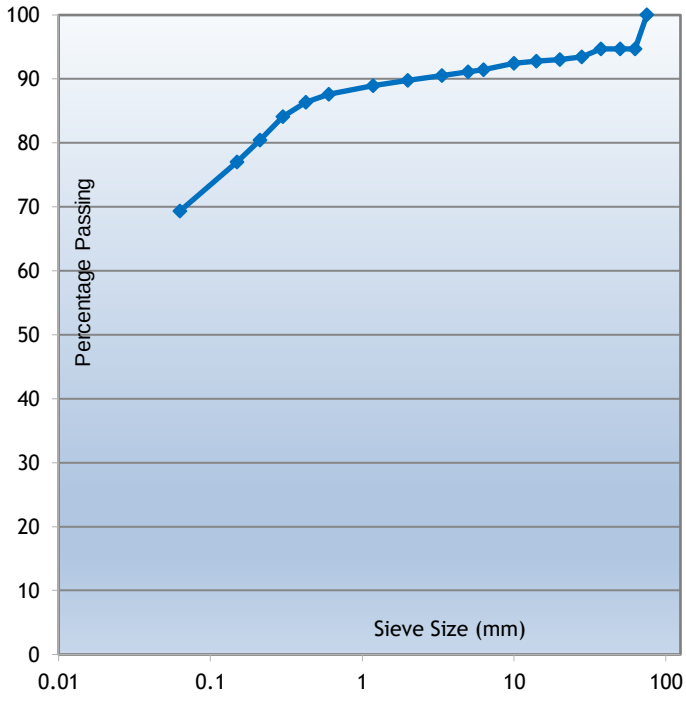
Sample No: L1962
Client Sample ID: 23
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	95
50	95
37.5	95
28	93
20	93
14	93
10	92
6.3	91
5	91
3.35	91
2	90
1.18	89
0.600	88
0.425	86
0.300	84
0.212	80
0.150	77
0.063	69.4



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Report No: HS6275 L1963 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

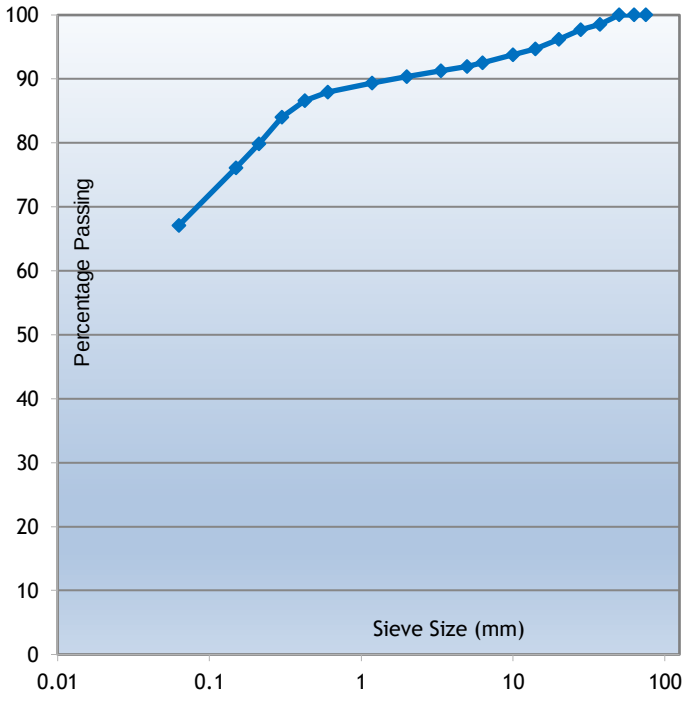
Sample No: L1963
Client Sample ID: 29
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	99
28	98
20	96
14	95
10	94
6.3	93
5	92
3.35	91
2	90
1.18	89
0.600	88
0.425	87
0.300	84
0.212	80
0.150	76
0.063	67.1



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Report No: HS6275 L1964 PSD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 01/10/2021
Date Tested: 27/09/2021

Test Details

Sample No: L1964
Sampled By: Hixtra
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

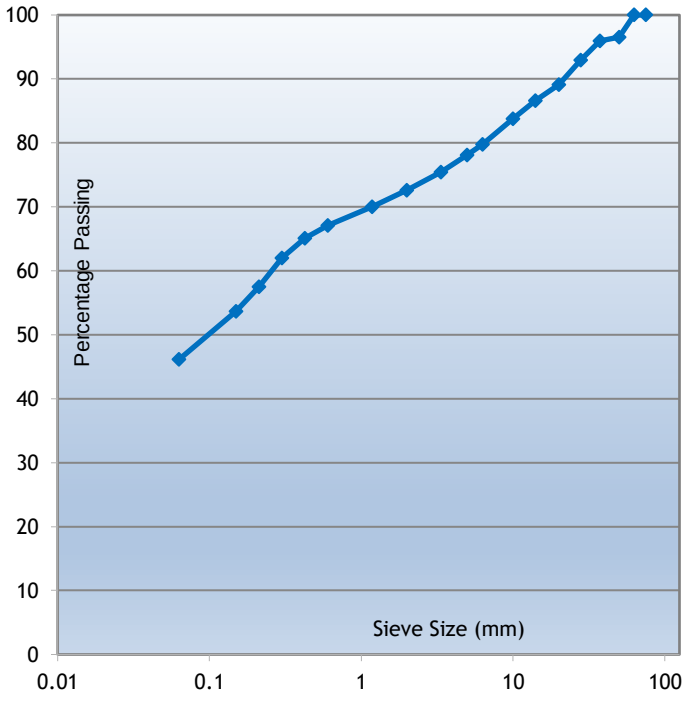
Client Sample ID: 17
Date Received: 23/09/2021

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	97
37.5	96
28	93
20	89
14	87
10	84
6.3	80
5	78
3.35	75
2	73
1.18	70
0.600	67
0.425	65
0.300	62
0.212	58
0.150	54
0.063	46.1



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6275 L1965 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 28/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

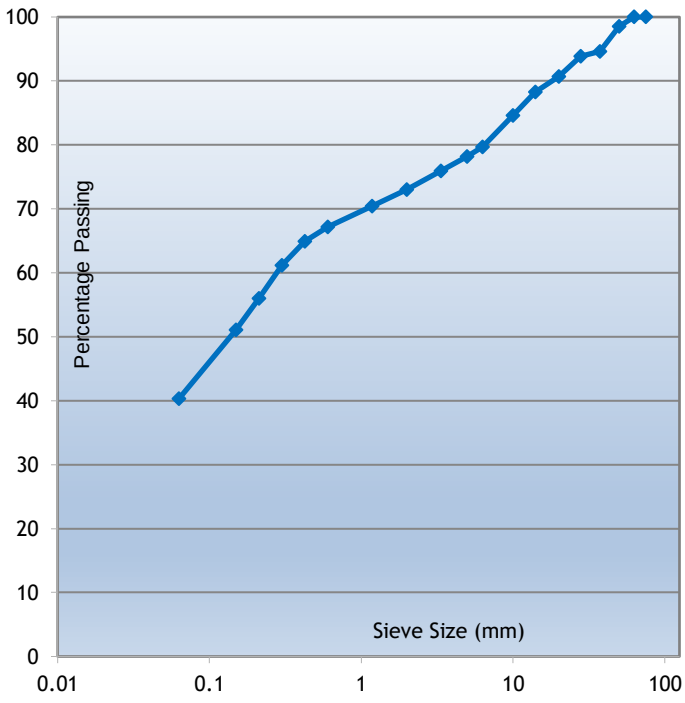
Sample No: L1965
Client Sample ID: 18
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	99
37.5	95
28	94
20	91
14	88
10	85
6.3	80
5	78
3.35	76
2	73
1.18	70
0.600	67
0.425	65
0.300	61
0.212	56
0.150	51
0.063	40.3



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Report No: HS6275 L1966 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

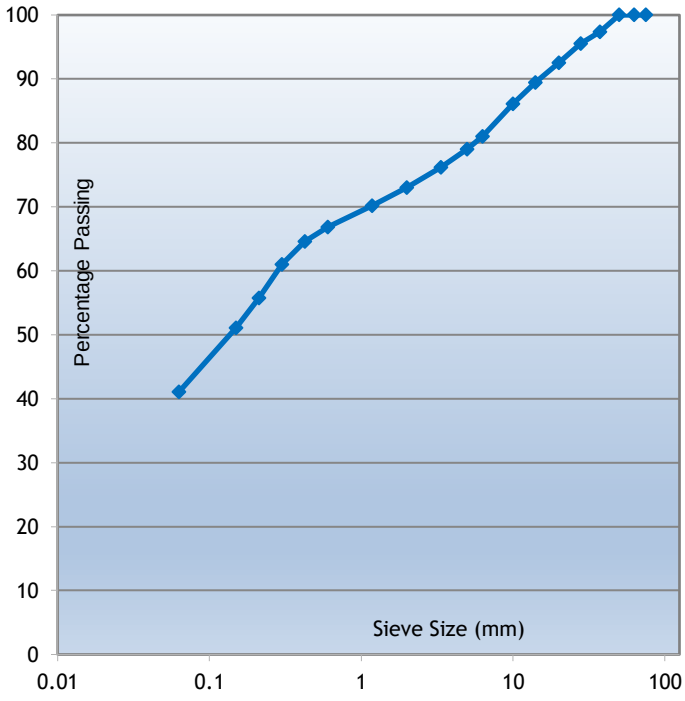
Sample No: L1966
Client Sample ID: 22
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	97
28	96
20	93
14	89
10	86
6.3	81
5	79
3.35	76
2	73
1.18	70
0.600	67
0.425	65
0.300	61
0.212	56
0.150	51
0.063	41.1



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Report No: HS6275 L1967 PSD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 01/10/2021
Date Tested: 27/09/2021

Test Details

Sample No: L1967
Sampled By: Hixtra
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

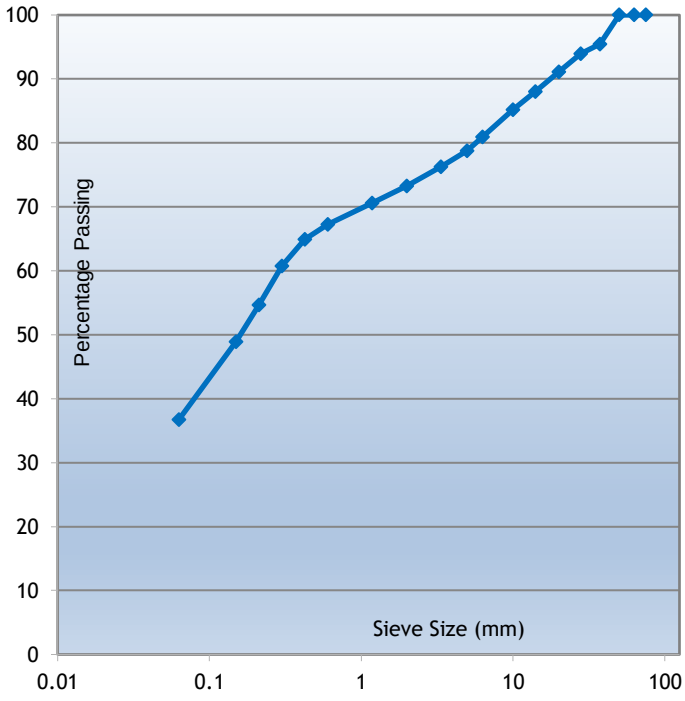
Client Sample ID: 24
Date Received: 23/09/2021

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	95
28	94
20	91
14	88
10	85
6.3	81
5	79
3.35	76
2	73
1.18	71
0.600	67
0.425	65
0.300	61
0.212	55
0.150	49
0.063	36.8



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Report No: HS6275 L1968 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

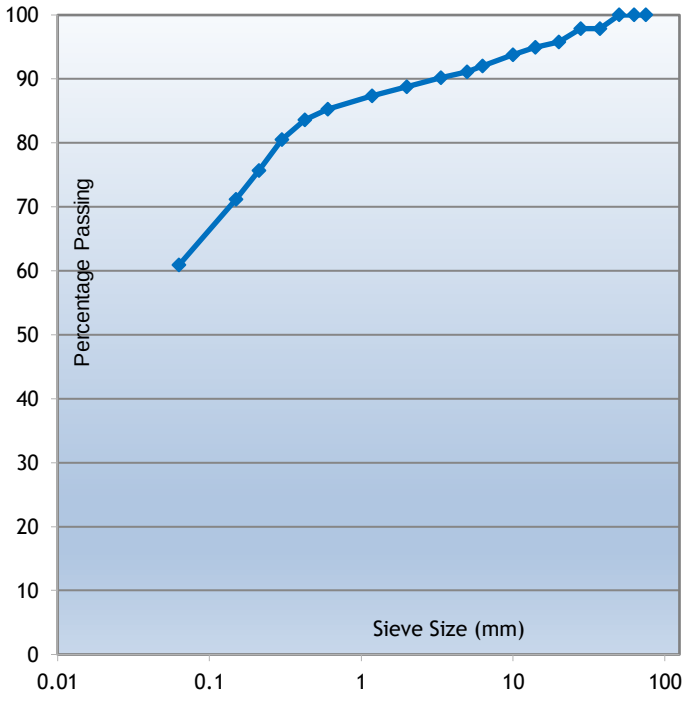
Sample No: L1968
Client Sample ID: 31
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	98
28	98
20	96
14	95
10	94
6.3	92
5	91
3.35	90
2	89
1.18	87
0.600	85
0.425	84
0.300	81
0.212	76
0.150	71
0.063	60.9



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Report No: HS6275 L1969 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

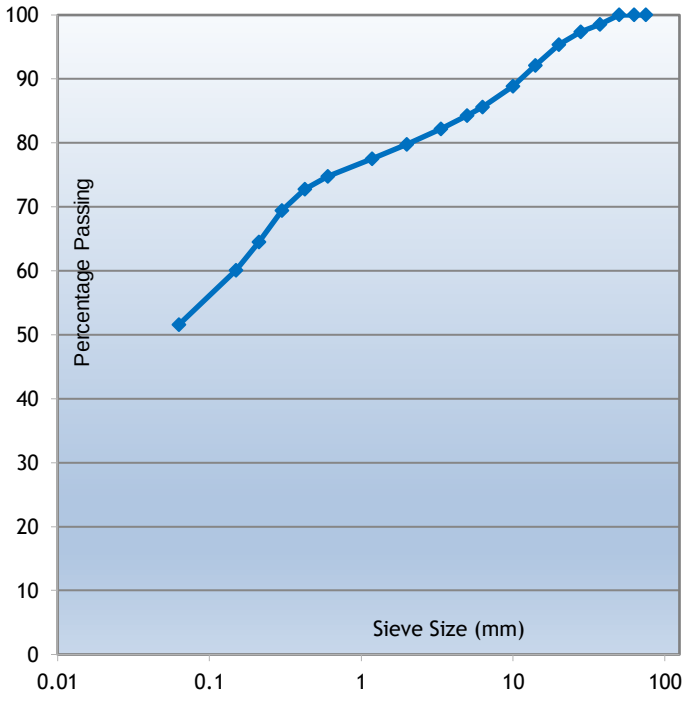
Sample No: L1969
Client Sample ID: 43
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	99
28	97
20	95
14	92
10	89
6.3	86
5	84
3.35	82
2	80
1.18	77
0.600	75
0.425	73
0.300	69
0.212	64
0.150	60
0.063	51.6



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Report No: HS6275 L1970 PSD
Report Date: 01/10/2021
Client: LK Consult Ltd
Date Tested: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

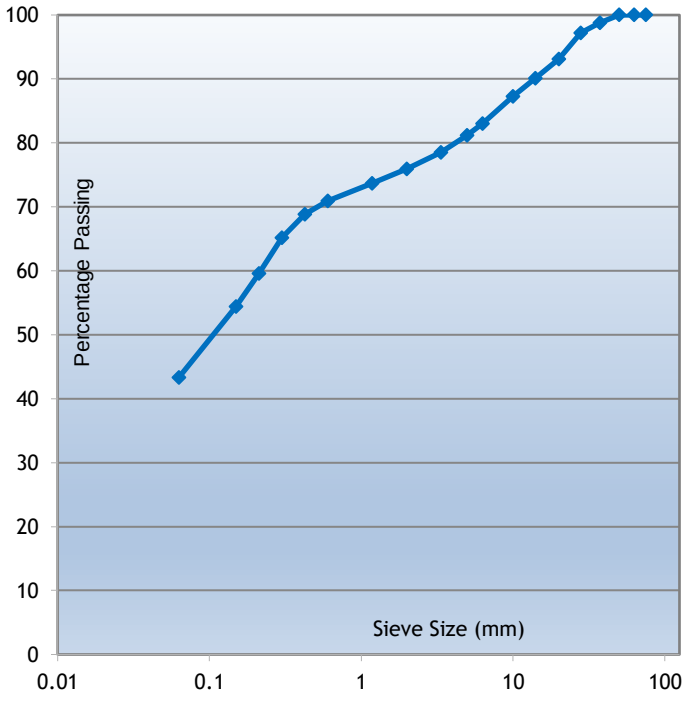
Sample No: L1970
Client Sample ID: 45
Sampled By: Hixtra
Date Received: 23/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	99
28	97
20	93
14	90
10	87
6.3	83
5	81
3.35	79
2	76
1.18	74
0.600	71
0.425	69
0.300	65
0.212	60
0.150	54
0.063	43.4



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of Uniformity Coefficient to SHW, Series 600, Table 6/1, D60:D10

Report No: HS6275 UC
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Sampled by: Hixtra
Date Received: 23/09/2021

Method

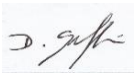
Test: Testing was carried out in accordance with Specification for Highway Works, Volume 1, Series 600, Table 6/1.
Deviations: Client requested no sedimentation tests to be carried out. Therefore the D10 could not be determined. Results are a minimum value.

Test Results

Hixtra Sample Number:	Client Reference:	Uniformity Coefficient D60:D10
L1947	25	>5
L1948	44	n/a
L1949	55	>4
L1961	14	>5
L1962	23	n/a
L1963	29	n/a
L1964	17	>4
L1965	18	>4
L1966	22	>4
L1967	24	>5
L1968	31	n/a
L1969	43	>2
L1670	45	>3

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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1973 PSD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 13/10/2021
Date Tested: 04/10/2021

Test Details

Sample No: L1973
Sampled By: Hixtra
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

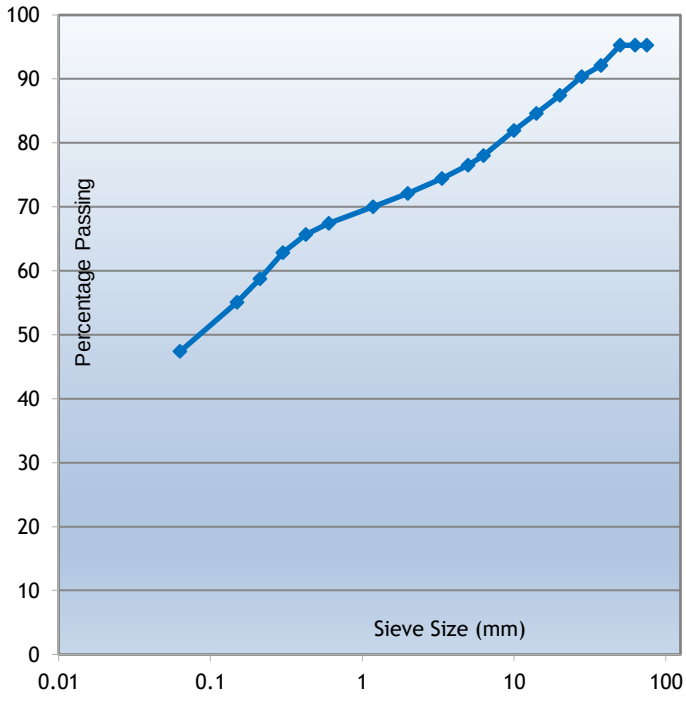
Client Sample ID: 9
Date Received: 24/09/2021

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	95
63	95
50	95
37.5	92
28	90
20	87
14	85
10	82
6.3	78
5	77
3.35	74
2	72
1.18	70
0.600	67
0.425	66
0.300	63
0.212	59
0.150	55
0.063	47.4



The results relate to the items tested only.

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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1974 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 30/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

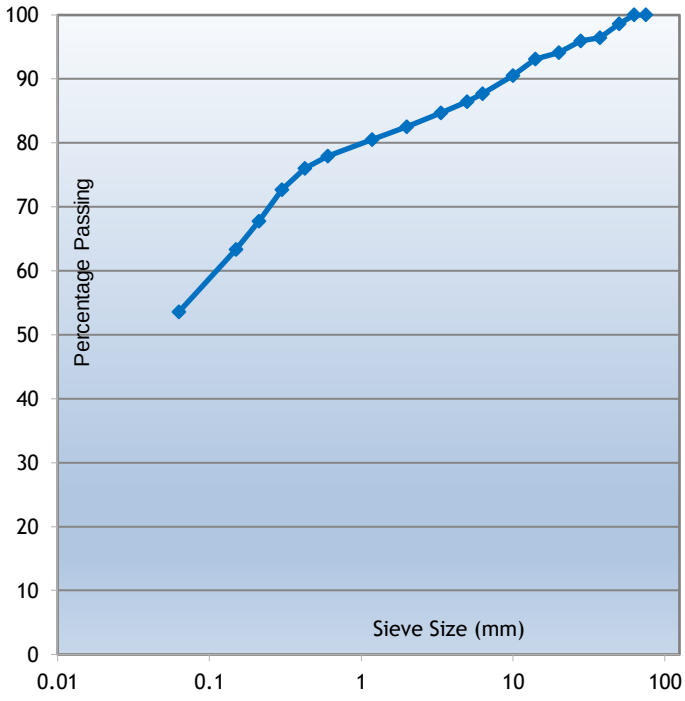
Sample No: L1974
Client Sample ID: 11
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Dark grey slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	99
37.5	96
28	96
20	94
14	93
10	91
6.3	88
5	86
3.35	85
2	83
1.18	81
0.600	78
0.425	76
0.300	73
0.212	68
0.150	63
0.063	53.6



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1975 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

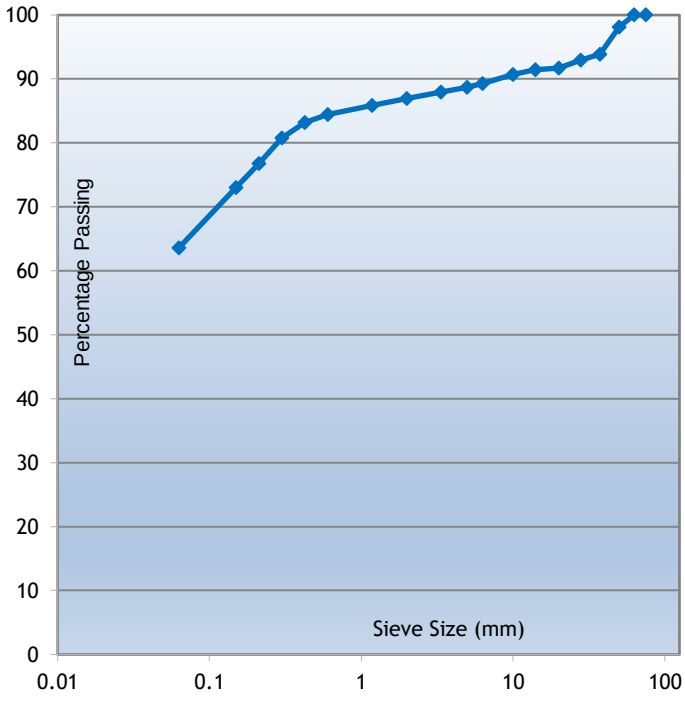
Sample No: L1975
Client Sample ID: 36
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	98
37.5	94
28	93
20	92
14	91
10	91
6.3	89
5	89
3.35	88
2	87
1.18	86
0.600	84
0.425	83
0.300	81
0.212	77
0.150	73
0.063	63.6



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1976 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

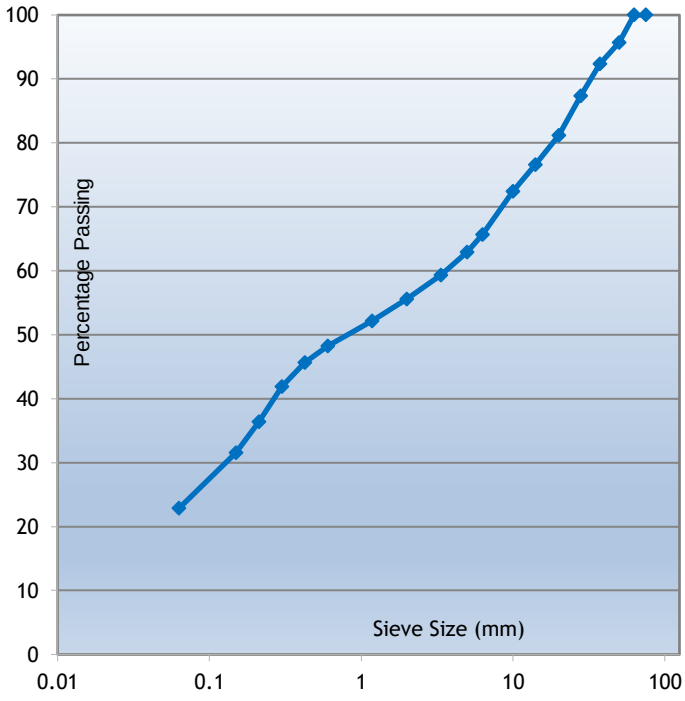
Sample No: L1976
Client Sample ID: 38
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Dark grey gravelly sandy ASH with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	96
37.5	92
28	87
20	81
14	77
10	72
6.3	66
5	63
3.35	59
2	56
1.18	52
0.600	48
0.425	46
0.300	42
0.212	36
0.150	32
0.063	22.9



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1977 PSD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date Tested: 04/10/2021

Test Details

Sample No: L1977
Sampled By: Hixtra
Description: Dark grey very clayey GRAVEL/SAND with occasional brick dust/rubble

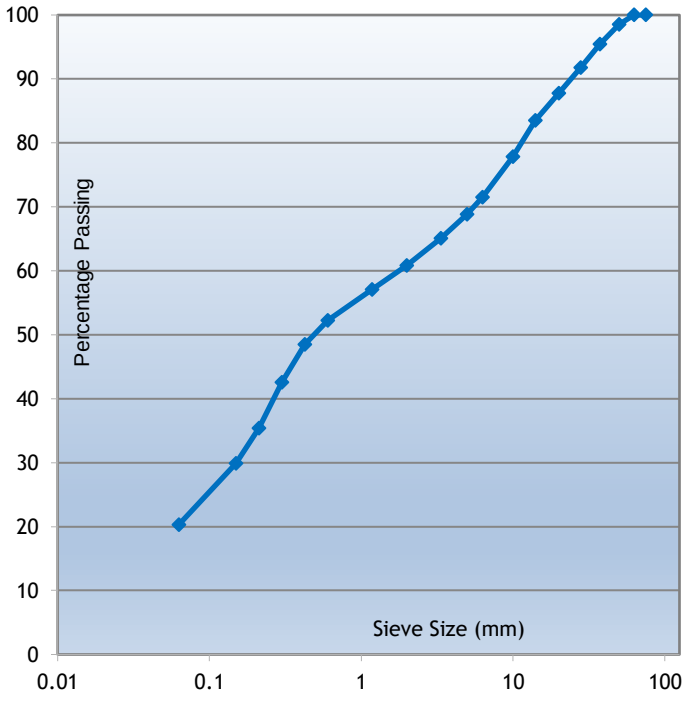
Client Sample ID: 42
Date Received: 24/09/2021

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	99
37.5	95
28	92
20	88
14	84
10	78
6.3	71
5	69
3.35	65
2	61
1.18	57
0.600	52
0.425	48
0.300	43
0.212	35
0.150	30
0.063	20.3



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1978 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

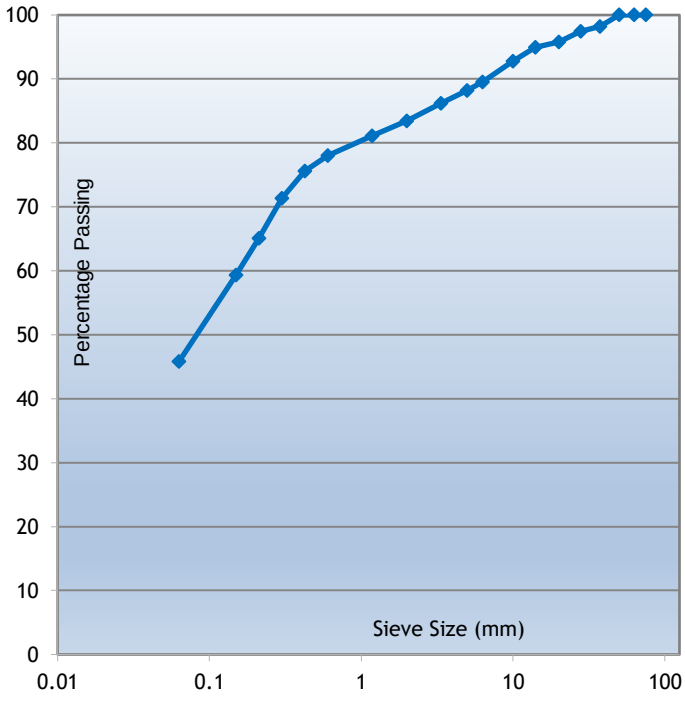
Sample No: L1978
Client Sample ID: 7
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	98
28	97
20	96
14	95
10	93
6.3	90
5	88
3.35	86
2	83
1.18	81
0.600	78
0.425	76
0.300	71
0.212	65
0.150	59
0.063	45.8



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1979 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

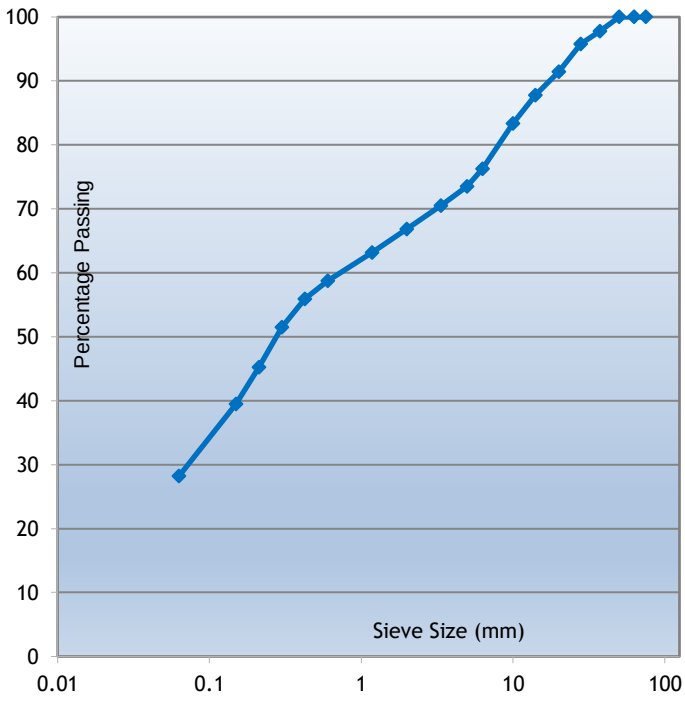
Sample No: L1979
Client Sample ID: 8
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Dark grey slightly gravelly clayey SAND with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	98
28	96
20	91
14	88
10	83
6.3	76
5	74
3.35	71
2	67
1.18	63
0.600	59
0.425	56
0.300	52
0.212	45
0.150	40
0.063	28.2



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Certificate for the Determination of the Particle Size Distribution of Soil to BS EN ISO 17892-4:2016: Clause 5.2

Report No: HS6283 L1980 PSD
Report Date: 08/10/2021
Client: LK Consult Ltd
Date Tested: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

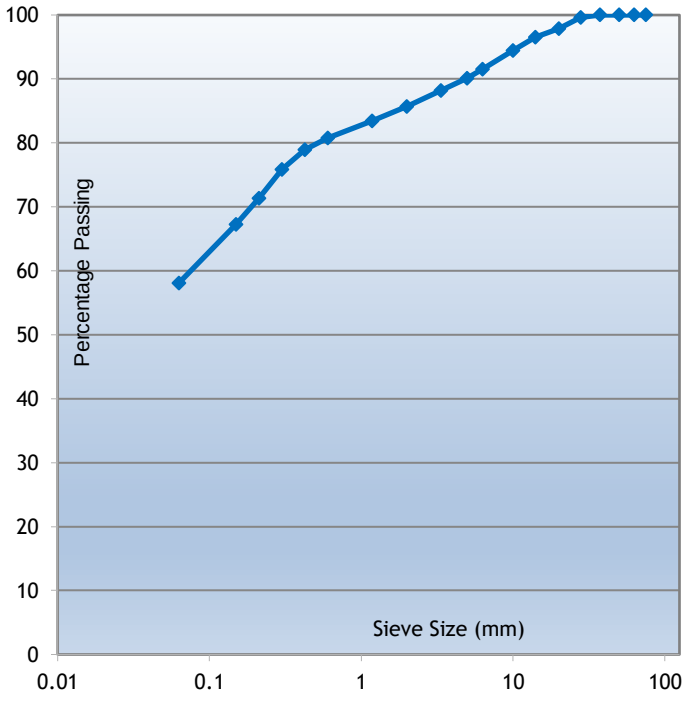
Sample No: L1980
Client Sample ID: 41
Sampled By: Hixtra
Date Received: 24/09/2021
Description: Dark brown slightly gravelly slightly sandy CLAY with occasional brick dust/rubble

Method

Test: Testing was carried out in accordance with BS EN ISO 17892-4:2016:Clause 5.2
Deviations: No deviations from the test method were employed.

Test Results

Aperture size (mm)	% passing
75	100
63	100
50	100
37.5	100
28	100
20	98
14	96
10	94
6.3	92
5	90
3.35	88
2	86
1.18	83
0.600	81
0.425	79
0.300	76
0.212	71
0.150	67
0.063	58.1



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Milton Keynes
MK8 8DD

Certificate for the Determination of Uniformity Coefficient to SHW, Series 600, Table 6/1, D60:D10

Report No: HS6283 UC
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 04/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Sampled by: Hixtra
Date Received: 24/09/2021

Method

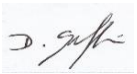
Test: Testing was carried out in accordance with Specification for Highway Works, Volume 1, Series 600, Table 6/1.
Deviations: Client requested no sedimentation tests to be carried out. Therefore the D10 could not be determined. Results are a minimum value.

Test Results

Hixtra Sample Number:	Client Reference:	Uniformity Coefficient D60:D10
L1973	9	>4
L1974	11	>2
L1975	36	n/a
L1976	38	>58
L1977	42	>29
L1978	7	>3
L1979	8	>12
L1980	41	n/a

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Certificate for the Determination of Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index of Soil to BS 1377 Part 2 1990

Report No: HS6234 MCPI
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

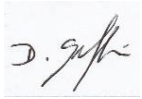
Report Date: 22/09/2021
Date sample received: 14/09/2021
Date sample tested: 15-21/9/21
Liquid Limt test clause: 4.4
Plastic limit test clause: 5.3
Hixtra Batch No: HS6234

Test Results

Sample Number	Sample description	Client ref	% of sample retained on 425µm sieve	Tested from natural state or sieved	Natural Moisture Content, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %
L1883	Dark grey gravelly sandy CLAY	Plot 1-3, S30	55	Sieved	16	38	21	17
L1884	Dark grey gravelly sandy CLAY	Plot 1-3, S15	50	Sieved	16	37	21	16
L1885	Dark grey gravelly clayey ASH	Plot 4-6, S30	54	Sieved	22	42	29	13
L1886	Dark grey gravelly clayey ASH	Plot 4-6, S15	54	Sieved	22	42	28	13

The results relate to the items tested only.

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Certificate for the Determination of Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index of Soil to BS 1377 Part 2 1990

Report No: HS6269 MCPI
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date sample received: 22/09/2021
Date sample tested: 05/10/2021
Liquid Limt test clause: 4.4
Plastic limit test clause: 5.3
Hixtra Batch No: HS6269

Test Results

Sample Number	Sample description	Client ref	% of sample retained on 425µm sieve	Tested from natural state or sieved	Natural Moisture Content, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %
L1922	Dark brown gravelly clayey SAND	57	51	Sieved	9.0		Non-plastic	
L1923	Dark brown gravelly sandy CLAY	59	35	Sieved	15	37	19	17
L1924	Dark brown gravelly sandy CLAY	60	37	Sieved	15	36	20	16

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Milton Keynes
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Certificate for the Determination of Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index of Soil to BS 1377 Part 2 1990

Report No: HS6275-1 MCPI
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

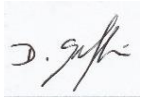
Report Date: 08/10/2021
Date sample received: 23/09/2021
Date sample tested: 05/10/2021
Liquid Limt test clause: 4.4
Plastic limit test clause: 5.3
Hixtra Batch No: HS6275

Test Results

Sample Number	Sample description	Client ref	% of sample retained on 425µm sieve	Tested from natural state or sieved	Natural Moisture Content, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %
L1947	Dark grey gravelly sandy CLAY	25	36	Sieved	17	41	20	21
L1948	Brown gravelly sandy CLAY	44	16	Sieved	14	41	18	23
L1949	Dark grey gravelly sandy CLAY	55	32	Sieved	12	37	19	17
L1961	Dark brown gravelly sandy CLAY	14	37	Sieved	17	42	21	22
L1962	Brown gravelly sandy CLAY	23	14	Sieved	11	39	19	20
L1963	Brown gravelly sandy CLAY	29	13	Sieved	14	40	18	22
L1964	Dark grey gravelly sandy CLAY	17	35	Sieved	17	43	20	22
L1965	Dark brown gravelly sandy CLAY	18	35	Sieved	15	42	21	21

The results relate to the items tested only.

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Milton Keynes
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Certificate for the Determination of Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index of Soil to BS 1377 Part 2 1990

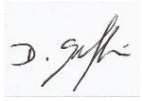
Report No: HS6275-2 MCPI
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date sample received: 23/09/2021
Date sample tested: 06/10/2021
Liquid Limt test clause: 4.4
Plastic limit test clause: 5.3
Hixtra Batch No: HS6275

Test Results

Sample Number	Sample description	Client ref	% of sample retained on 425µm sieve	Tested from natural state or sieved	Natural Moisture Content, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %
L1966	Dark grey gravelly sandy CLAY	22	35	Sieved	15	42	23	19
L1967	Brown gravelly sandy CLAY	24	35	Sieved	17	42	21	21
L1968	Dark grey gravelly sandy CLAY	31	16	Sieved	15	41	19	22
L1969	Dark brown gravelly sandy CLAY	43	27	Sieved	16	40	19	21
L1970	Dark brown gravelly sandy CLAY	45	31	Sieved	16	41	19	22

The results relate to the items tested only.
For and on Behalf of Hixtra Ltd



Derek Griffin
Authorised signatory

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Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of Moisture Content, Liquid Limit, Plastic Limit and Plasticity Index of Soil to BS 1377 Part 2 1990

Report No: HS6283 MCPI
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

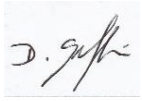
Report Date: 08/10/2021
Date sample received: 24/09/2021
Date sample tested: 07/10/2021
Liquid Limt test clause: 4.4
Plastic limit test clause: 5.3
Hixtra Batch No: HS6283

Test Results

Sample Number	Sample description	Client ref	% of sample retained on 425µm sieve	Tested from natural state or sieved	Natural Moisture Content, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index, %
L1973	Brown gravelly sandy CLAY	9	34	Sieved	8.8	49	21	28
L1974	Dark grey gravelly sandy CLAY	11	24	Sieved	14	40	20	20
L1975	Brown gravelly sandy CLAY	36	17	Sieved	12	38	19	20
L1976	Dark grey gravelly sandy ASH	38	54	Sieved	19		Non-plastic	
L1977	Grey very clayey GRAVEL/SAND	42	52	Sieved	12	36	23	13
L1978	Dark brown gravelly sandy CLAY	7	24	Sieved	12	41	21	19
L1979	Dark grey gravelly clayey SAND	8	44	Sieved	18	42	25	16
L1980	Dark brown gravelly sandy CLAY	41	21	Sieved	13	39	21	18

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd



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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6234 L1884 MCVRel	Report Date:	22/09/2021
Client:	LK Consult Ltd	Date received:	14/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	15/09/2021
		Sample Number:	L1884
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

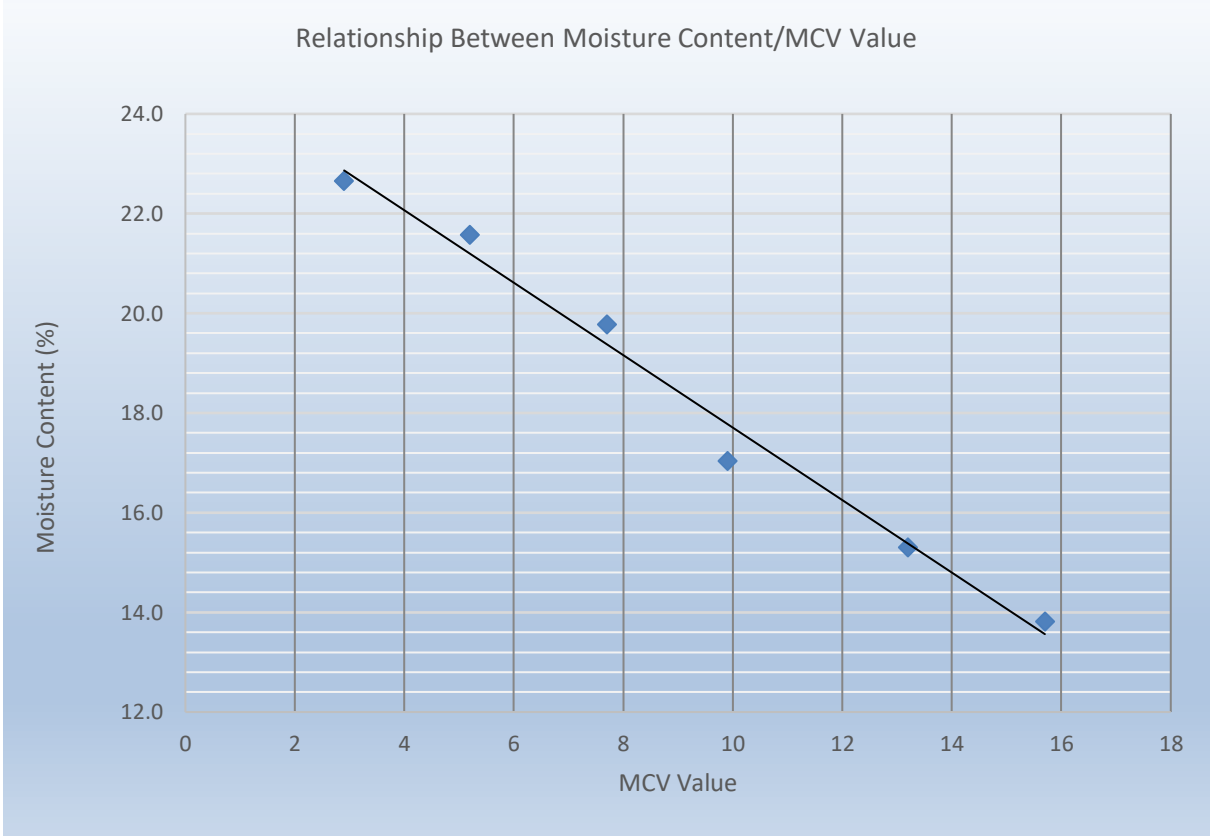
Test Details

Test Location:	Plot 1-3, S15	Percentage retained on 20mm sieve:	16
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Client

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6234 L1886 MCVRel	Report Date:	22/09/2021
Client:	LK Consult Ltd	Date received:	14/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	15/09/2021
		Sample Number:	L1886
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

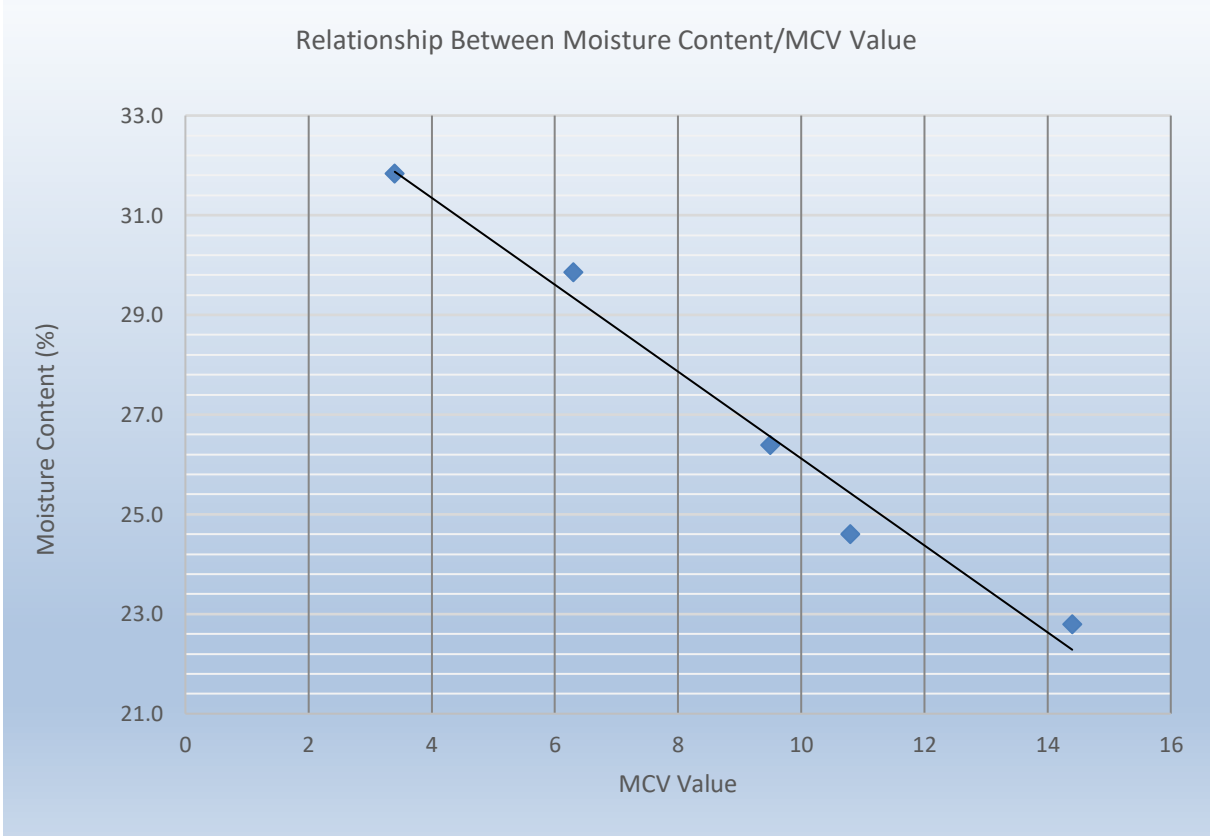
Test Details

Test Location:	Plot 4-6, S15	Percentage retained on 20mm sieve:	17
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly clayey ASH	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Client

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6269 L1922 MCVRel	Report Date:	11/10/2021
Client:	LK Consult Ltd	Date received:	22/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	30/09/2021
		Sample Number:	L1922
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

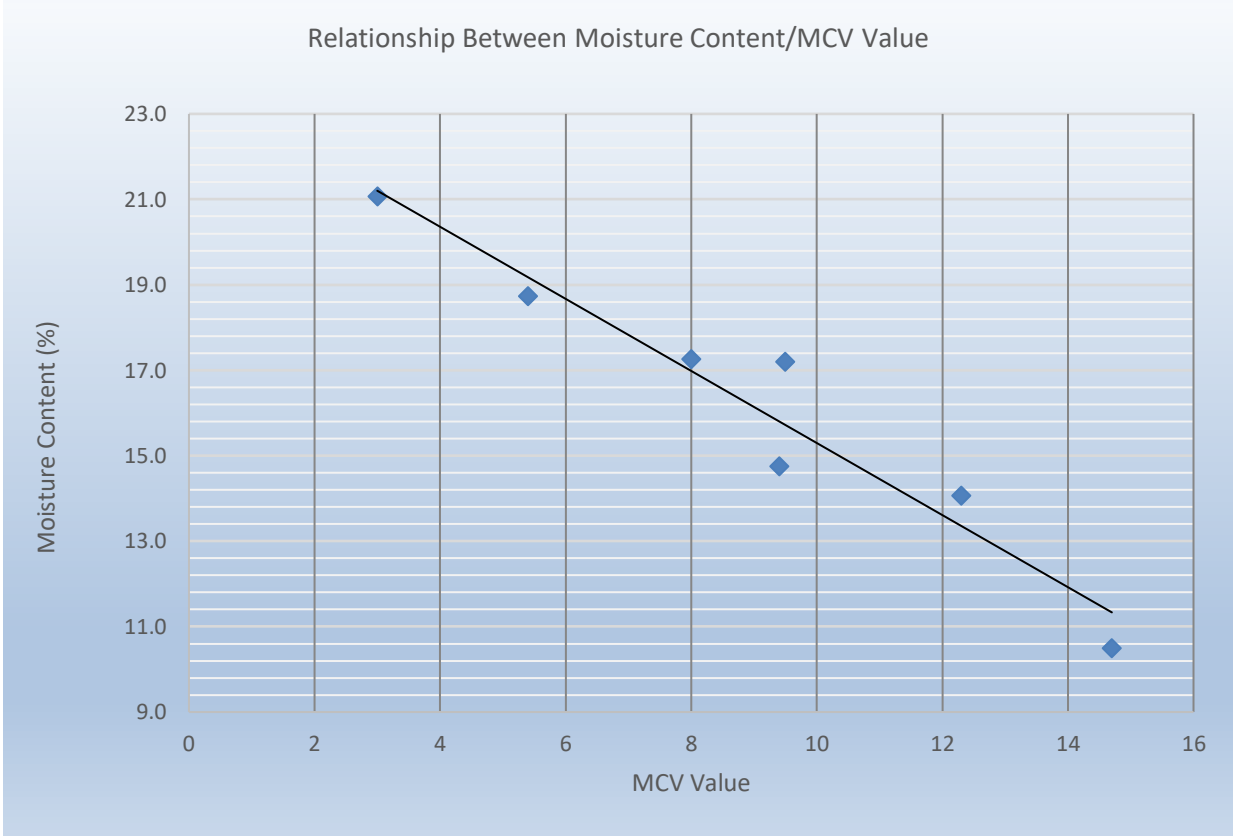
Test Details

Test Location:	57	Percentage retained on 20mm sieve:	27
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Dark brown gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6269 L1923 MCVRel	Report Date:	02/10/2021
Client:	LK Consult Ltd	Date received:	22/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	29/09/2021
		Sample Number:	L1923
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

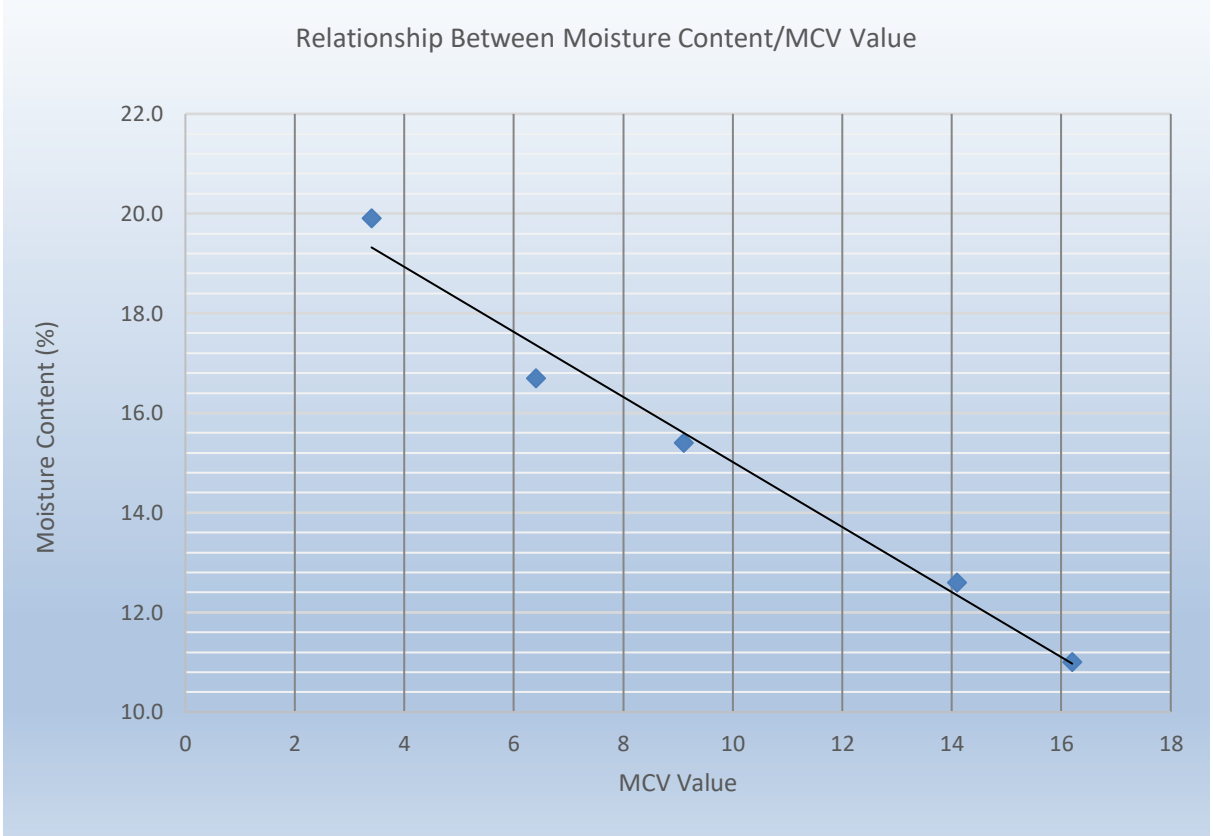
Test Details

Test Location:	59	Percentage retained on 20mm sieve:	7
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Dark brown gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test:	Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations:	No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1947 MCVRel	Report Date:	08/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	01/10/2021
		Sample Number:	L1947
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

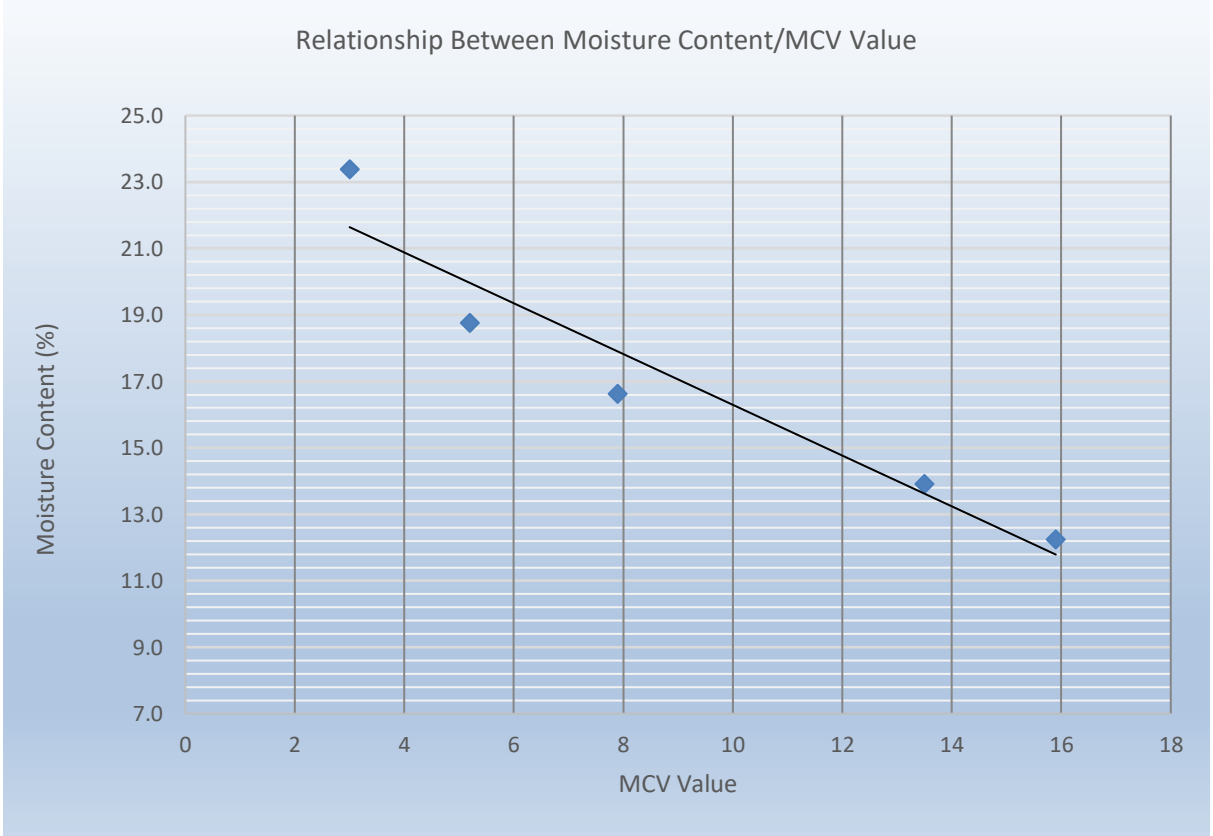
Test Details

Test Location:	25	Percentage retained on 20mm sieve:	5
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Dark grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

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Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1948 MCVRel	Report Date:	08/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	07/10/2021
		Sample Number:	L1948
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

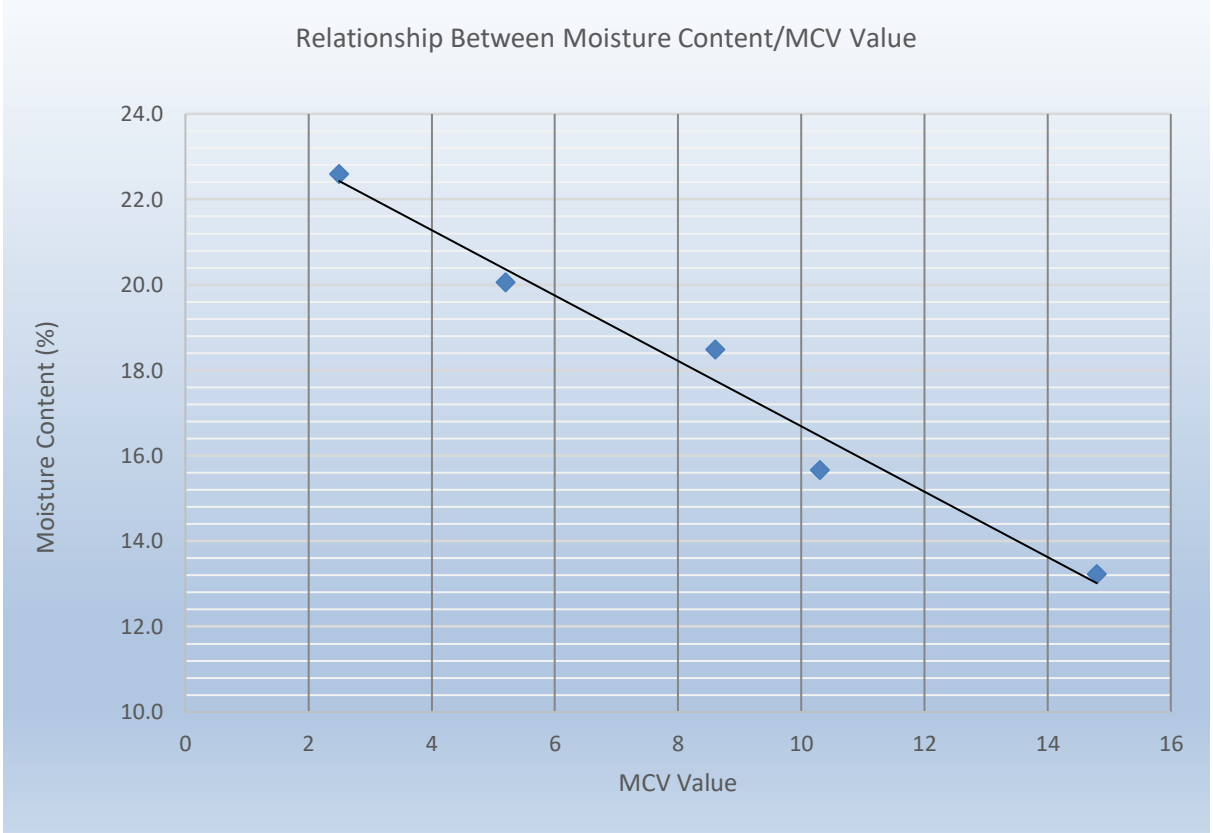
Test Details

Test Location:	44	Percentage retained on 20mm sieve:	4
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Brown gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

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Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1949 MCVRel	Report Date:	08/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	01/10/2021
		Sample Number:	L1949
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

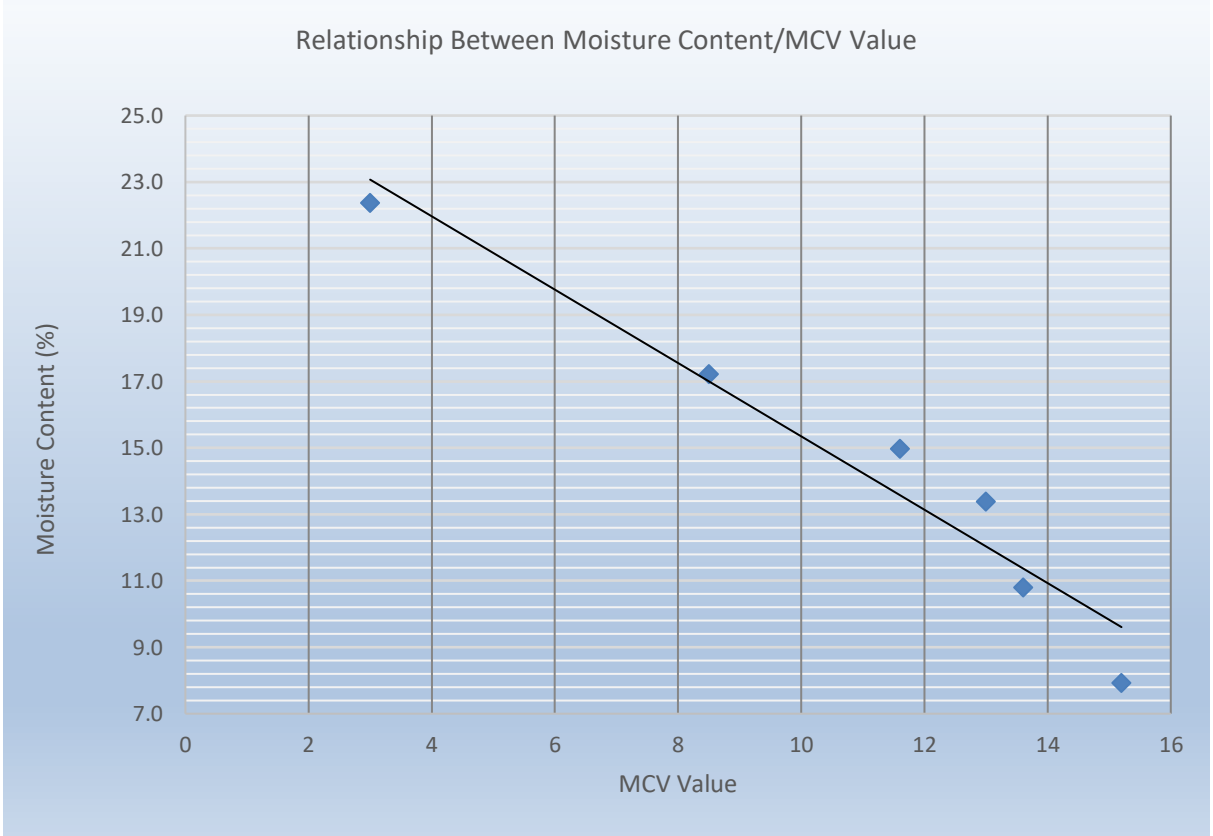
Test Details

Test Location:	55	Percentage retained on 20mm sieve:	7
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Dark grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

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Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1961 MCVRel	Report Date:	02/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	30/09/2021
		Sample Number:	L1961
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

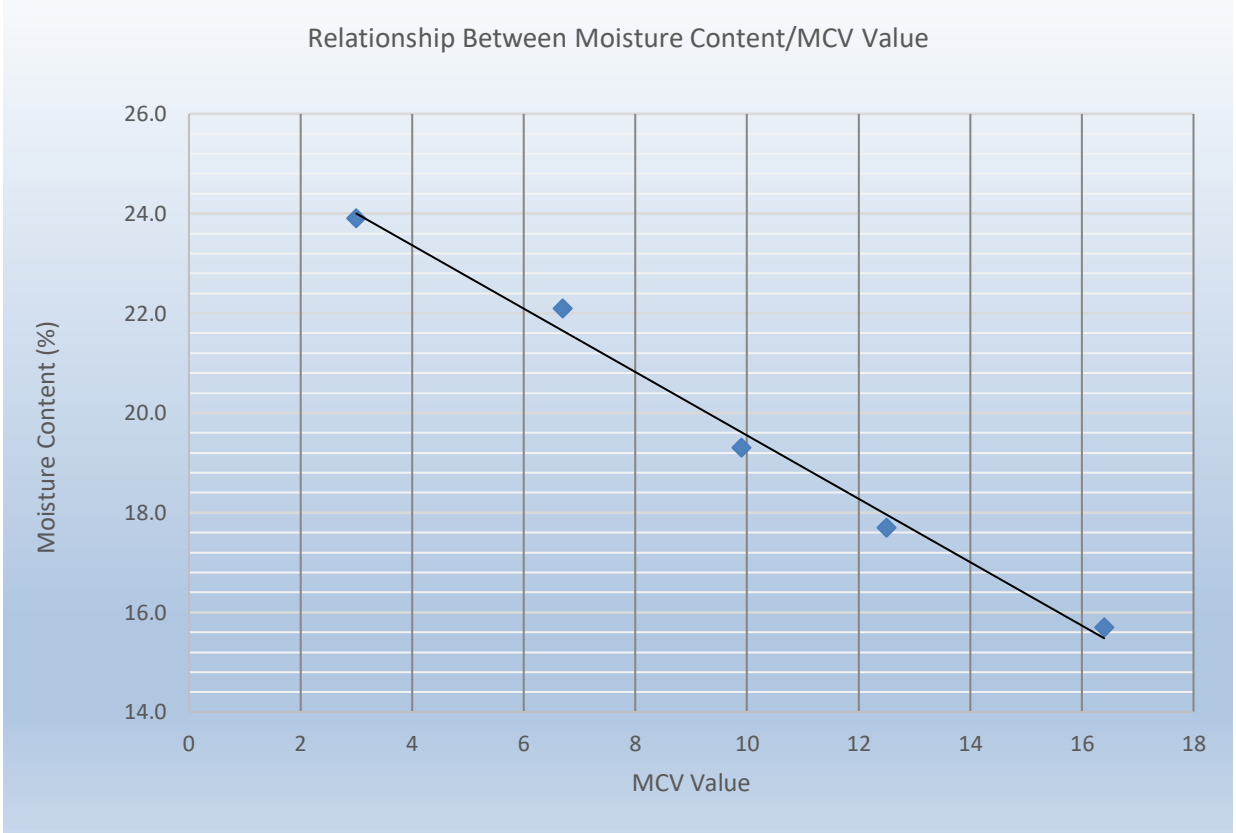
Test Details

Test Location:	14	Percentage retained on 20mm sieve:	12
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Dark brown gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1962 MCVRel	Report Date:	11/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	07/10/2021
		Sample Number:	L1962
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

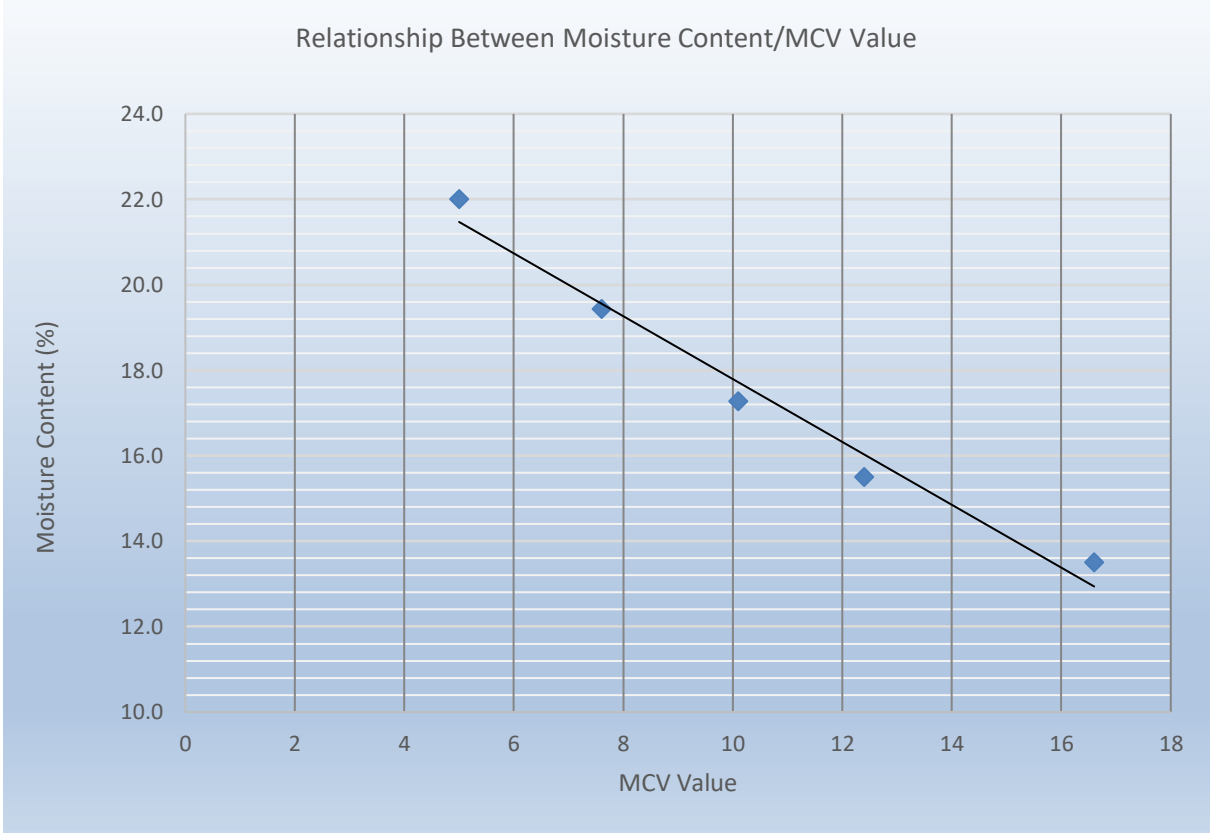
Test Details

Test Location:	23	Percentage retained on 20mm sieve:	7
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1963 MCVRel	Report Date:	13/10/2021
Client:	LK Consult Ltd	Date received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	08/10/2021
		Sample Number:	L1963
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

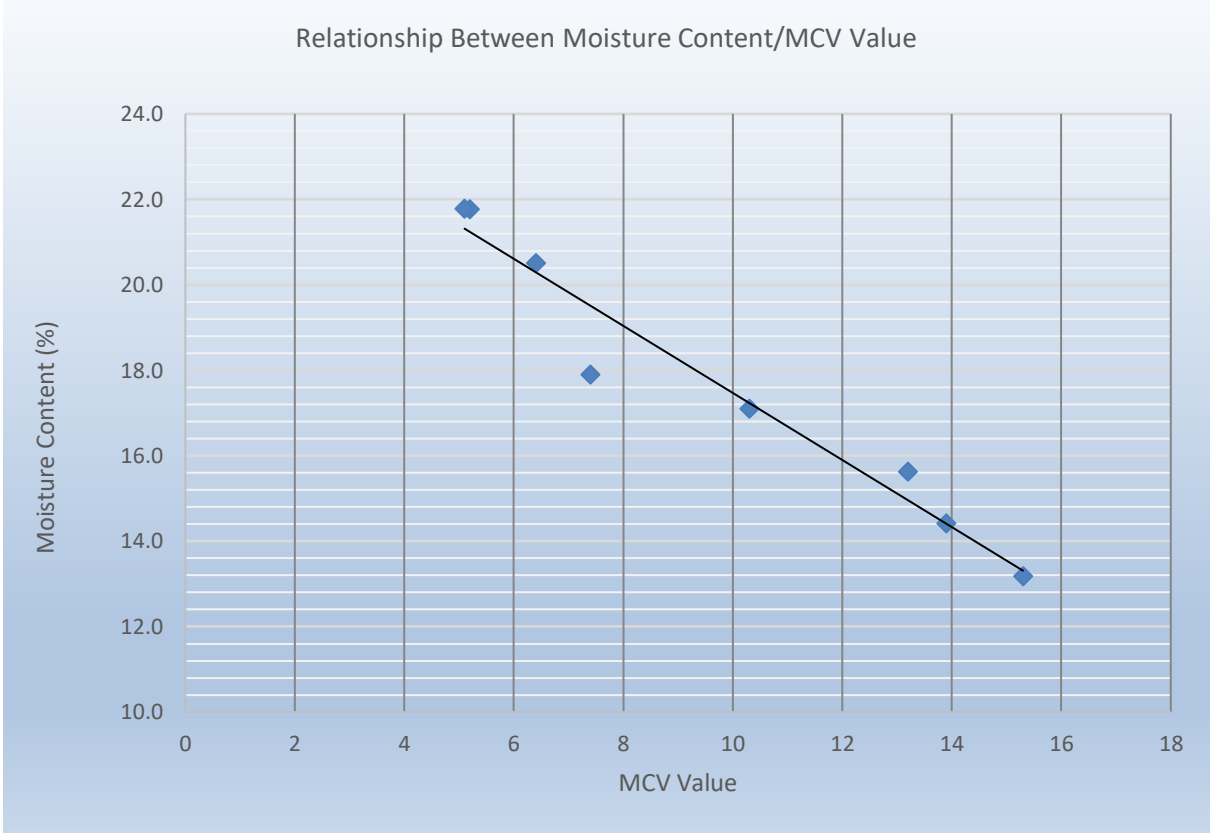
Test Details

Test Location:	29	Percentage retained on 20mm sieve:	4
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1973 MCVRel	Report Date:	13/10/2021
Client:	LK Consult Ltd	Date received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	08/10/2021
		Sample Number:	L1973
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

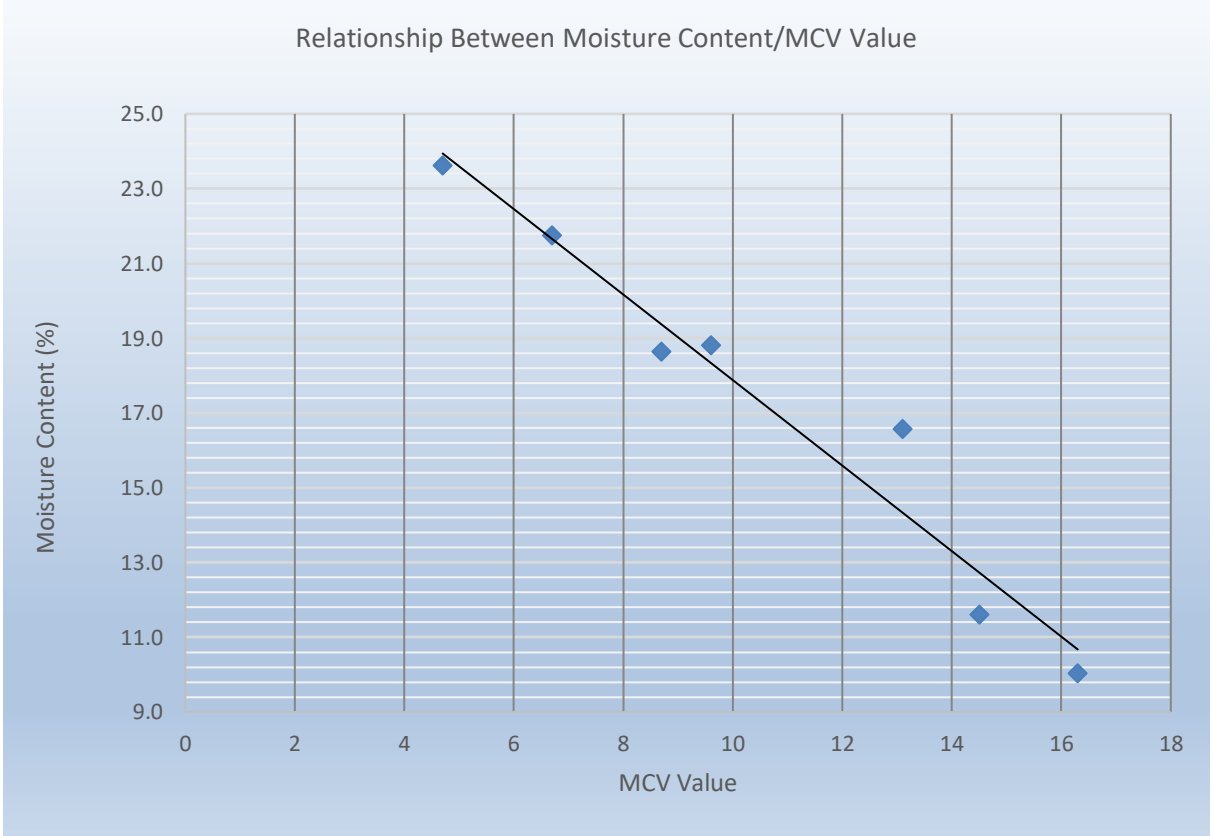
Test Details

Test Location:	9	Percentage retained on 20mm sieve:	13
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1974 MCVRel	Report Date:	08/10/2021
Client:	LK Consult Ltd	Date received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	07/10/2021
		Sample Number:	L1974
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

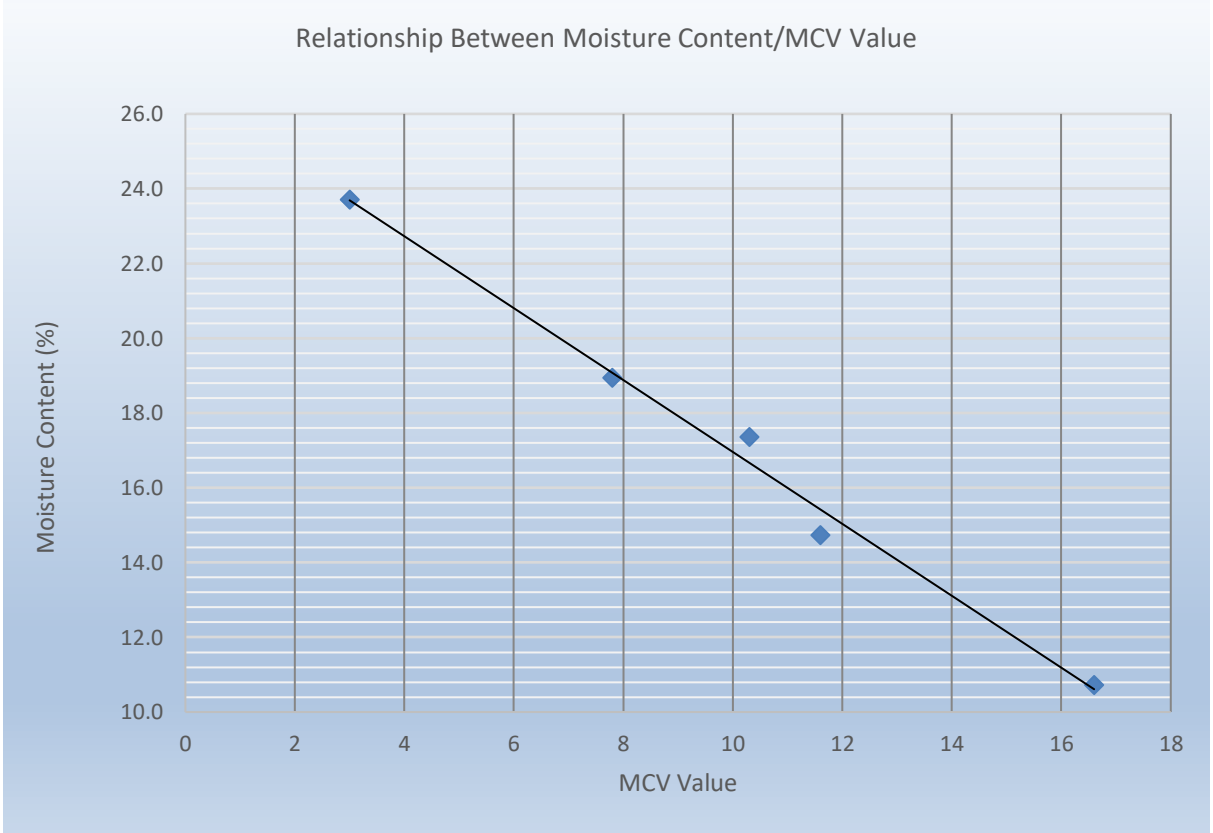
Test Details

Test Location:	11	Percentage retained on 20mm sieve:	6
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1975 MCVRel	Report Date:	13/10/2021
Client:	LK Consult Ltd	Date received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	08/10/2021
		Sample Number:	L1975
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

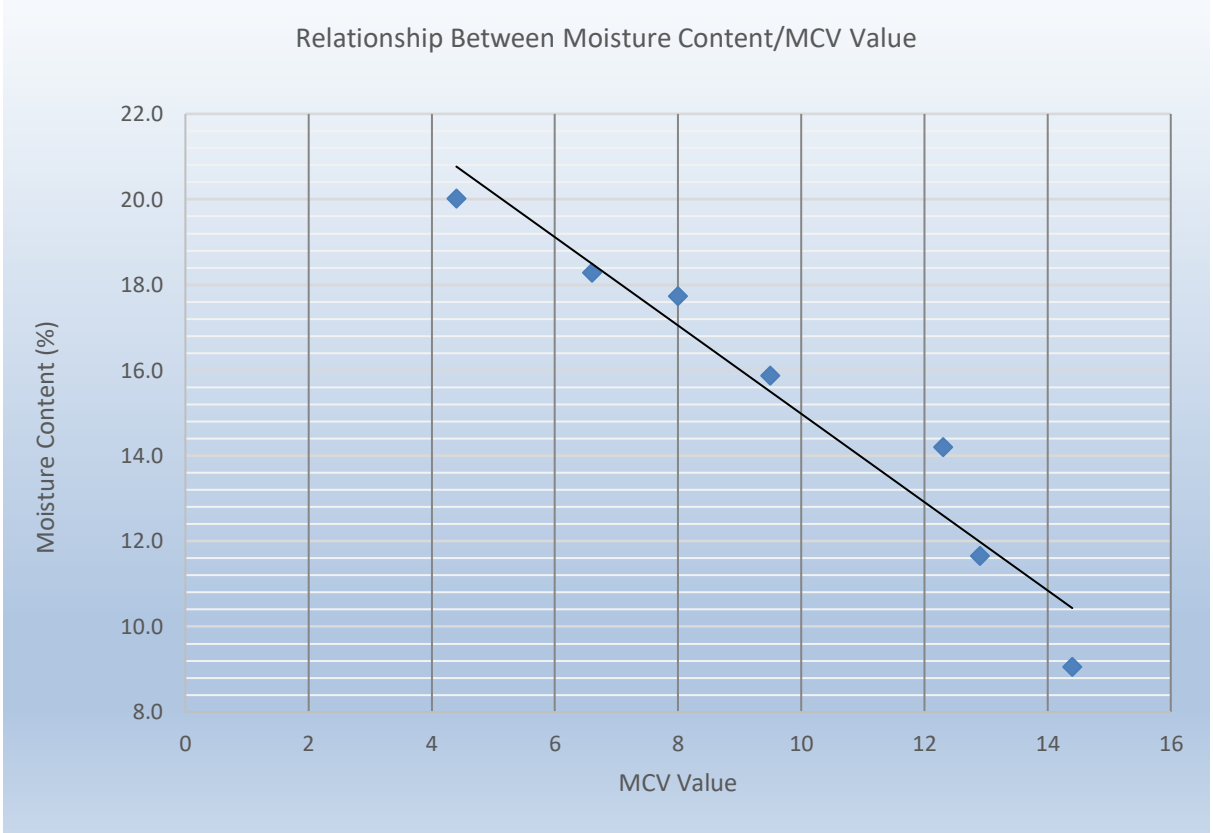
Test Details

Test Location:	36	Percentage retained on 20mm sieve:	8
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Authorised signatory

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Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1976 MCVRel	Report Date:	13/10/2021
Client:	LK Consult Ltd	Date received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	08/10/2021
		Sample Number:	L1976
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

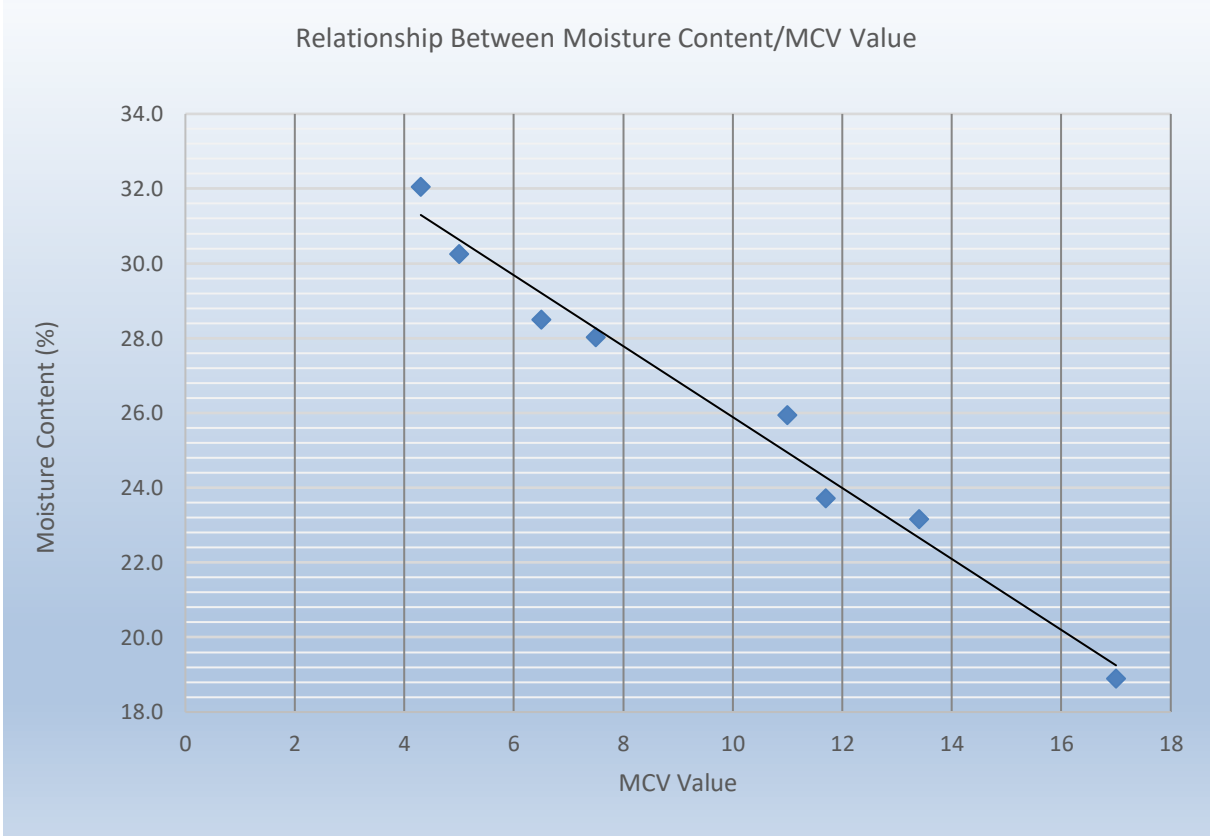
Test Details

Test Location:	38	Percentage retained on 20mm sieve:	19
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy ASH	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Authorised signatory

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Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the MCV/moisture content relation of a Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1977 MCVRel	Report Date:	08/10/2021
Client:	LK Consult Ltd	Date received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date tested:	07/10/2021
		Sample Number:	L1977
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

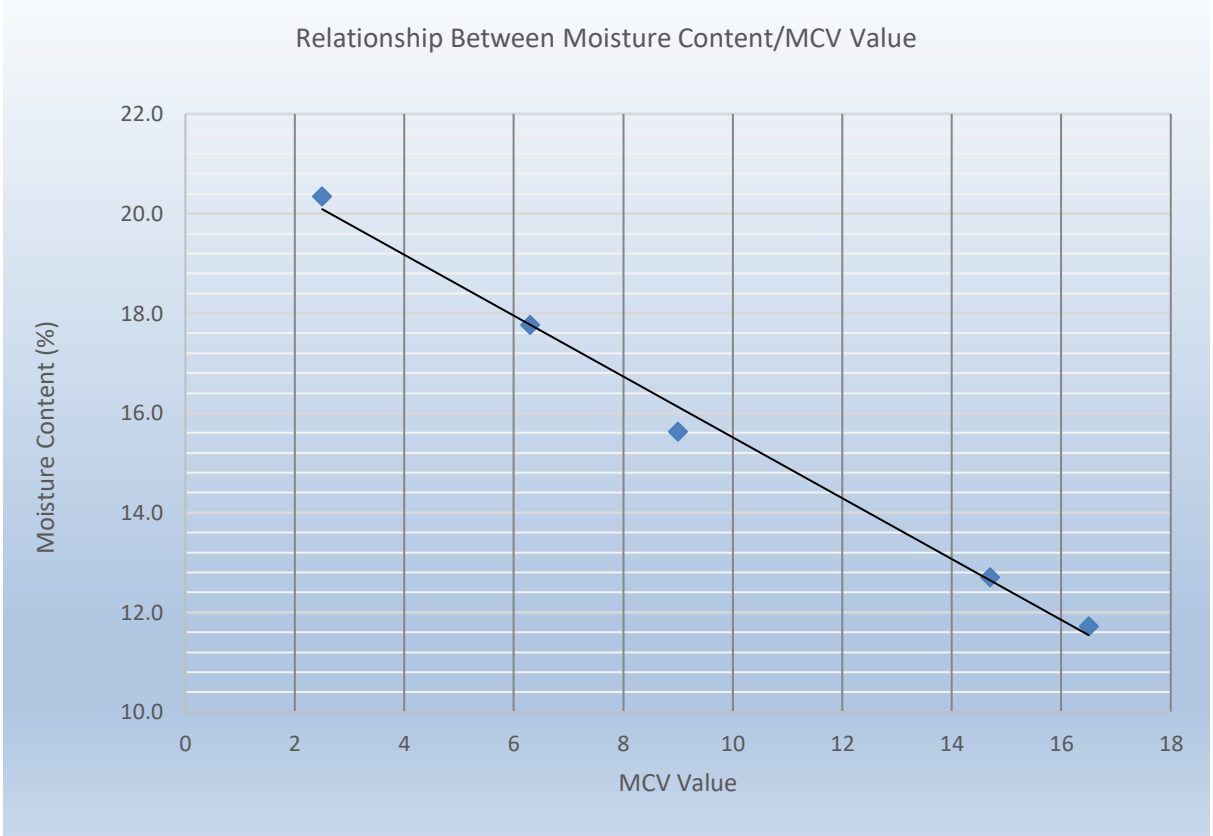
Test Details

Test Location:	42	Percentage retained on 20mm sieve:	12
Layer/Depth:		Single or separate samples:	Separate
Material Class:		Test method clause:	5.5
Description:	Grey gravelly sandy CLAY	Interpretation of test curve clause:	5.4.2.3
		Sampled By:	Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.5
Deviations: No deviations from the test method were employed.

Test Results



The results relate to the items tested only.

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6234 MCV
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 22/09/2021
Date of Test: 15/09/2021

Test Details

Interpretation of test curve: Clause 5.4.2.3
Method of preparation: Clause 5.4

Date of Received: 14/09/2021
Sampled by: Client

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1877	MCV 1	20	17	Brown sandy CLAY	10.3
L1878	MCV 2	13	16	Grey sandy CLAY	13.8
L1879	MCV 3	18	25	Brown sandy CLAY	8.3
L1880	MCV 4	23	5	Brown sandy CLAY	14.6
L1881	MCV 5	24	25	Brown sandy CLAY	16.0
L1882	MCV 6	23	9	Brown sandy CLAY	14.0
L1883	Plot 1-3, S30	20	22	Grey gravelly sandy CLAY	8.2
L1884	Plot 1-3, S15	17	16	Grey gravelly sandy CLAY	9.9
L1885	Plot 4-6, S30	23	19	Grey gravelly clayey ASH	15.5
L1886	Plot 4-6, S15	23	17	Grey gravelly clayey ASH	14.4

The results relate to the items tested only.

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6264 MCV
Report Date: 23/09/2021
Client: LK Consult Ltd
Date of Test: 22/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 21/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

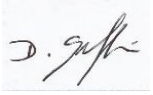
Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1896	MCV 7	6.1	1	Brown gravelly sandy CLAY	15.0
L1897	MCV 8	11	10	Brown gravelly sandy CLAY	15.6
L1898	MCV 9	12	1	Brown gravelly sandy CLAY	15.2
L1899	MCV 10	10	9	Brown gravelly sandy CLAY	11.6
L1900	MCV 11	11	0	Brown gravelly sandy CLAY	15.0
L1901	MCV 12	8.5	1	Brown gravelly sandy CLAY	14.2
L1902	MCV 13	11	12	Brown gravelly sandy CLAY	14.3
L1903	MCV 14	10	12	Brown gravelly sandy CLAY	15.1
L1904	MCV 15	8.0	16	Brown gravelly sandy CLAY	9.8
L1905	MCV 16	7.8	1	Brown gravelly sandy CLAY	12.3
L1906	MCV 17	9.9	28	Brown gravelly sandy CLAY	14.6
L1907	MCV 18	11	21	Brown gravelly sandy CLAY	15.1
L1908	MCV 19	8.2	24	Brown gravelly sandy CLAY	9.3
L1909	MCV 20	17	22	Brown gravelly sandy CLAY	16.4
L1910	MCV 21	8.8	13	Brown gravelly sandy CLAY	14.4
L1911	MCV 22	7.5	65	Brown gravelly sandy CLAY	12.6
L1912	MCV 52	17	0	Brown gravelly sandy CLAY	11.4

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6269 MCV
Report Date: 01/10/2021
Client: LK Consult Ltd
Date of Test: 23/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 22/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1921	56	12	9	Brown gravelly sandy CLAY	12.9
L1924	60	15	5	Brown gravelly sandy CLAY	10.0

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Report No: HS6269-2 MCV
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 23/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 22/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1922	57	10	27	Dark brown gravelly Clayey SAND	12.1
L1923	59	15	7	Brown gravelly sandy CLAY	9.1

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6275 MCV
Report Date: 30/09/2021
Client: LK Consult Ltd
Date of Test: 28/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 23/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1952	MCV 26	12	6	Brown gravelly sandy CLAY	16.6
L1941	MCV 28	6.8	64	Brown gravelly sandy CLAY	6.6
L1953	MCV 32	14	6	Brown gravelly sandy CLAY	14.0
L1954	MCV 33	14	2	Brown gravelly sandy CLAY	15.0
L1955	MCV 34	17	0	Brown gravelly sandy CLAY	9.8
L1956	MCV 37	16	0	Brown gravelly sandy CLAY	14.4
L1957	MCV 40	18	3	Brown gravelly sandy CLAY	11.9
L1942	MCV 46	7.3	0	Brown gravelly sandy CLAY	13.0
L1943	MCV 48	6.8	7	Brown gravelly sandy CLAY	12.9
L1958	MCV 49	13	7	Brown gravelly sandy CLAY	14.5
L1944	MCV 50	7.1	0	Brown gravelly sandy CLAY	11.0
L1945	MCV 51	6.4	0	Brown gravelly sandy CLAY	12.9
L1946	MCV 53	6.8	0	Brown gravelly sandy CLAY	12.6
L1959	MCV 54	17	6	Brown gravelly sandy CLAY	9.9

The results relate to the items tested only.

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6275-2r1 MCV
Report Date: 08/10/2021
Client: LK Consult Ltd
Date of Test: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 23/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

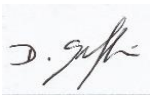
Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1967	24	17	9	Dark grey gravelly sandy CLAY	10.0
L1968	31	15	4	Dark brown gravelly sandy CLAY	12.8
L1969	43	15	5	Dark brown gravelly sandy CLAY	11.8
L1970	45	17	7	Dark brown gravelly sandy CLAY	10.4

Amendment to report HS6275-2 MCV, Duplicate results removed.

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6275-3 MCV
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 27/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 23/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1947	25	17	5	Dark grey gravelly sandy CLAY	7.9
L1948	44	13	4	Brown gravelly sandy CLAY	14.8
L1949	55	11	7	Dark grey gravelly sandy CLAY	13.6
L1962	23	14	7	Brown gravelly sandy CLAY	16.9
L1963	29	13.0	4	Brown gravelly sandy CLAY	15.3

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Report No: HS6283 MCV
Report Date: 30/09/2021
Client: LK Consult Ltd
Date of Test: 29/09/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 24/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1960	MCV 35	13	25	Brown gravelly sandy CLAY	12.6
L1971	MCV 39	13	6	Brown gravelly sandy CLAY	14.7
L1972	MCV 58	13	21	Brown gravelly sandy CLAY	15.1

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Certificate for the Determination of Moisture Condition Value of Soil to BS 1377: Part 4: 1990: Clause 5.4

Report No: HS6283-2 MCV
Report Date: 12/10/2021
Client: LK Consult Ltd
Date of Test: 07/10/2021
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Interpretation of test curve: Clause 5.4.2.3
Date Received: 24/09/2021
Method of preparation: Clause 5.4
Sampled by: Hixtra

Method

Test: Testing was carried out in accordance with BS1377: Part 4 :1990: Clause 5.4
Deviations: No deviations from the test method were employed.

Test Results

Hixtra Sample Number:	Client Reference:	Moisture Content, %	Retained on 20mm Sieve, %	Description	Moisture Condition Value
L1975	36	9.1	8	Brown gravelly sandy CLAY	14.4
L1976	38	23	19	Dark grey gravelly sandy ASH	13.4
L1977	42	12	12	Grey very clayey SAND/GRAVEL	16.5
L1980	41	13	2	Brown gravelly sandy CLAY	14.5

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6234 L1884 OMC	Report date:	22/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	15/09/2021
		Sample number:	L1884
		Client ref:	Plot 1-3, S15
		Sampled by:	Client
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

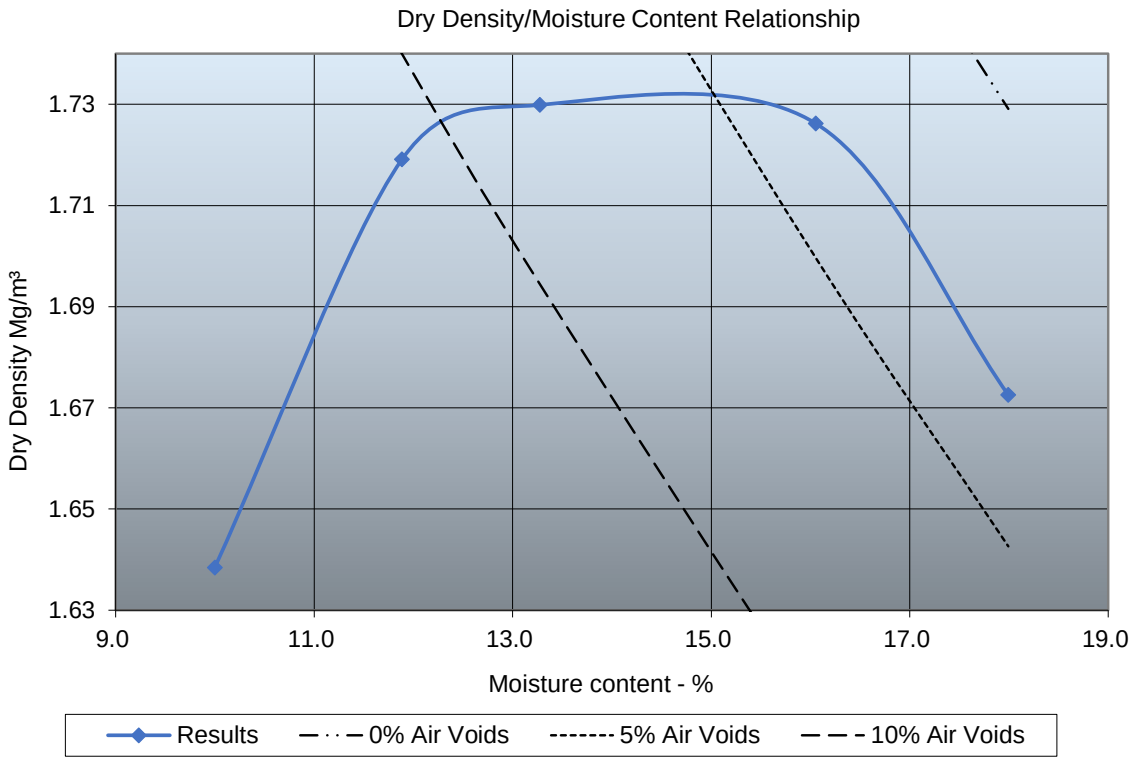
Specimen & Test Details

Sample description:	Grey gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.51
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	96	Sample prep method clause:	3.2.5.2
% passing 20mm:	84		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.73
Optimum Moisture Content, %:	15

The results relate to the items tested only.

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6234 L1886 OMC	Report date:	22/09/2021
Client:	LK Consult Ltd	Date sample received:	14/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	15/09/2021
		Sample number:	L1886
		Client ref:	Plot 4-6, S15
		Sampled by:	Client
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

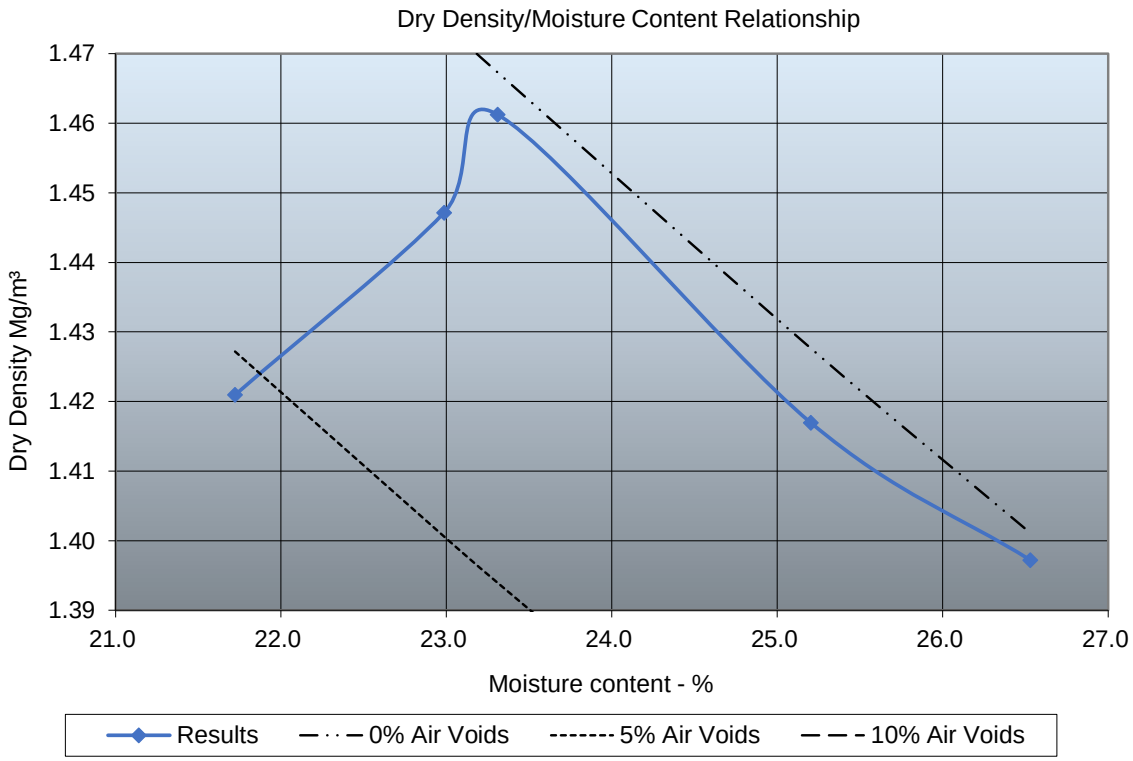
Specimen & Test Details

Sample description:	Grey gravelly clayey ASH	Actual particle density, Mg/m^3:	2.23
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	92	Sample prep method clause:	3.2.5.3
% passing 20mm:	83		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.46
Optimum Moisture Content, %:	23

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6269 L1922 OMC	Report date:	01/10/2021
Client:	LK Consult Ltd	Date sample received:	22/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	24/09/2021
		Sample number:	L1922
		Client ref:	57
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

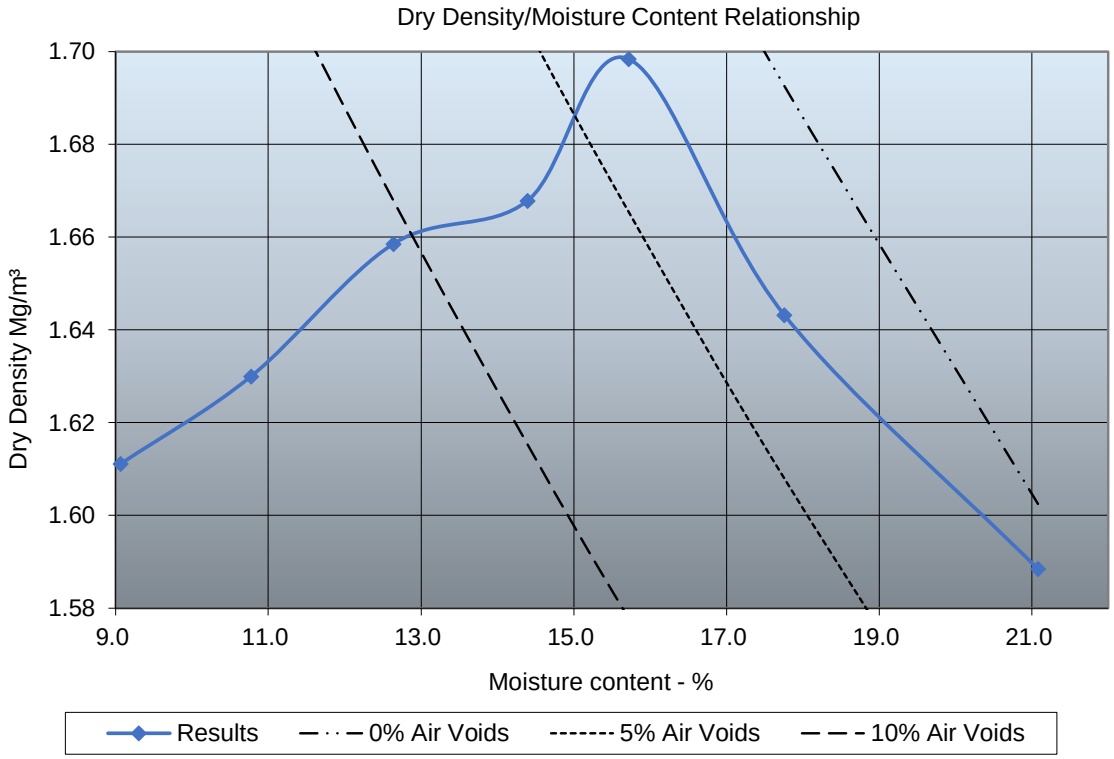
Specimen & Test Details

Sample description:	Grey gravelly clayey sandy ASH	Actual particle density, Mg/m^3:	2.42
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	84	Sample prep method clause:	3.2.5.3
% passing 20mm:	73		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.70
Optimum Moisture Content, %:	16

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6269 L1923 OMC	Report date:	01/10/2021
Client:	LK Consult Ltd	Date sample received:	22/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1923
		Client ref:	59
		Sampled by:	Client
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

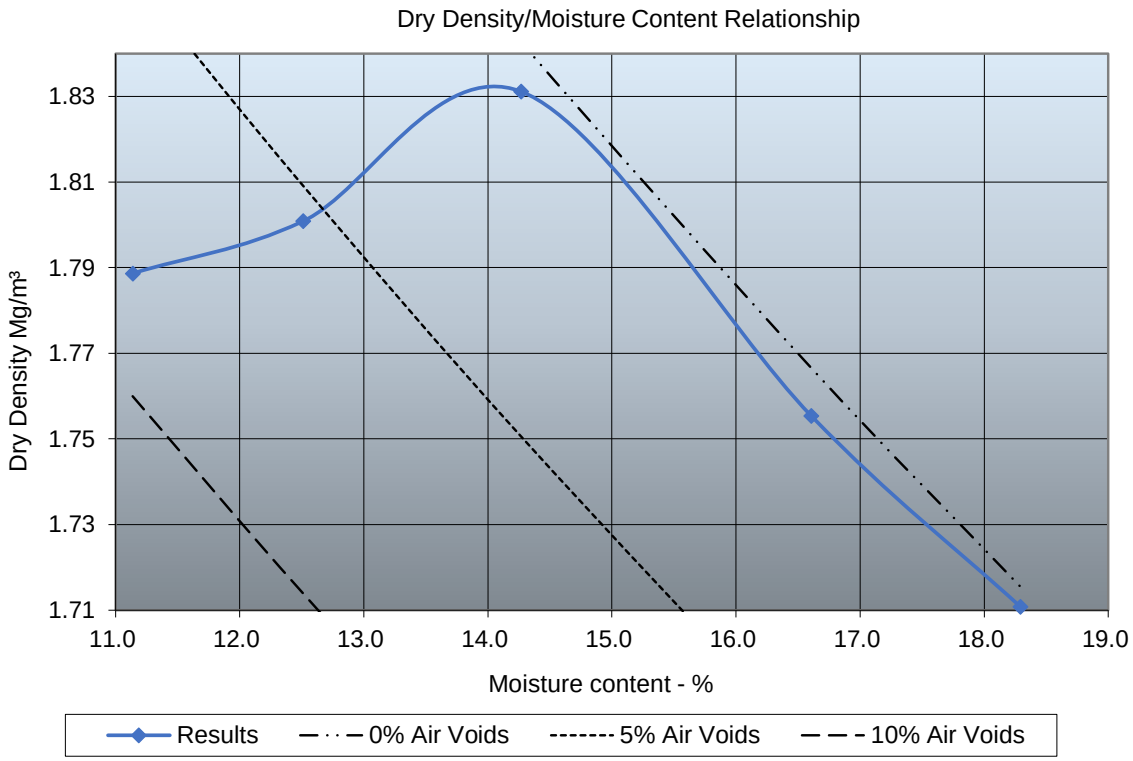
Specimen & Test Details

Sample description:	Brown gravelly clayey SAND	Actual particle density, Mg/m^3:	2.50
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	98	Sample prep method clause:	3.2.5.2
% passing 20mm:	93		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.83
Optimum Moisture Content, %:	14

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1947 OMC	Report date:	01/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1947
		Client ref:	25
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

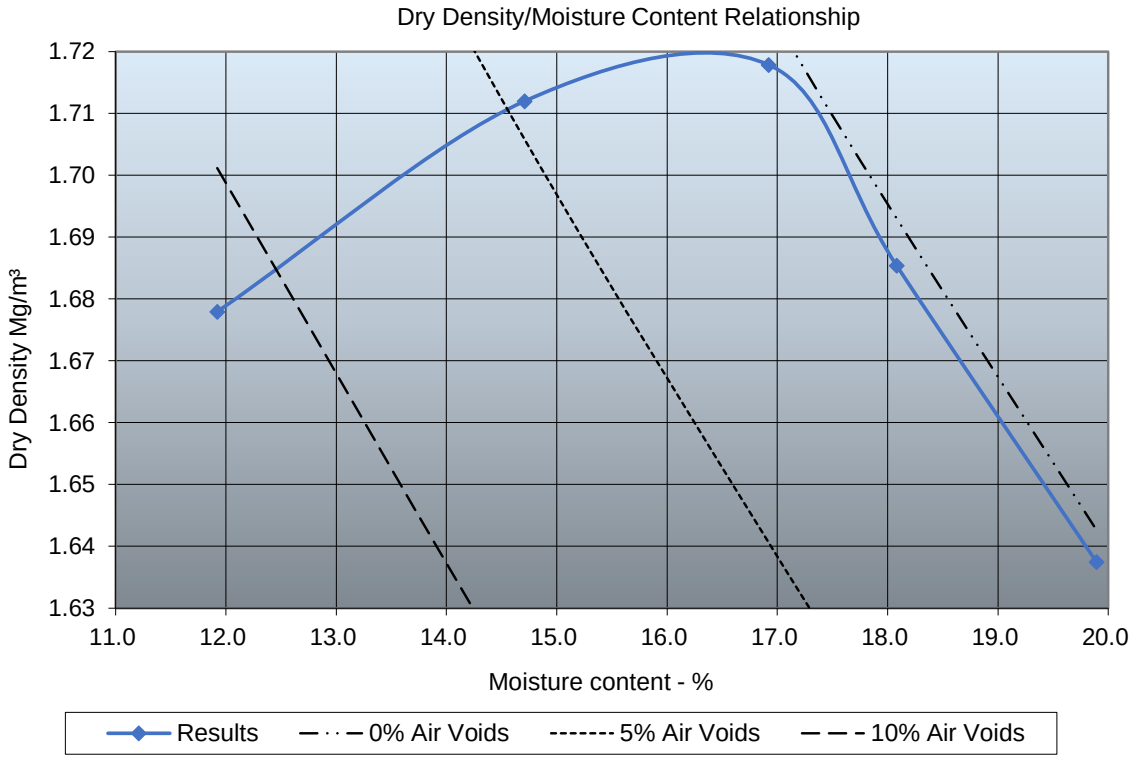
Specimen & Test Details

Sample description:	Dark grey gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.44
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	99	Sample prep method clause:	3.2.5.2
% passing 20mm:	95		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.72
Optimum Moisture Content, %:	16

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Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1948 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1948
		Client ref:	44
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

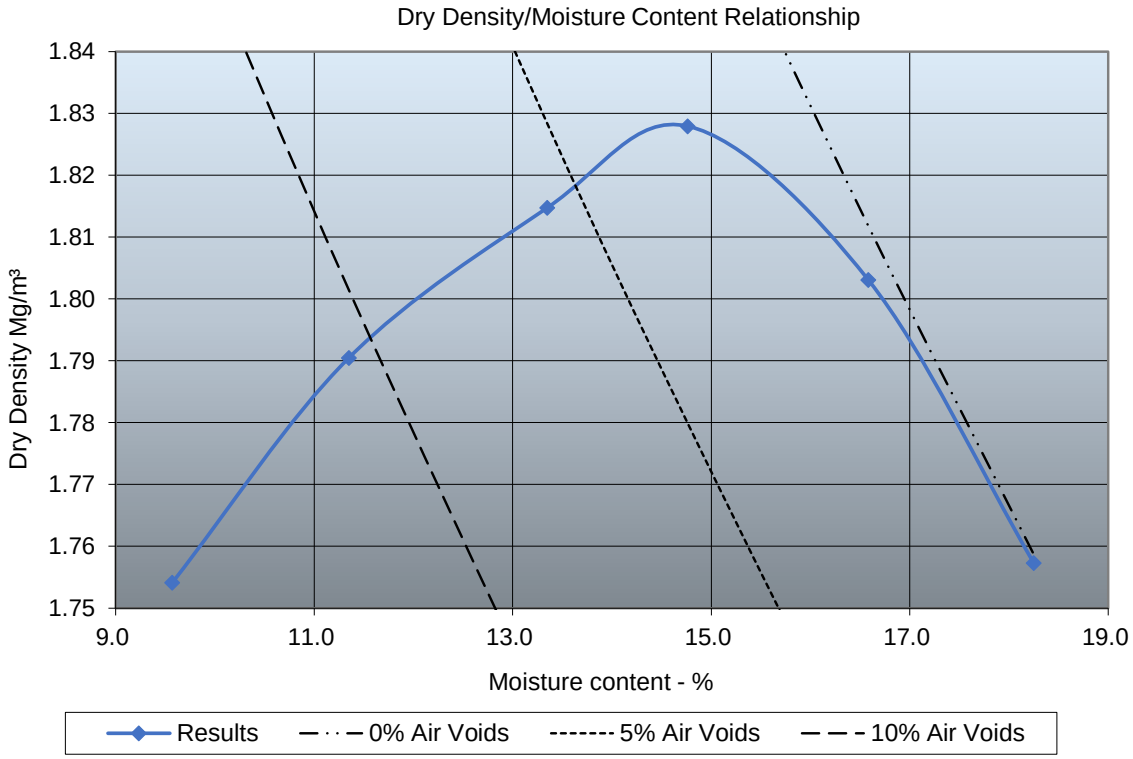
Specimen & Test Details

Sample description:	Brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.59
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	98	Sample prep method clause:	3.2.5.2
% passing 20mm:	96		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.83
Optimum Moisture Content, %:	15

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1949 OMC	Report date:	01/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1949
		Client ref:	55
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

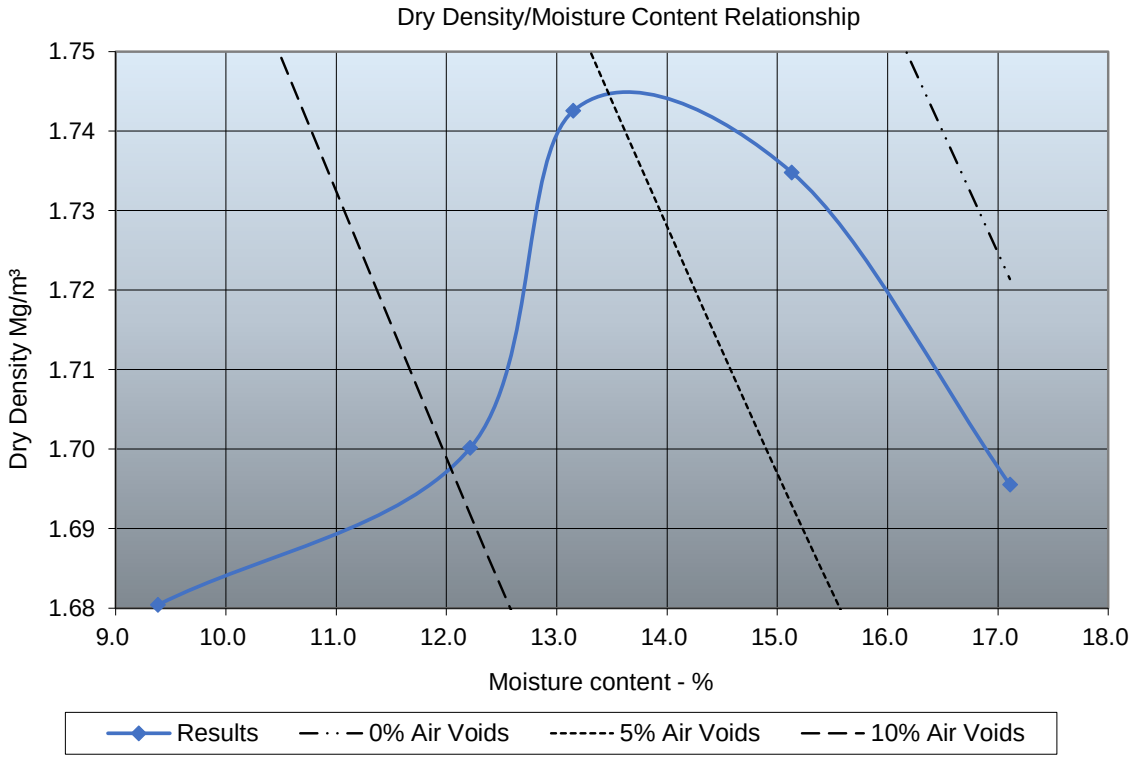
Specimen & Test Details

Sample description:	Grey gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.44
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	96	Sample prep method clause:	3.2.5.2
% passing 20mm:	93		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.74
Optimum Moisture Content, %:	14

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1961 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	24/09/2021
		Sample number:	L1961
		Client ref:	14
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

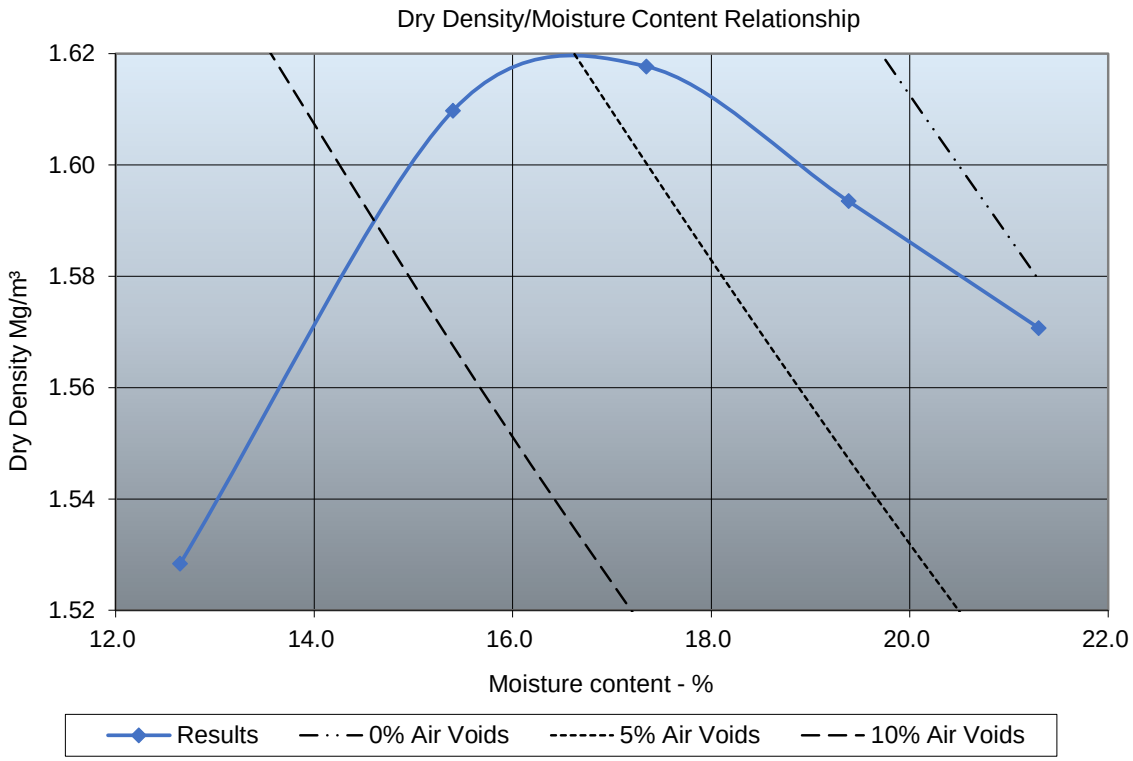
Specimen & Test Details

Sample description:	Dark brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.38
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	93	Sample prep method clause:	3.2.5.3
% passing 20mm:	88		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.62
Optimum Moisture Content, %:	17

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1962 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1962
		Client ref:	23
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

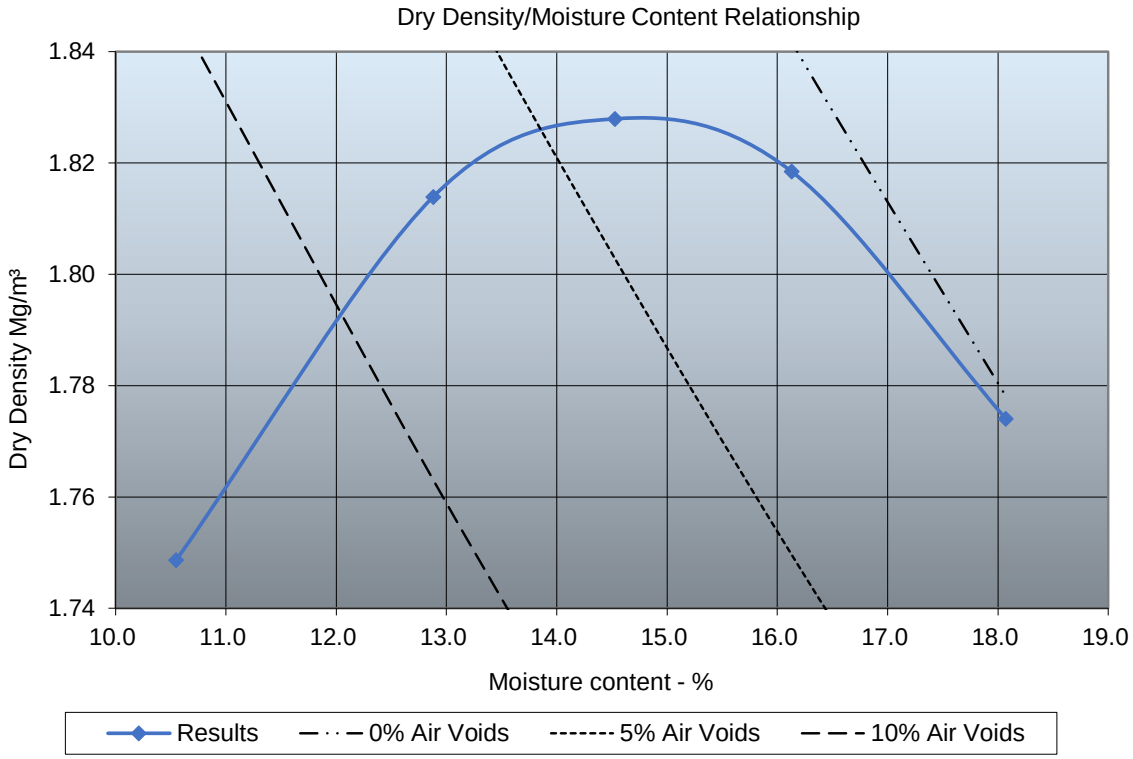
Specimen & Test Details

Sample description:	Brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.62
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	95	Sample prep method clause:	3.2.5.2
% passing 20mm:	93		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.83
Optimum Moisture Content, %:	15

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6275 L1963 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	23/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	29/09/2021
		Sample number:	L1963
		Client ref:	29
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

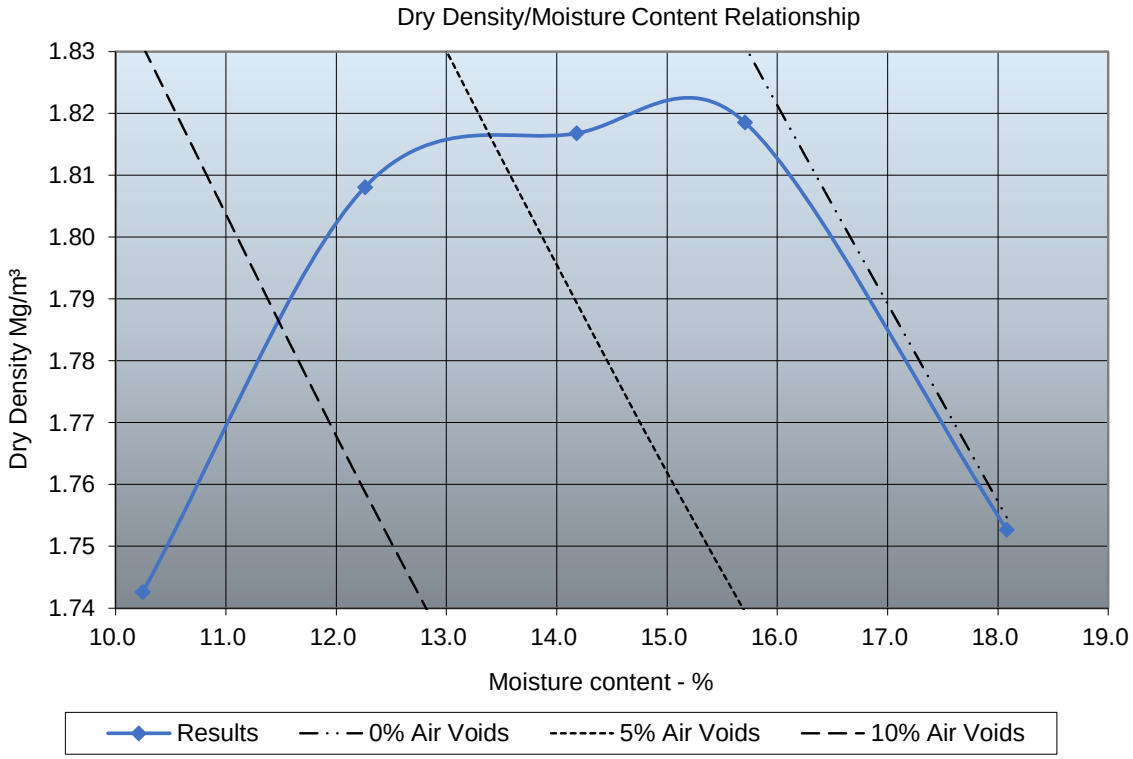
Specimen & Test Details

Sample description:	Brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.57
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	99	Sample prep method clause:	3.2.5.2
% passing 20mm:	96		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.82
Optimum Moisture Content, %:	15

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1973 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	05/10/2021
		Sample number:	L1973
		Client ref:	9
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

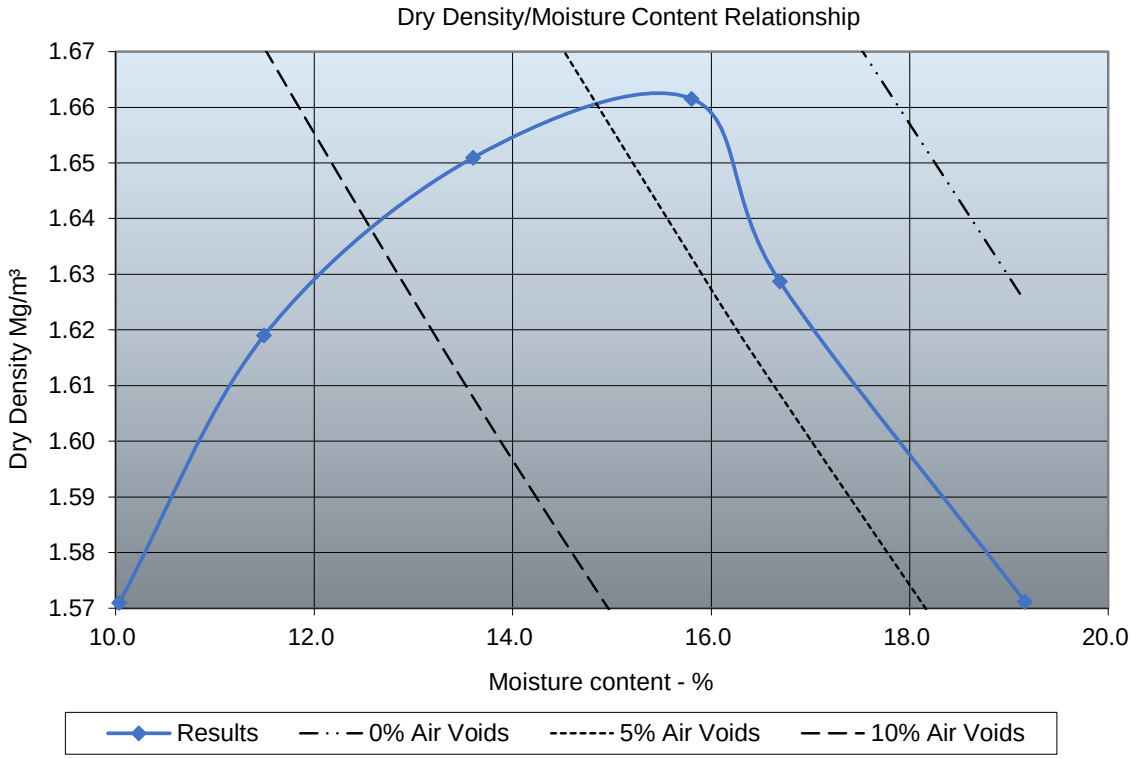
Specimen & Test Details

Sample description:	Brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.36
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	92	Sample prep method clause:	3.2.5.3
% passing 20mm:	87		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.66
Optimum Moisture Content, %:	16

The results relate to the items tested only.

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Derek Griffin
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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1974 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	05/10/2021
		Sample number:	L1974
		Client ref:	11
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

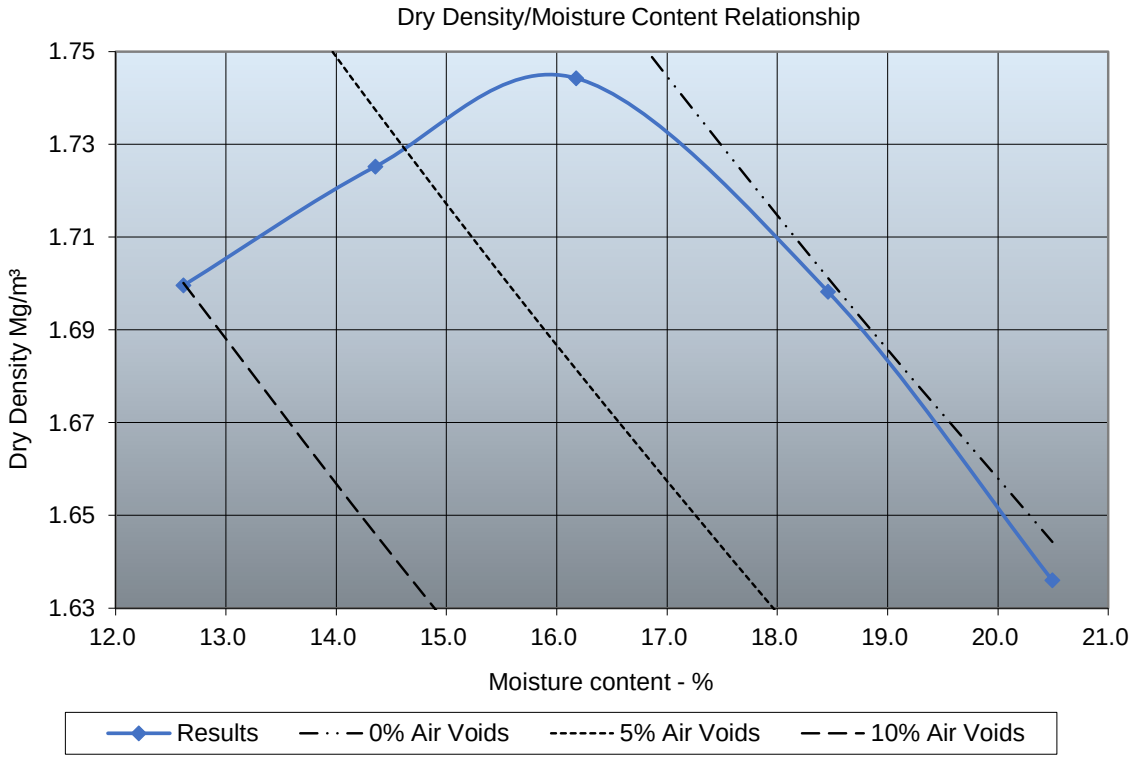
Specimen & Test Details

Sample description:	Dark grey gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.48
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	96	Sample prep method clause:	3.2.5.2
% passing 20mm:	94		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.74
Optimum Moisture Content, %:	16

The results relate to the items tested only.

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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1975 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	05/10/2021
		Sample number:	L1975
		Client ref:	36
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

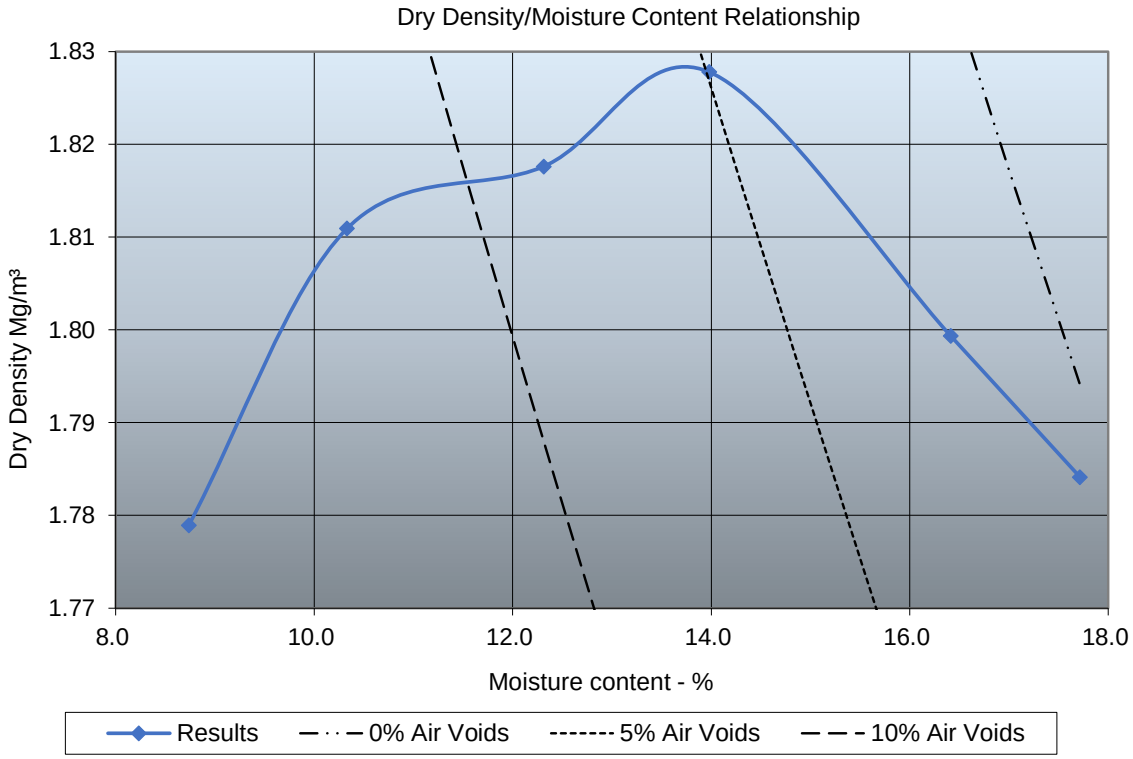
Specimen & Test Details

Sample description:	Brown gravelly sandy CLAY	Actual particle density, Mg/m^3:	2.63
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	94	Sample prep method clause:	3.2.5.3
% passing 20mm:	92		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.83
Optimum Moisture Content, %:	14

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
Authorised signatory

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Milton Keynes
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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1976 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	05/10/2021
		Sample number:	L1976
		Client ref:	38
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

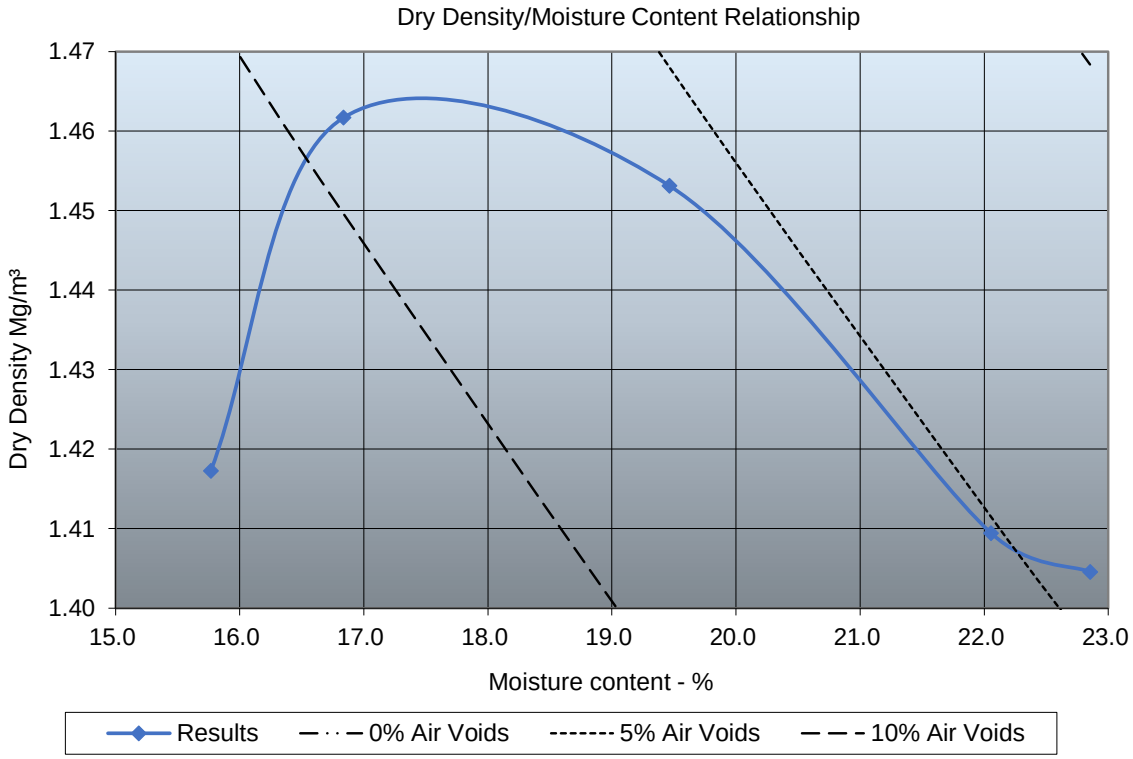
Specimen & Test Details

Sample description:	Dark grey gravelly sandy ASH	Actual particle density, Mg/m^3:	2.21
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	92	Sample prep method clause:	3.2.5.3
% passing 20mm:	81		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.46
Optimum Moisture Content, %:	17

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Certificate for the Determination of the Dry Density/Moisture Content Relationship of Soil to BS 1377 Part 4 1990

Report No:	HS6283 L1977 OMC	Report date:	08/10/2021
Client:	LK Consult Ltd	Date sample received:	24/09/2021
Address:	Unit 29, Eton Business Park Eton Hill Road Radcliffe Greater Manchester, M26 2ZS	Date sample tested:	05/10/2021
		Sample number:	L1977
		Client ref:	42
		Sampled by:	Hixtra
Site:	Needwood Close, Collyhurst, Manchester, M40 8LB		

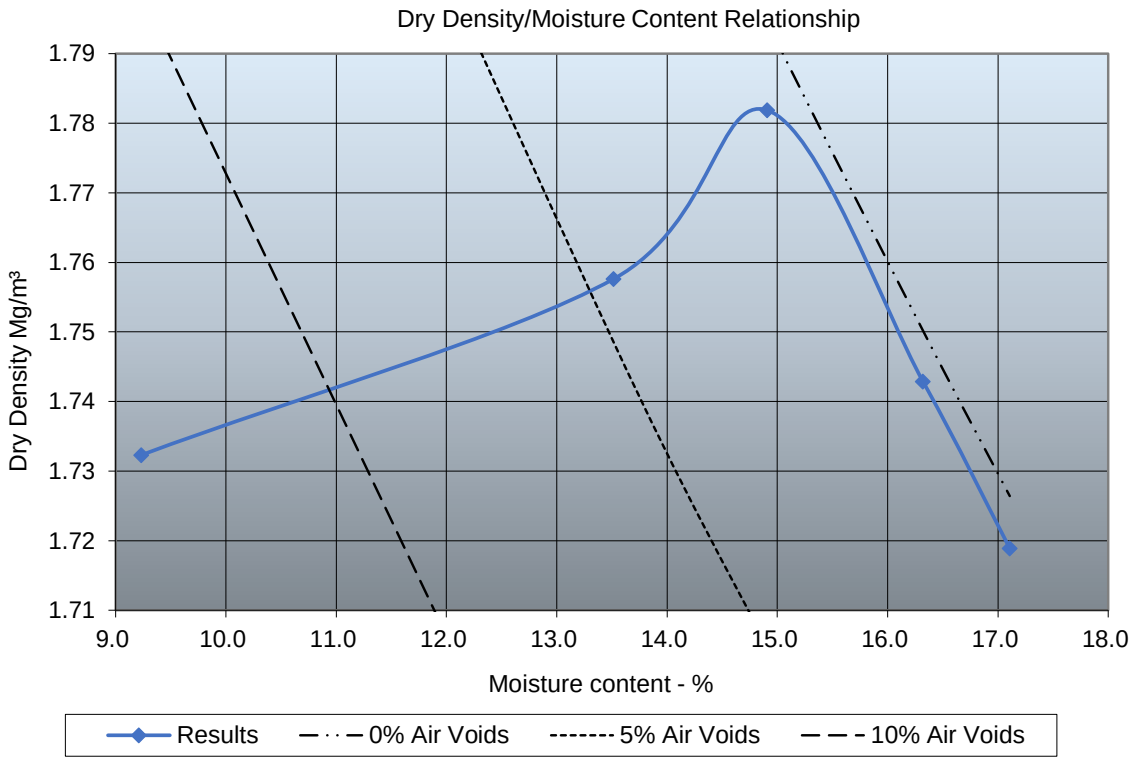
Specimen & Test Details

Sample description:	Dark grey clayey SAND/GRAVEL	Actual particle density, Mg/m^3:	2.45
Test method clause:	3.4.4.1	Single or separate samples:	Separate
% passing 37.5mm:	95	Sample prep method clause:	3.2.5.2
% passing 20mm:	88		

Methods

Test: Testing was carried out in accordance with BS 1377: Part 4: 1990: Clause 3. Using a 2.5kg rammer.
Deviations: No deviations from the test method were employed.

Test Results



Maximum Dry Density, Mg/m^3:	1.78
Optimum Moisture Content, %:	15

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Certificate for the Determination of Particle Density to BS 1377 Part 2 1990

Report No: HS6234 PD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 22/09/2021
Date Received: 14/09/2021
Date Tested: 21/09/2021
Batch No: HS6234
Sampled By: Client

Specimen & Test Details

Client sample no.	Hixtra sample no.	Sample description:
Plot 1-3, S15	L1884	Grey gravelly sandy CLAY
Plot 4-6, S15	L1886	Grey gravelly clayey ASH

Method

Test: Testing was carried out in accordance with BS1377: Part 2: Clause 8.2
Deviations: No deviations from the test method were employed.

Test Results

Sample No:	Plot 1-3, S15	Plot 4-6, S15

Particle Density, Mg/m³:	2.51	2.23

The results relate to the items tested only.

For and on Behalf of Hixtra Ltd

Derek Griffin
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Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of Particle Density to BS 1377 Part 2 1990

Report No: HS6269 PD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date Received: 22/09/2021
Date Tested: 28/09/2021
Batch No: HS6269
Sampled By: Hixtra

Specimen & Test Details

Client sample no.	Hixtra sample no.	Sample description:
57	L1922	Brown gravelly clayey SAND
59	L1923	Brown gravelly sandy CLAY

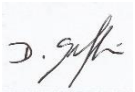
Method

Test: Testing was carried out in accordance with BS1377: Part 2: Clause 8.2
Deviations: No deviations from the test method were employed.

Test Results

Sample No:	57	59
Particle Density, Mg/m³:	2.42	2.50

For and on Behalf of Hixtra Ltd



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Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of Particle Density to BS 1377 Part 2 1990

Report No: HS6275 PD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date Received: 23/09/2021
Date Tested: 29/9-1/10/21
Batch No: HS6275
Sampled By: Hixtra

Specimen & Test Details

Client sample no.	Hixtra sample no.	Sample description:
25	L1947	Dark grey gravelly sandy CLAY
44	L1948	Brown gravelly sandy CLAY
55	L1949	Dark grey gravelly sandy CLAY
14	L1961	Dark brown gravelly sandy CLAY
23	L1962	Brown gravelly sandy CLAY
29	L1963	Brown gravelly sandy CLAY

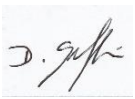
Method

Test: Testing was carried out in accordance with BS1377: Part 2: Clause 8.2
Deviations: No deviations from the test method were employed.

Test Results

Sample No:	25	44	55	14	23	29
Particle Density, Mg/m³:	2.44	2.59	2.44	2.38	2.62	2.57

For and on Behalf of Hixtra Ltd



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Milton Keynes
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Certificate for the Determination of Particle Density to BS 1377 Part 2 1990

Report No: HS6283 PD
Client: LK Consult Ltd
Address: Unit 29, Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester, M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Report Date: 08/10/2021
Date Received: 24/09/2021
Date Tested: 4-7/10/21
Batch No: HS6283
Sampled By: Hixtra

Specimen & Test Details

Client sample no.	Hixtra sample no.	Sample description:
9	L1973	Brown gravelly sandy CLAY
11	L1974	Dark grey gravelly sandy CLAY
36	L1975	Brown gravelly sandy CLAY
38	L1976	Dark grey gravelly sandy ASH
42	L1977	Dark grey gravelly sandy CLAY

Method

Test: Testing was carried out in accordance with BS1377: Part 2: Clause 8.2
Deviations: No deviations from the test method were employed.

Test Results

Sample No:	9	11	36	38	42
Particle Density, Mg/m³:	2.36	2.48	2.63	2.21	2.45

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Derek Griffin
Authorised signatory

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MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR 20 1044 -
Collyhurst

Job Number MRN 4117/14
Date of Issue 09 September 2021
Pages 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

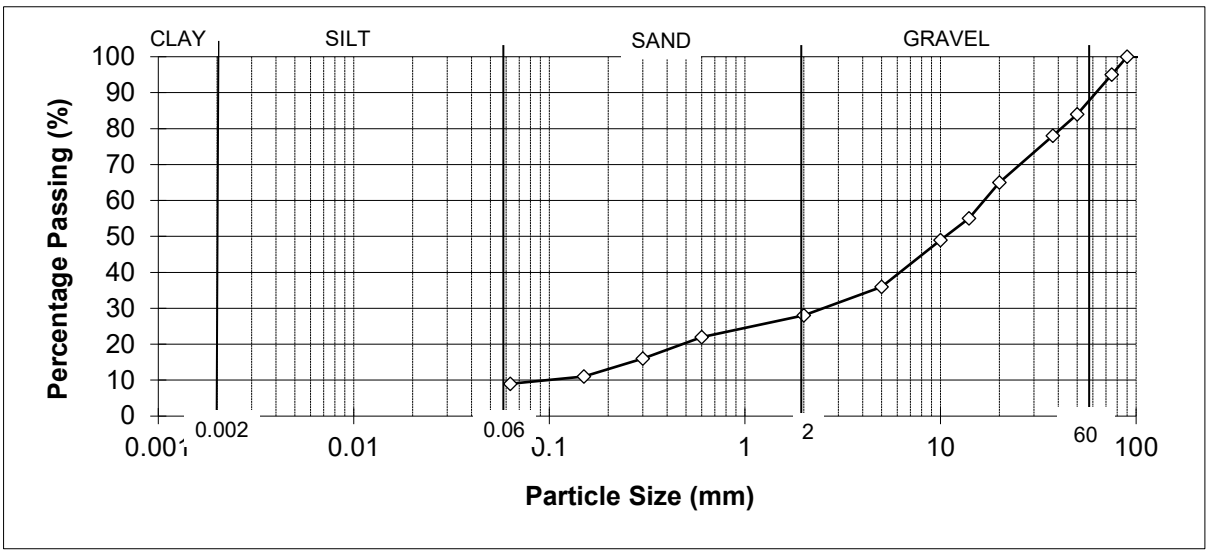
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR01	DATE SAMPLED	Not advised
LAB SAMPLE No	102338	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	49	15-60
90	100	80-100	5	36	10-45
75	95	65-100	2	28	
50	84		0.6	22	0-25
37.5	78	45-100	0.3	16	
20	65		0.15	11	
14	55		0.063	9	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 7.7%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102338
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR01
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27-Jul-21
Date of start of test	:	02-Aug-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	40% passing 14mm retained 12.5mm 60% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**34**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102338
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR01
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27 July 2021
Date of start of test	:	02 August 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	95
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	3.8
Ra	Bituminous materials	1.1
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.1
FL	Floating Particles (cm^3/kg)	1.3

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET

DUKINFIELD, CHESHIRE SK16 4QX

TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER

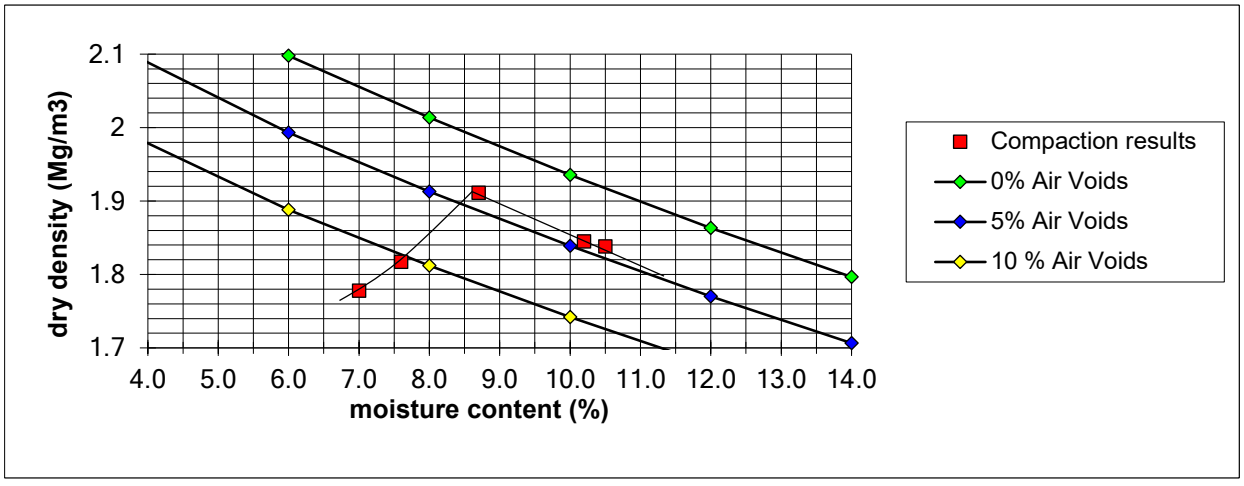
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR01	DATE SAMPLED	Not advised
LAB SAMPLE No	102338	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		7.0	1.778
2		7.6	1.817
3		8.7	1.911
4		10.2	1.845
5		10.5	1.838
	Optimum	8.7	
	Maximum		1.91
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 37.5mm sieve = 22%

Percentage of material retained on 20mm sieve = 35%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

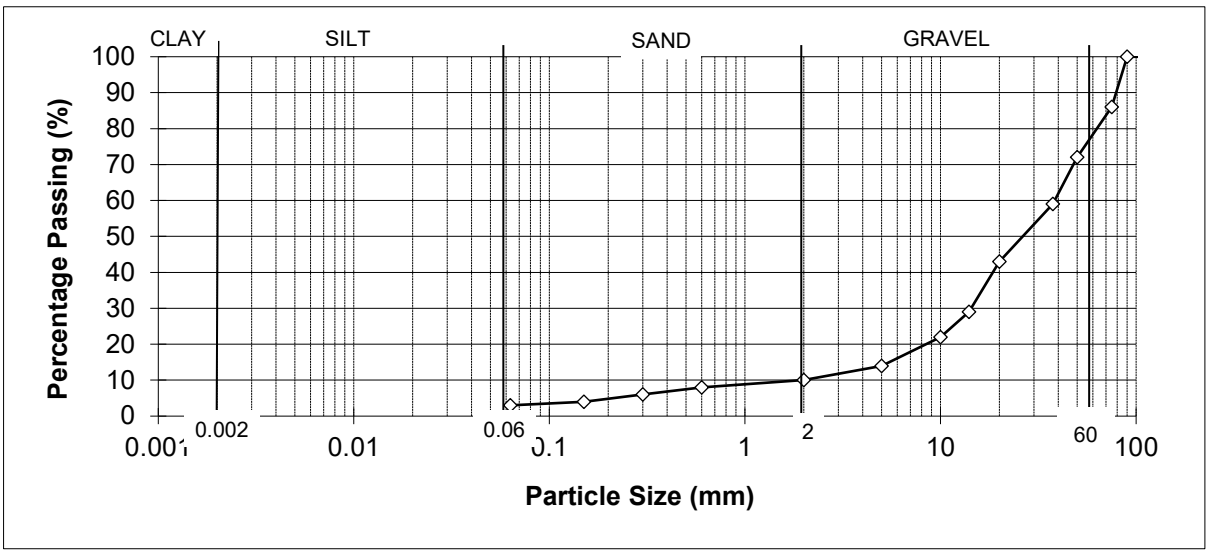
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR02	DATE SAMPLED	Not advised
LAB SAMPLE No	102339	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	22	15-60
90	100	80-100	5	14	10-45
75	86	65-100	2	10	
50	72		0.6	8	0-25
37.5	59	45-100	0.3	6	
20	43		0.15	4	
14	29		0.063	3	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 5.0%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102339
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR02
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27-Jul-21
Date of start of test	:	02-Aug-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	33% passing 14mm retained 12.5mm 67% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**35**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102339
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR02
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27 July 2021
Date of start of test	:	02 August 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	94
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	4.1
Ra	Bituminous materials	1.9
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.2
FL	Floating Particles (cm^3/kg)	1.0

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

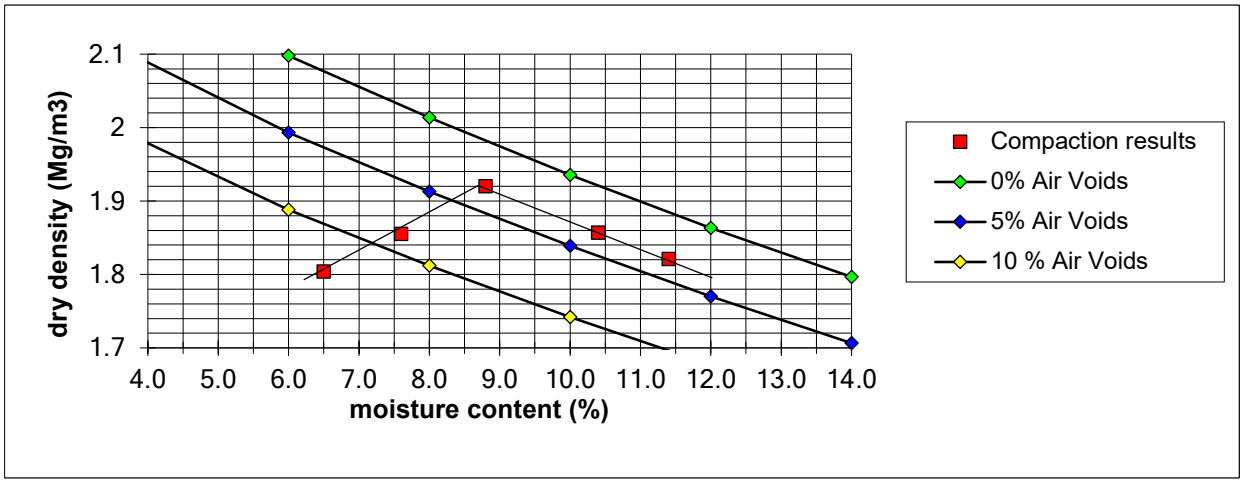
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR02	DATE SAMPLED	Not advised
LAB SAMPLE No	102339	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		6.5	1.804
2		7.6	1.855
3		8.8	1.920
4		10.4	1.857
5		11.4	1.821
	Optimum	8.8	
	Maximum		1.92
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 37.5mm sieve = 41%
Percentage of material retained on 20mm sieve = 57%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

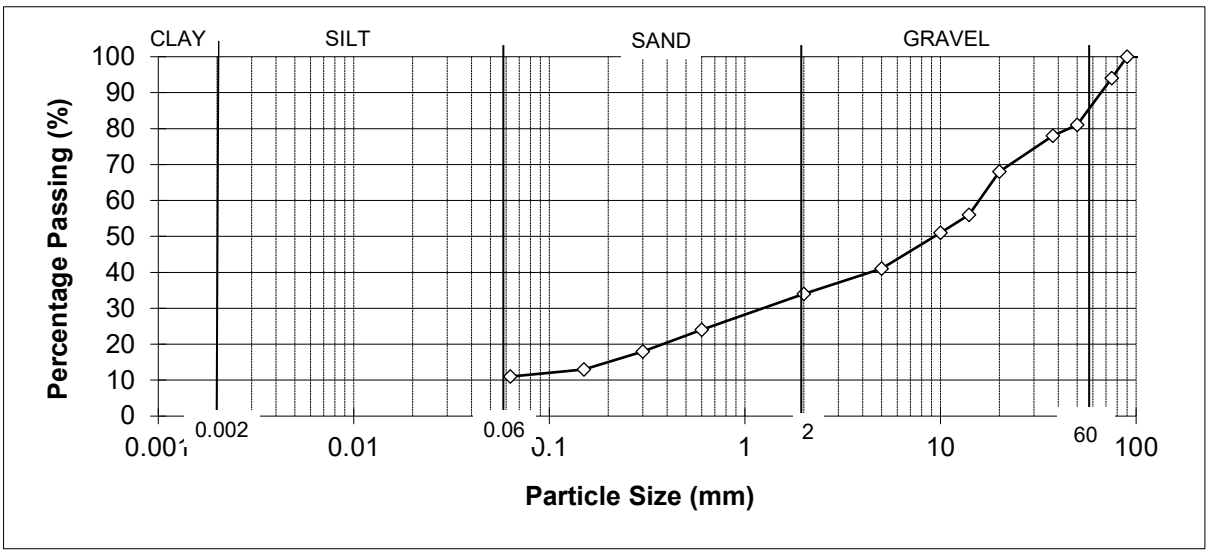
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR03	DATE SAMPLED	Not advised
LAB SAMPLE No	102340	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	51	15-60
90	100	80-100	5	41	10-45
75	94	65-100	2	34	
50	81		0.6	24	0-25
37.5	78	45-100	0.3	18	
20	68		0.15	13	
14	56		0.063	11	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 4.5%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102340
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR03
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27-Jul-21
Date of start of test	:	02-Aug-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	31% passing 14mm retained 12.5mm
		69% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**34**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/14
Laboratory sample number	:	102340
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR03
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	27 July 2021
Date of start of test	:	02 August 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	96
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	2.7
Ra	Bituminous materials	1.0
Rg	Glass	0.1
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.2
FL	Floating Particles (cm^3/kg)	0.7

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 09-Sep-21

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

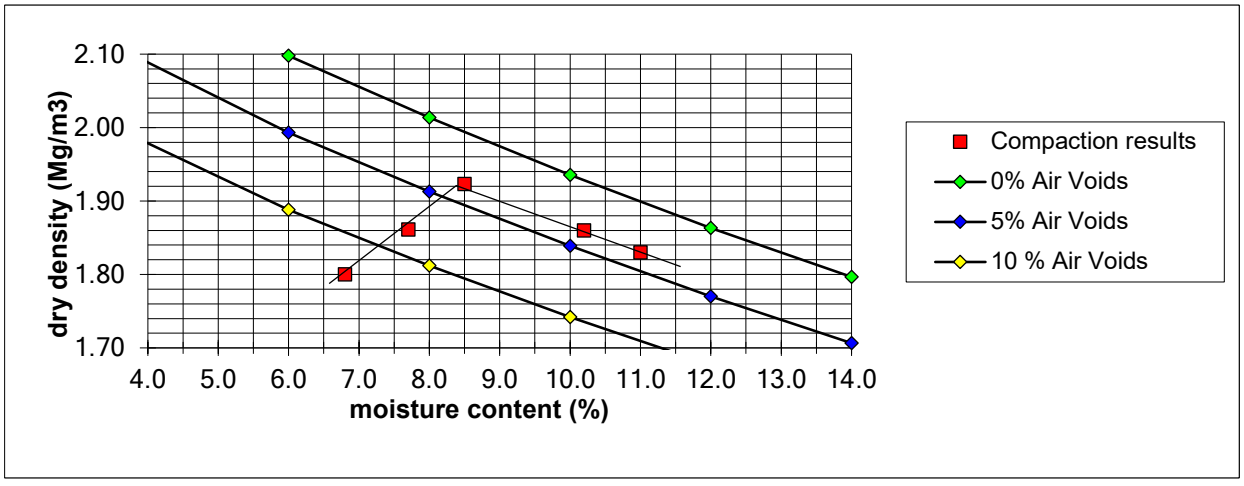
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/14

SAMPLE LABEL	CR03	DATE SAMPLED	Not advised
LAB SAMPLE No	102340	DATE RECEIVED	27-Jul-21
DATE TESTED	02-Aug-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		6.8	1.800
2		7.7	1.861
3		8.5	1.923
4		10.2	1.860
5		11.0	1.830
	Optimum	8.5	
	Maximum		1.92
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 37.5mm sieve = 22%
Percentage of material retained on 20mm sieve = 32%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 09-Sep-21

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR 20 1044 -
Collyhurst

Job Number MRN 4117/16
Date of Issue 30 November 2021
Pages 1 of 13

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

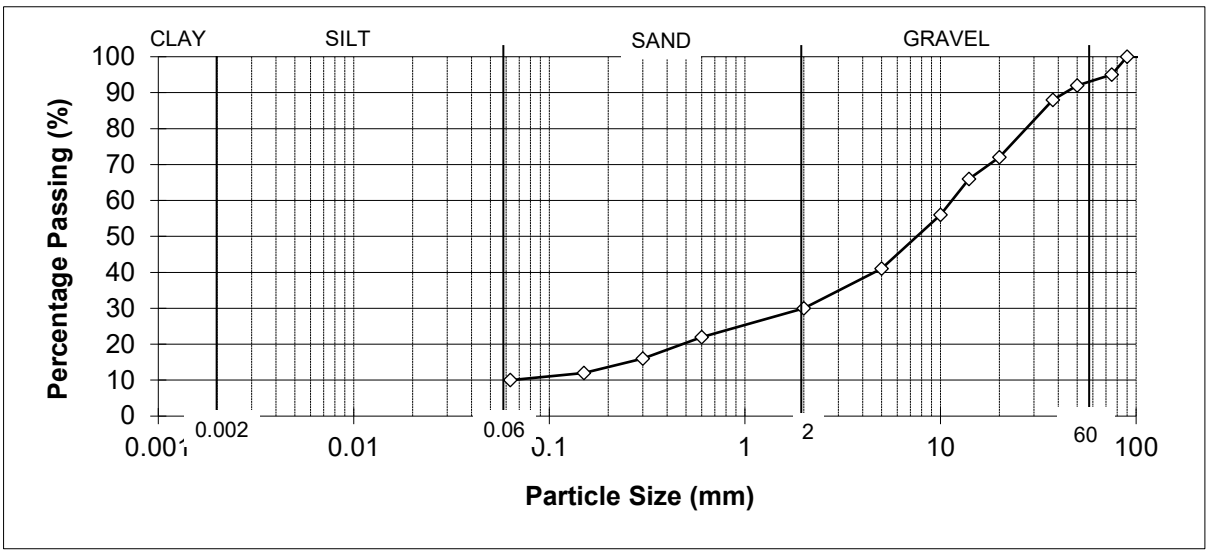
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR04	DATE SAMPLED	Not advised
LAB SAMPLE No	106206	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	56	15-60
90	100	80-100	5	41	10-45
75	95	65-100	2	30	
50	92		0.6	22	0-25
37.5	88	45-100	0.3	16	
20	72		0.15	12	
14	66		0.063	10	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 12%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106206
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR04
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Nov-21
Date of start of test	:	11-Nov-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	34% passing 14mm retained 12.5mm 66% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**37**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

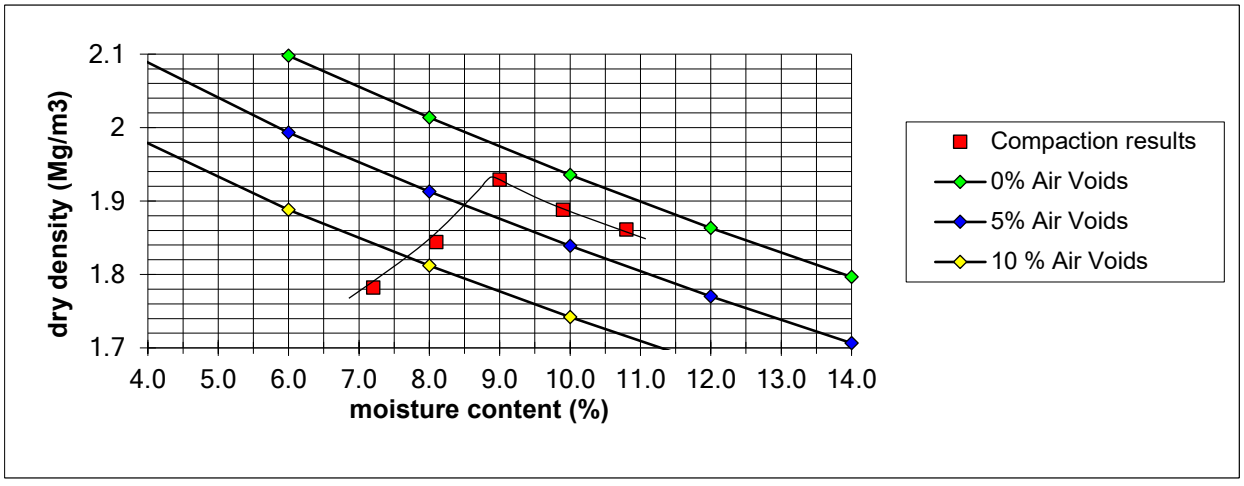
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR04	DATE SAMPLED	Not advised
LAB SAMPLE No	106206	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		7.2	1.782
2		8.1	1.844
3		9.0	1.929
4		9.9	1.888
5		10.8	1.861
	Optimum	9.0	
	Maximum		1.93
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 37.5mm sieve = 12%
Percentage of material retained on 20mm sieve = 28%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106206
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR04
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 November 2021
Date of start of test	:	11 November 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	94
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	4.1
Ra	Bituminous materials	1.8
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0
FL	Floating Particles (cm^3/kg)	0.3

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING
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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

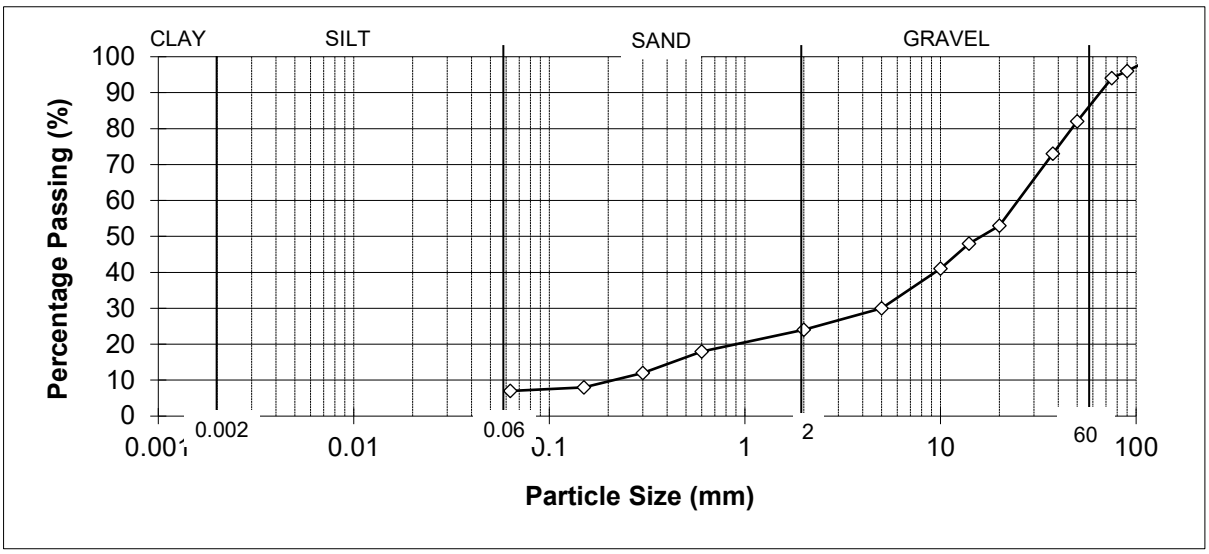
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR05	DATE SAMPLED	Not advised
LAB SAMPLE No	106207	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	41	15-60
90	96	80-100	5	30	10-45
75	94	65-100	2	24	
50	82		0.6	18	0-25
37.5	73	45-100	0.3	12	
20	53		0.15	8	
14	48		0.063	7	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 11%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106207
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR05
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Nov-21
Date of start of test	:	11-Nov-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	33% passing 14mm retained 12.5mm 67% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**35**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

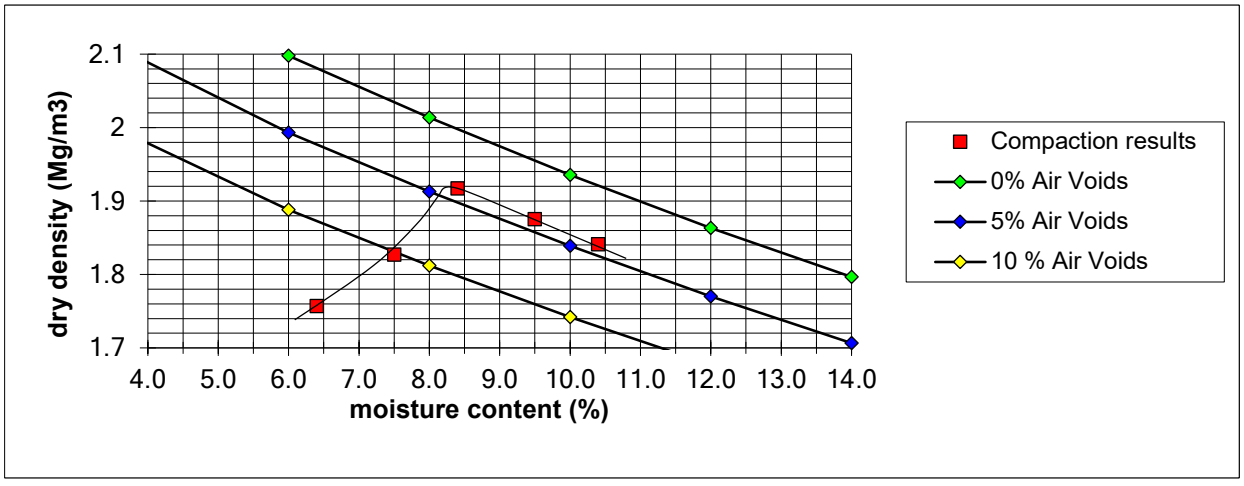
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR05	DATE SAMPLED	Not advised
LAB SAMPLE No	106207	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		6.4	1.757
2		7.5	1.827
3		8.4	1.917
4		9.5	1.875
5		10.4	1.841
	Optimum	8.4	
	Maximum		1.92
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 37.5mm sieve = 27%
Percentage of material retained on 20mm sieve = 47%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
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UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106207
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR06
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 November 2021
Date of start of test	:	11 November 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	91
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	6.5
Ra	Bituminous materials	2.5
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0
FL	Floating Particles (cm^3/kg)	0.7

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

MURRAY RIX

Andrew House, Hadfield Street
Dukinfield, Cheshire SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.2: 1990

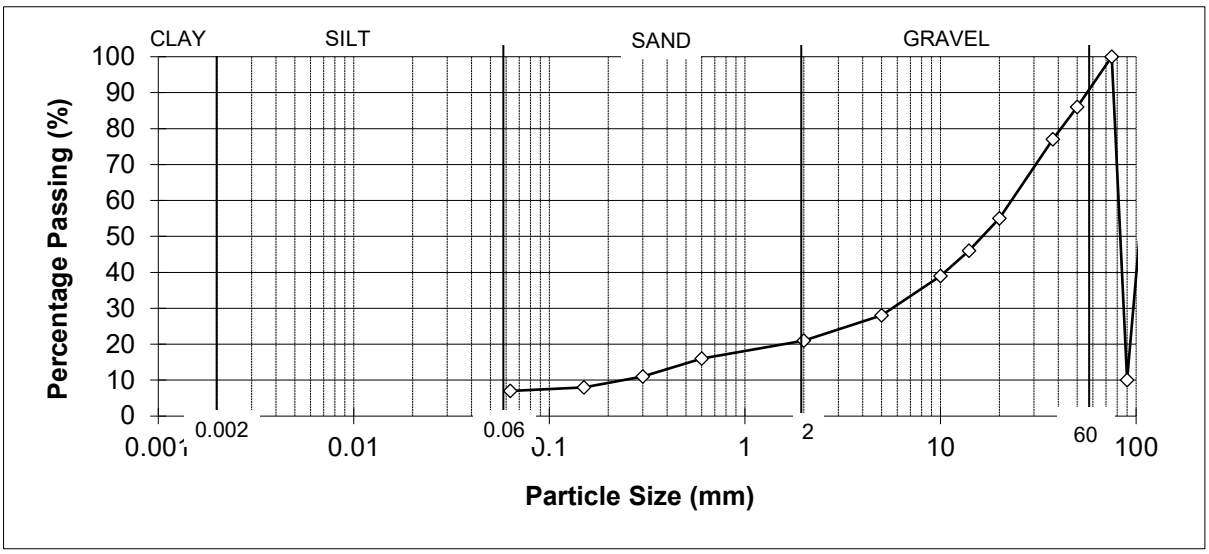
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR06	DATE SAMPLED	Not advised
LAB SAMPLE No	106208	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	10	39	15-60
90	10	80-100	5	28	10-45
75	100	65-100	2	21	
50	86		0.6	16	0-25
37.5	77	45-100	0.3	11	
20	55		0.15	8	
14	46		0.063	7	0-12



REMARKS
Sample complies with the grading requirements for a 6F2 material (SHW 2016)
As received moisture content = 9.7%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
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UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106208
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR06
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Nov-21
Date of start of test	:	11-Nov-21
Sampling Location	:	BS EN 932-1 : 1997
Method of sampling	:	Not advised
Sampled by	:	Client
Size Fraction	:	37% passing 14mm retained 12.5mm
		63% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**34**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

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ANDREW HOUSE, HADFIELD STREET
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UKAS TESTING 1580

TEST CERTIFICATE

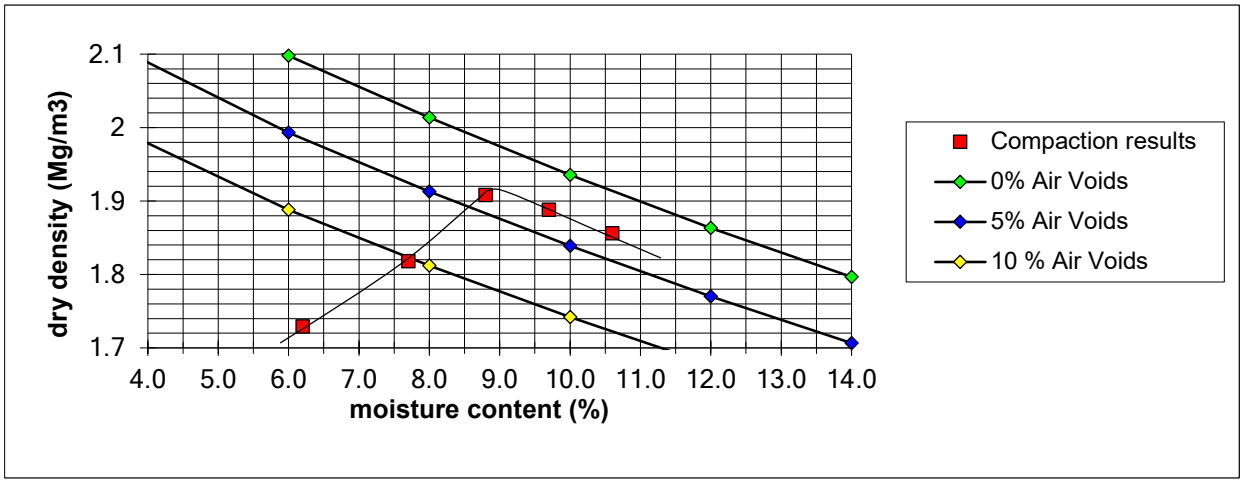
DRY DENSITY/MOISTURE CONTENT RELATIONSHIP VIBRATING HAMMER
BS1377: PART 4: 1990

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4117/16

SAMPLE LABEL	CR06	DATE SAMPLED	Not advised
LAB SAMPLE No	106208	DATE RECEIVED	03-Nov-21
DATE TESTED	11-Nov-21	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		6.2	1.729
2		7.7	1.818
3		8.8	1.908
4		9.7	1.888
5		10.6	1.856
	Optimum	8.9	
	Maximum		1.91
	Particle Density	2.4 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 37.5mm sieve = 23%
Percentage of material retained on 20mm sieve = 45%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 30-Nov-21

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4117/16
Laboratory sample number	:	106208
Material	:	Recycled Crush
Advised source	:	Site Won
Site mark	:	CR06
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 November 2021
Date of start of test	:	11 November 2021
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	95
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.0
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	3.7
Ra	Bituminous materials	1.3
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0
FL	Floating Particles (cm^3/kg)	0.4

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 30-Nov-21

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR201044 -
Collyhurst

Job Number MRN 4297/2
Date of Issue 01 March 2022
Pages 1 of 17

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

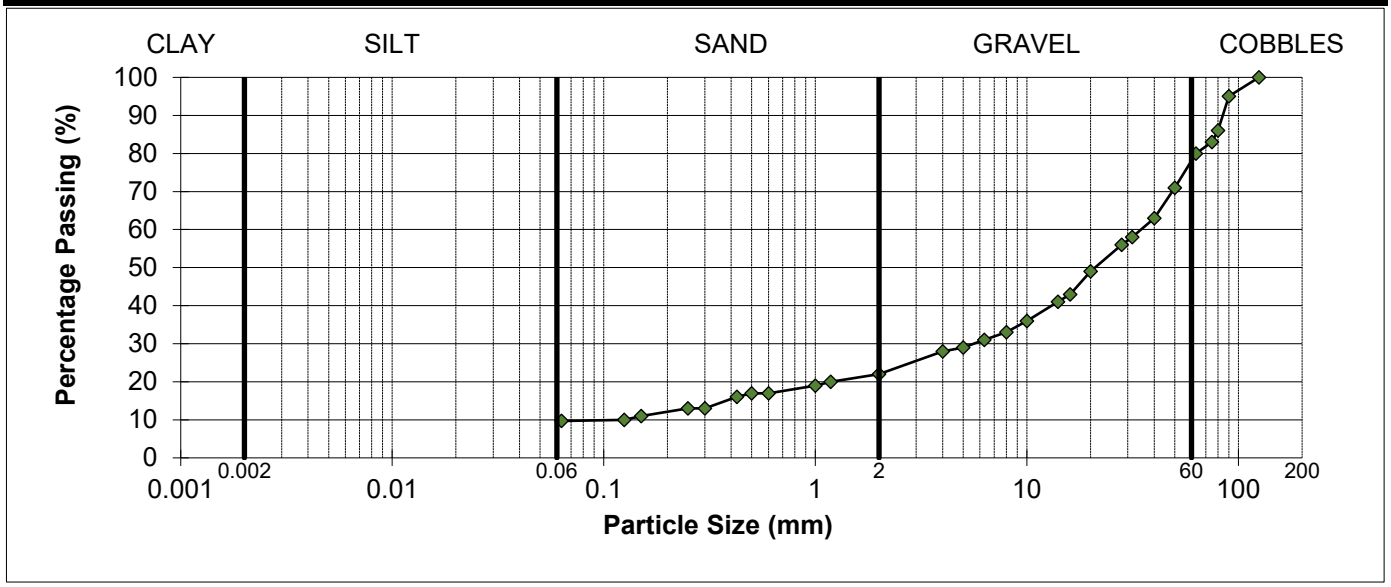
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR201	DATE SAMPLED	Not advised
LAB SAMPLE No	109175	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	31	
90	95		5	29	
80	86	75-99	4	28	
75	83		2	22	0-35
63	80		1.18	20	
50	71		1	19	
40	63	50-90	0.6	17	
31.5	58		0.5	17	
28	56		0.425	16	
20	49	30-75	0.3	13	
16	43		0.25	13	
14	41		0.15	11	
10	36	15-60	0.125	10	
8	33		0.063	9.7	0-12



REMARKS

As received water content = 9.2%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109175
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR201
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Feb-22
Date of start of test	:	11-Feb-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	38% passing 14mm retained 12.5mm 62% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**42**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109175
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR201
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 February 2022
Date of start of test	:	11 February 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	69
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	3.2
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	27
Ra	Bituminous materials	0.8
Rg	Glass	0.1
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.7

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET

DUKINFIELD, CHESHIRE SK16 4QX

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UKAS TESTING 1580

TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER

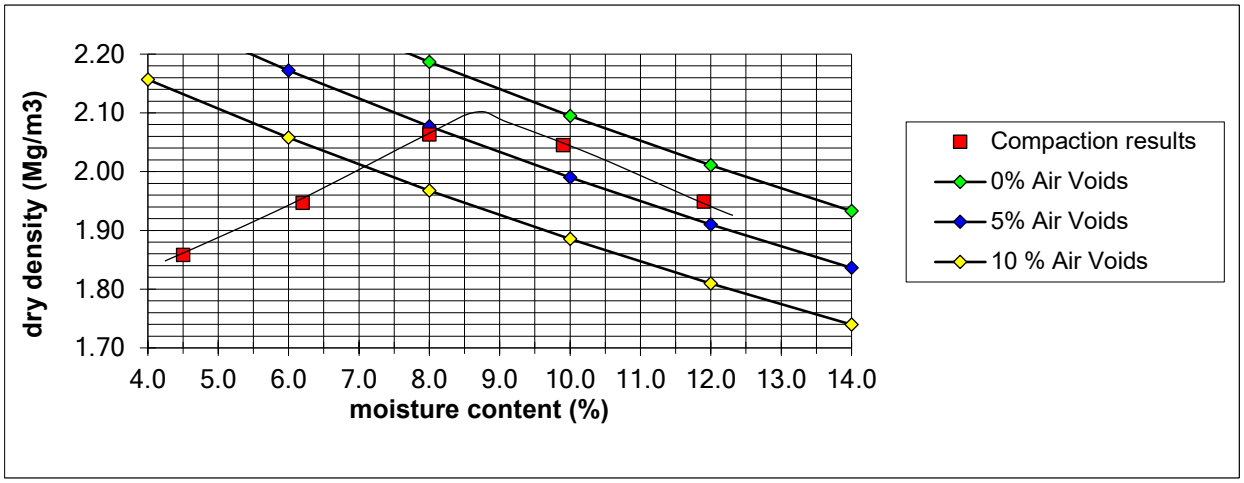
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR201	DATE SAMPLED	Not Advised
LAB SAMPLE No	109175	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		4.5	1.858
2		6.2	1.947
3		8.0	2.063
4		9.9	2.045
5		11.9	1.949
	Optimum	8.7	
	Maximum		2.10
	Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES

Percentage of material retained on 40mm sieve = 37%

Percentage of material retained on 20mm sieve = 51%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

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TEL 0161 475 0870 FAX 0161 475 0871

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

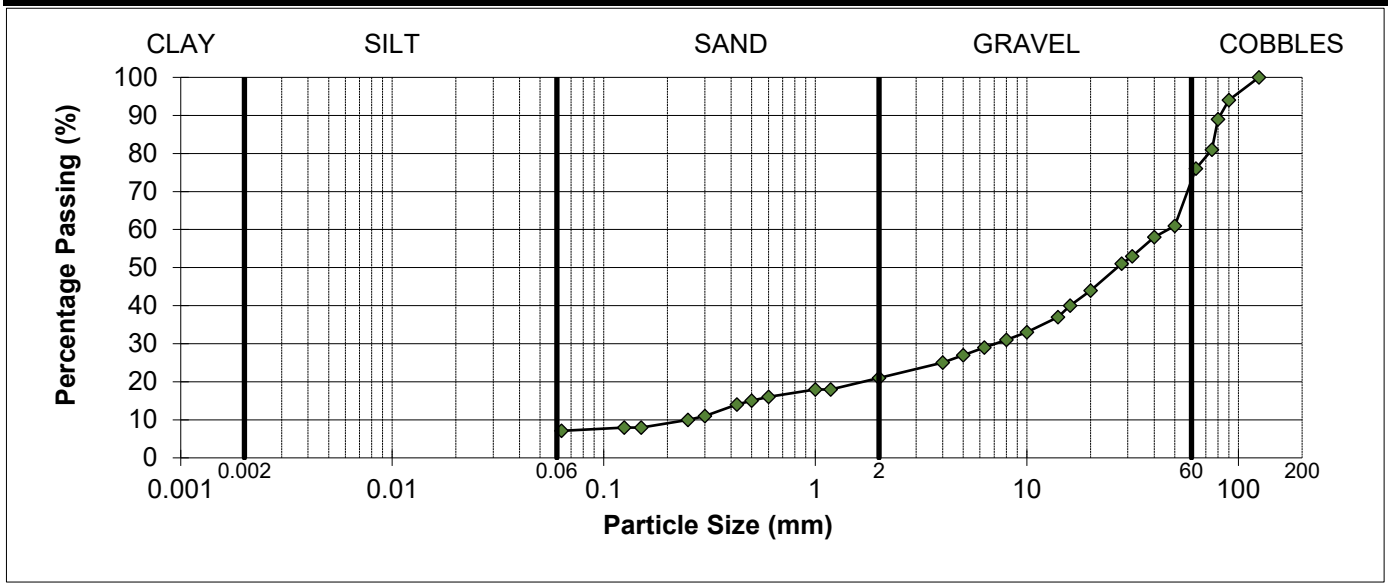
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR202	DATE SAMPLED	Not advised
LAB SAMPLE No	109176	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	29	
90	94		5	27	
80	89	75-99	4	25	
75	81		2	21	0-35
63	76		1.18	18	
50	61		1	18	
40	58	50-90	0.6	16	
31.5	53		0.5	15	
28	51		0.425	14	
20	44	30-75	0.3	11	
16	40		0.25	10	
14	37		0.15	8	
10	33	15-60	0.125	8	
8	31		0.063	7.1	0-12



REMARKS

As received water content = 11%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109176
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR202
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Feb-22
Date of start of test	:	11-Feb-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	38% passing 14mm retained 12.5mm 62% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**45**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109176
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR202
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 February 2022
Date of start of test	:	11 February 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	65
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	2.9
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	32
Ra	Bituminous materials	0.2
Rg	Glass	0.3
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.2

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

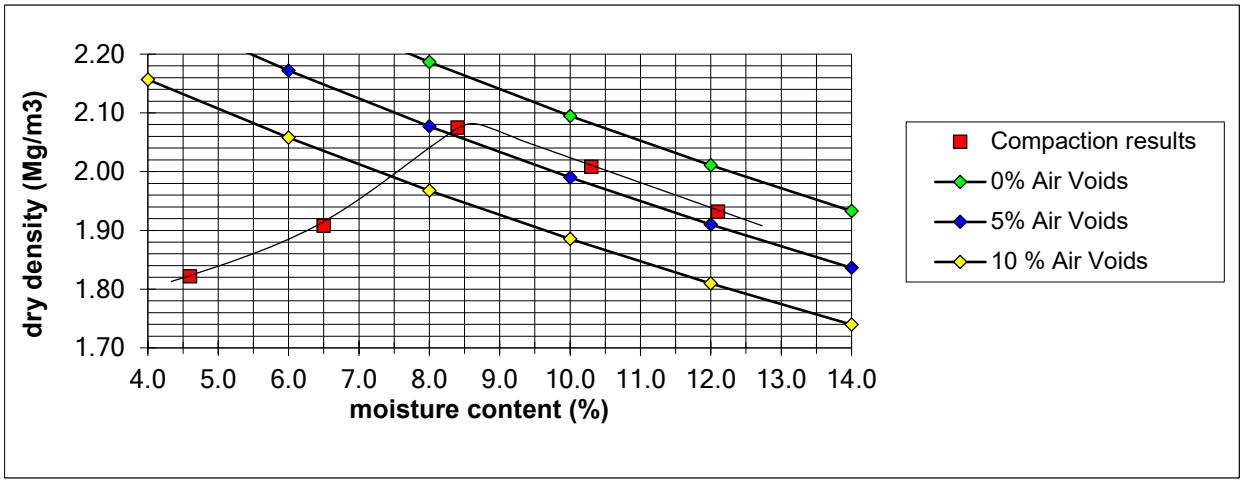
DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR202	DATE SAMPLED	Not Advised
LAB SAMPLE No	109176	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		4.6	1.822
2		6.5	1.908
3		8.4	2.075
4		10.3	2.008
5		12.1	1.932
	Optimum	8.6	
	Maximum		2.08
	Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 40mm sieve = 42%
Percentage of material retained on 20mm sieve = 56%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

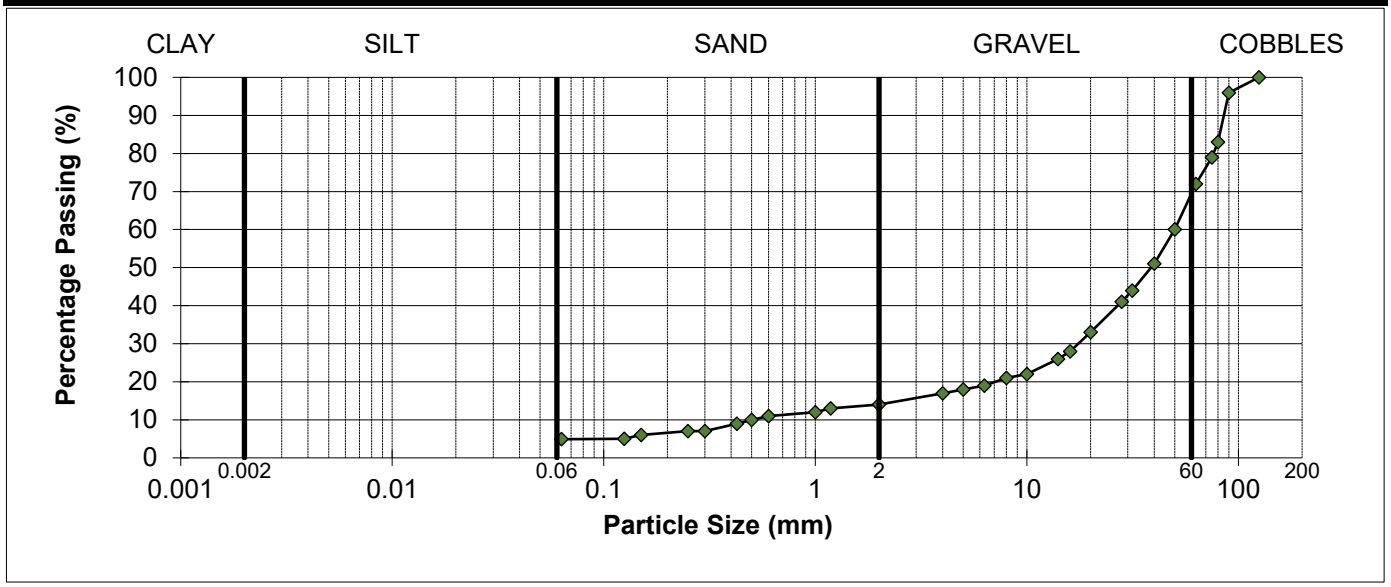
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR203	DATE SAMPLED	Not advised
LAB SAMPLE No	109177	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	19	
90	96		5	18	
80	83	75-99	4	17	
75	79		2	14	0-35
63	72		1.18	13	
50	60		1	12	
40	51	50-90	0.6	11	
31.5	44		0.5	10	
28	41		0.425	9	
20	33	30-75	0.3	7	
16	28		0.25	7	
14	26		0.15	6	
10	22	15-60	0.125	5	
8	21		0.063	4.9	0-12



REMARKS

As received water content = 7.3%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109177
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR203
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Feb-22
Date of start of test	:	11-Feb-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	34% passing 14mm retained 12.5mm
		66% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**45**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109177
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR203
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 February 2022
Date of start of test	:	11 February 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	70
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.8
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	29
Ra	Bituminous materials	0.5
Rg	Glass	0.1
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.5

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

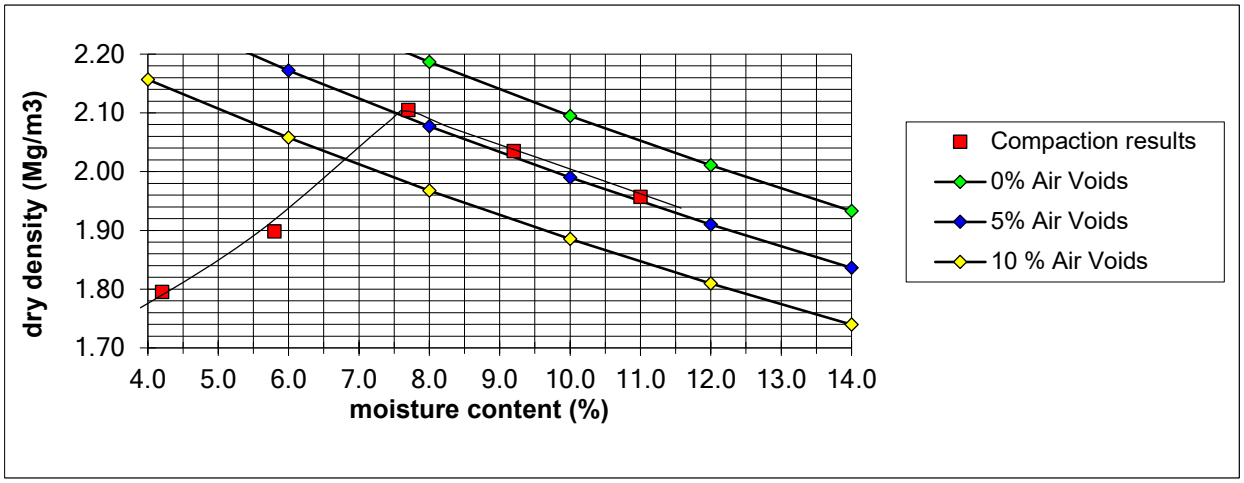
DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR203	DATE SAMPLED	Not Advised
LAB SAMPLE No	109177	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		4.2	1.795
2		5.8	1.898
3		7.7	2.105
4		9.2	2.035
5		11.0	1.957
	Optimum	7.7	
	Maximum		2.10
	Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 40mm sieve = 49%
Percentage of material retained on 20mm sieve = 67%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

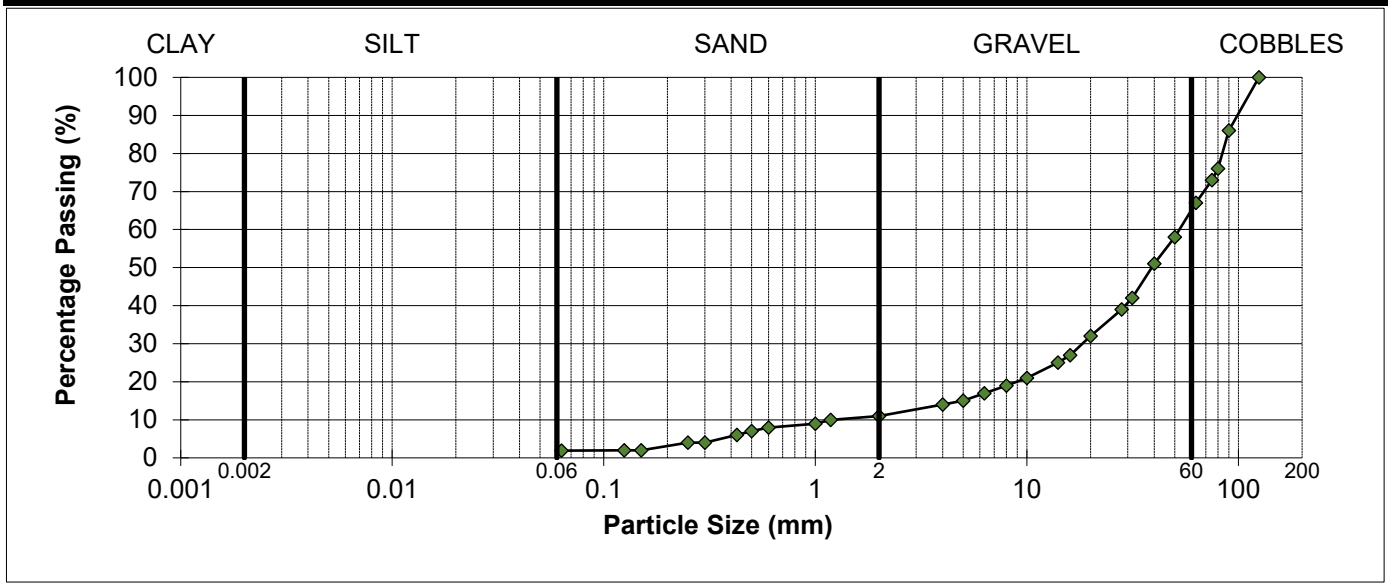
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR204	DATE SAMPLED	Not advised
LAB SAMPLE No	109178	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	17	
90	86		5	15	
80	76	75-99	4	14	
75	73		2	11	0-35
63	67		1.18	10	
50	58		1	9	
40	51	50-90	0.6	8	
31.5	42		0.5	7	
28	39		0.425	6	
20	32	30-75	0.3	4	
16	27		0.25	4	
14	25		0.15	2	
10	21	15-60	0.125	2	
8	19		0.063	1.9	0-12



REMARKS

As received water content = 8.2%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING
1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109178
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR204
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03-Feb-22
Date of start of test	:	11-Feb-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	35% passing 14mm retained 12.5mm 65% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**44**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/2
Laboratory sample number	:	109178
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR204
Certificate of sampling received	:	No
Date and time of sampling	:	Not advised
Date received at Laboratory	:	03 February 2022
Date of start of test	:	11 February 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	67
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	5.1
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	27
Ra	Bituminous materials	0.8
Rg	Glass	0.1
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.4

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 01-Mar-22

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ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

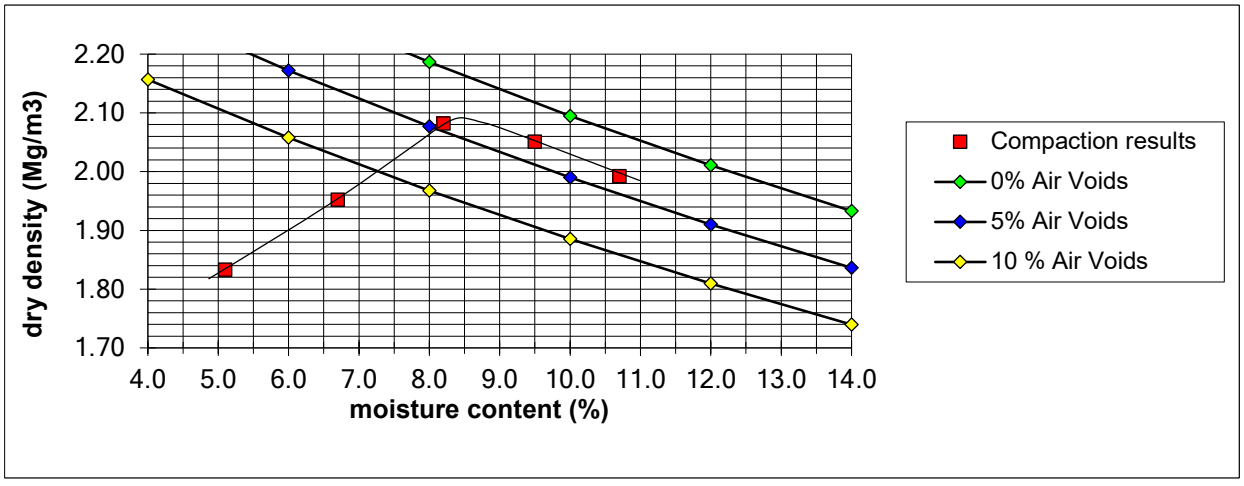
DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/2

SAMPLE LABEL	CR204	DATE SAMPLED	Not Advised
LAB SAMPLE No	109178	DATE RECEIVED	03-Feb-22
DATE TESTED	11-Feb-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		5.1	1.833
2		6.7	1.952
3		8.2	2.082
4		9.5	2.051
5		10.7	1.992
	Optimum	8.4	
	Maximum		2.09
	Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 40mm sieve = 49%
Percentage of material retained on 20mm sieve = 68%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 01-Mar-22

MURRAY RIX

CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR201044 -
Collyhurst

Job Number MRN 4297/4
Date of Issue 17 March 2022
Pages 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

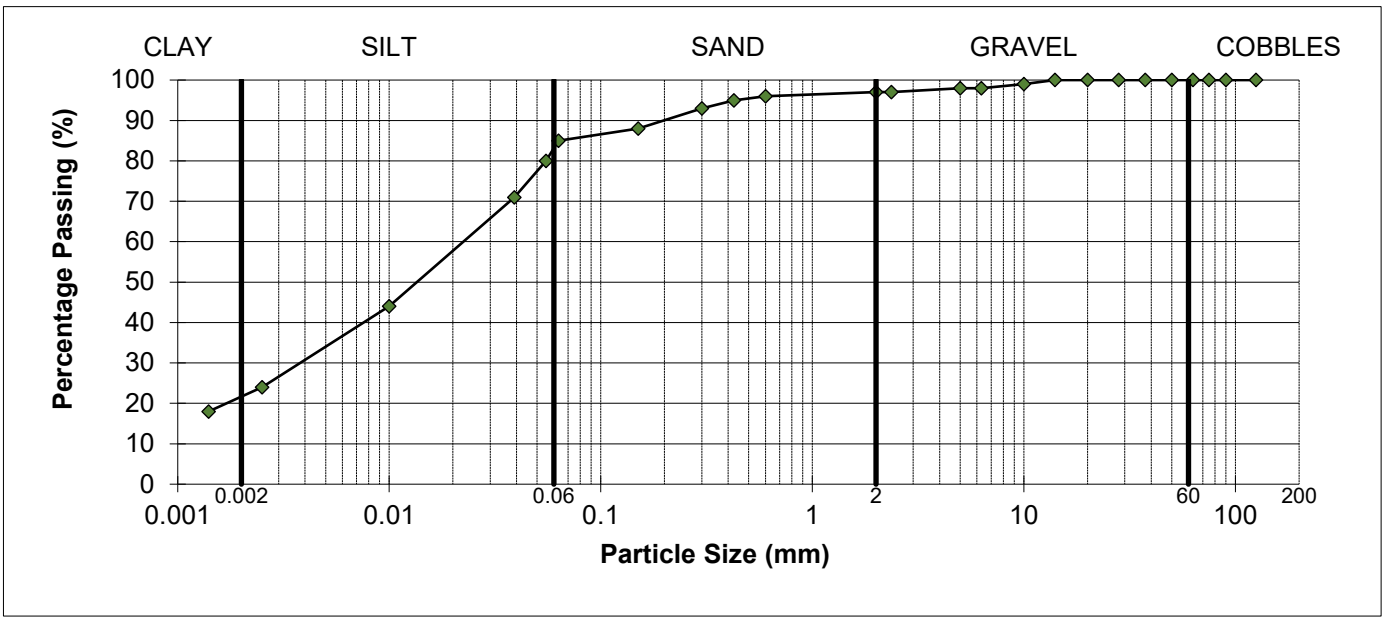
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/4

SAMPLE LABEL	CL401	DATE SAMPLED	23-Feb-22
LAB SAMPLE No	109749	DATE RECEIVED	25-Feb-22
DATE TESTED	03-Mar-22	SAMPLED BY	Client

MATERIAL	Brown silty sandy CLAY
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	97	
90	100		2	97	
75	100		0.6	96	
63	100		0.425	95	
50	100		0.3	93	
37.5	100		0.15	88	
28	100		0.063	85	
20	100		0.055	80	
14	100		0.039	71	
10	99		0.01	44	
6.3	98		0.0025	24	
5	98		0.0014	18	



REMARKS
As received moisture content = 16%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 17-Mar-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

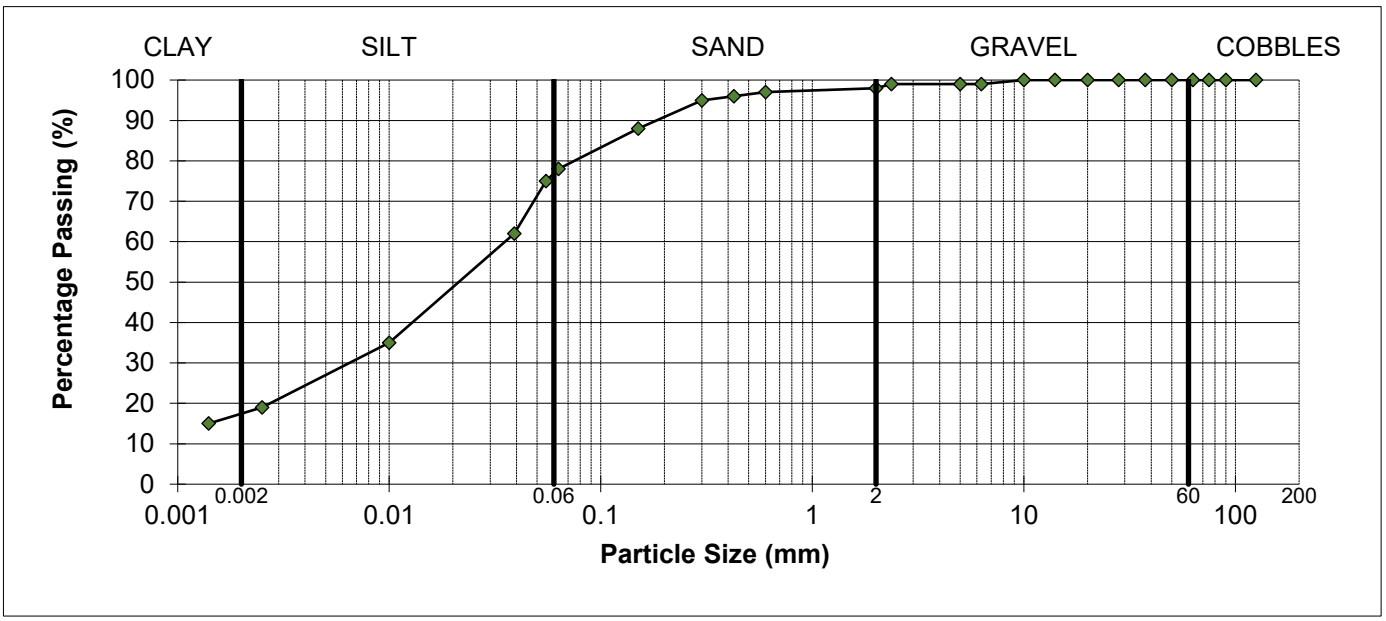
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/4

SAMPLE LABEL	CL403	DATE SAMPLED	23-Feb-22
LAB SAMPLE No	109751	DATE RECEIVED	25-Feb-22
DATE TESTED	03-Mar-22	SAMPLED BY	Client

MATERIAL	Brown silty sandy CLAY
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	99	
90	100		2	98	
75	100		0.6	97	
63	100		0.425	96	
50	100		0.3	95	
37.5	100		0.15	88	
28	100		0.063	78	
20	100		0.055	75	
14	100		0.039	62	
10	100		0.01	35	
6.3	99		0.0025	19	
5	99		0.0014	15	



REMARKS
As received moisture content = 15%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 17-Mar-22

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ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870 FAX 0161 475 0871

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

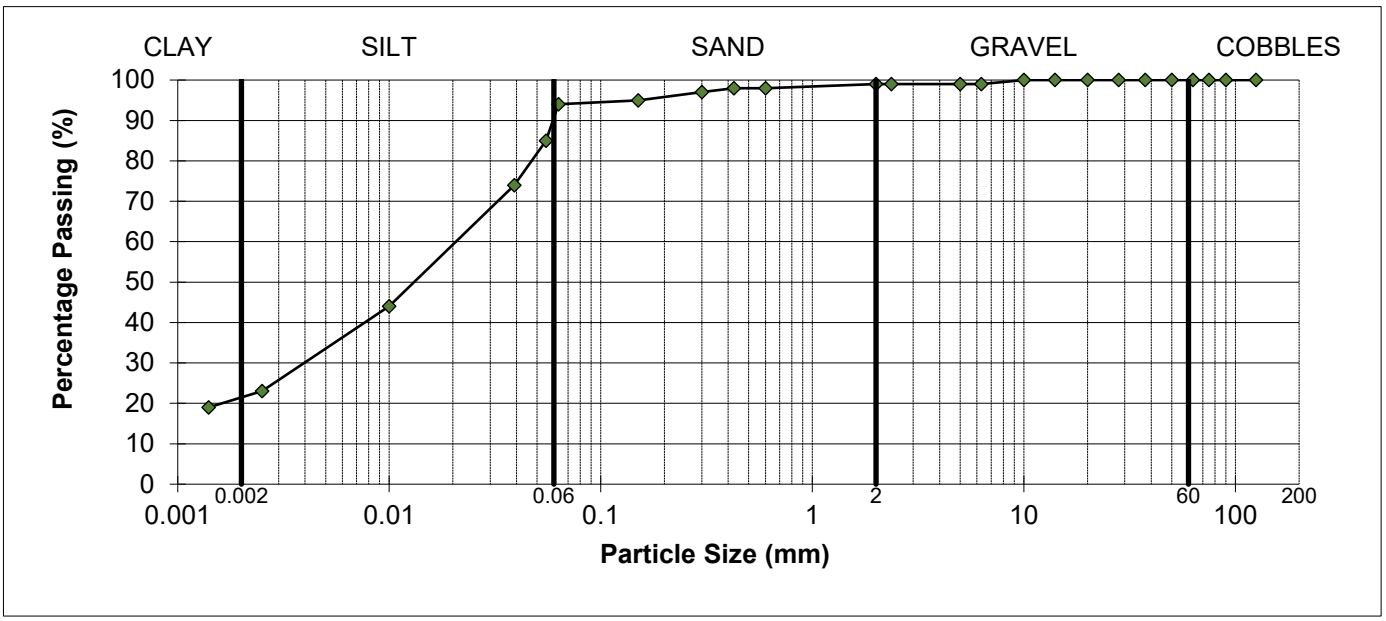
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/4

SAMPLE LABEL	CL405	DATE SAMPLED	23-Feb-22
LAB SAMPLE No	109752	DATE RECEIVED	25-Feb-22
DATE TESTED	03-Mar-22	SAMPLED BY	Client

MATERIAL	Brown silty sandy CLAY
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	99	
90	100		2	99	
75	100		0.6	98	
63	100		0.425	98	
50	100		0.3	97	
37.5	100		0.15	95	
28	100		0.063	94	
20	100		0.055	85	
14	100		0.039	74	
10	100		0.01	44	
6.3	99		0.0025	23	
5	99		0.0014	19	



REMARKS
As received moisture content = 16%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 17-Mar-22

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ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE DENSITY DETERMINATION
BS 1377 : Part 2 : 1990 Clause 8.2
GAS JAR METHOD

CLIENT	LK Remediate Ltd
SITE	LKR201044 - Collyhurst
JOB NUMBER	MRN 4297/4

METHOD OF PREPARATION	Oven Dry	VARIATIONS FROM PROCEDURE	None
DATE OF TEST	03-Mar-22	DATE SAMPLED	23-Feb-22

Laboratory Sample Number	Sample Label	Sample Location	Material	Particle Density (Mg/m^3)
109749	CL401	Not advised	Brown silty sandy CLAY	2.68
109750	CL402	Not advised	Brown silty sandy CLAY	2.67
109751	CL403	Not advised	Brown silty sandy CLAY	2.68
109752	CL404	Not advised	Brown silty sandy CLAY	2.65
109753	CL405	Not advised	Brown silty sandy CLAY	2.66
109754	CL406	Not advised	Brown silty sandy CLAY	2.67

Comment / Anomalies
Particle density reported is the average of two determinations

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 17-Mar-22

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client	LK Remediate Ltd
Address	Unit 29 Eton Business Park Eton Hill Road Radcliffe Greater Manchester M26 2ZS
Contract	LKR 20 1044 - Collyhurst
Job Number	MRN 4297/8
Date of Issue	07 April 2022
Pages	1 of 9

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

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TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

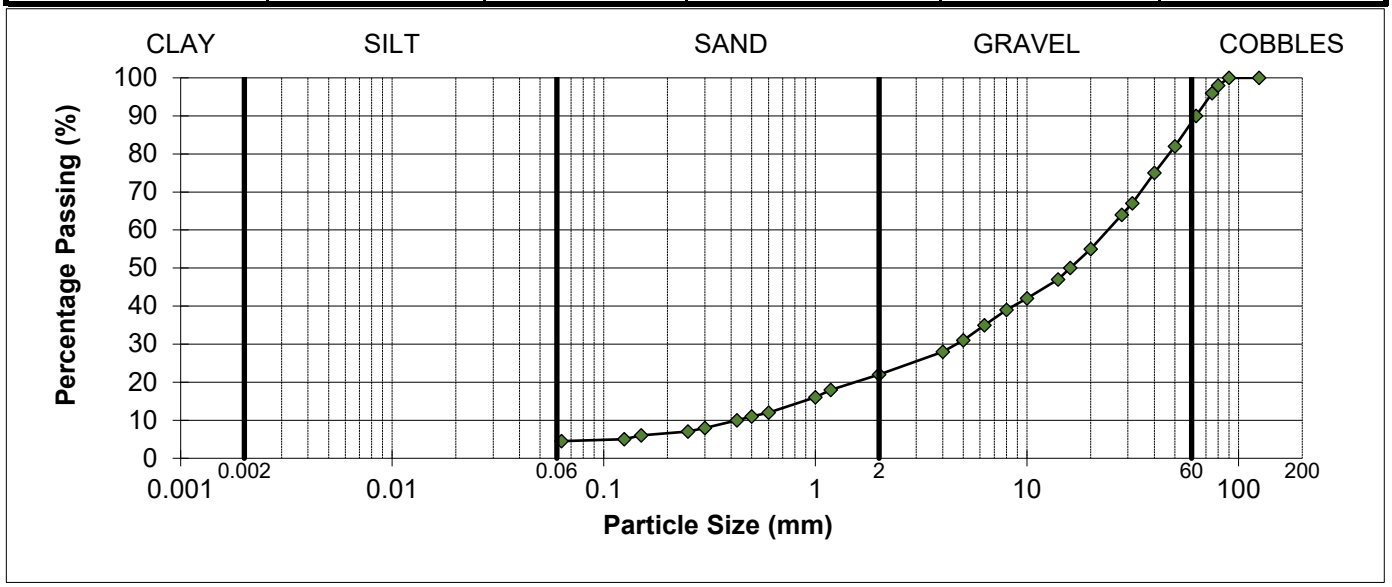
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4297/8

SAMPLE LABEL	CR212	DATE SAMPLED	22-Mar-22
LAB SAMPLE No	110641	DATE RECEIVED	24-Mar-22
DATE TESTED	28-Mar-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	35	
90	100		5	31	
80	98	75-99	4	28	
75	96		2	22	0-35
63	90		1.18	18	
50	82		1	16	
40	75	50-90	0.6	12	
31.5	67		0.5	11	
28	64		0.425	10	
20	55	30-75	0.3	8	
16	50		0.25	7	
14	47		0.15	6	
10	42	15-60	0.125	5	
8	39		0.063	4.5	0-12



REMARKS

As received water content = 8.2%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 07-Apr-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/8
Laboratory sample number	:	110641
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR212
Certificate of sampling received	:	No
Date and time of sampling	:	22-Mar-22
Date received at Laboratory	:	24-Mar-22
Date of start of test	:	28-Mar-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	34% passing 14mm retained 12.5mm 66% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**45**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 07-Apr-22

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ANDREW HOUSE, HADFIELD STREET
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

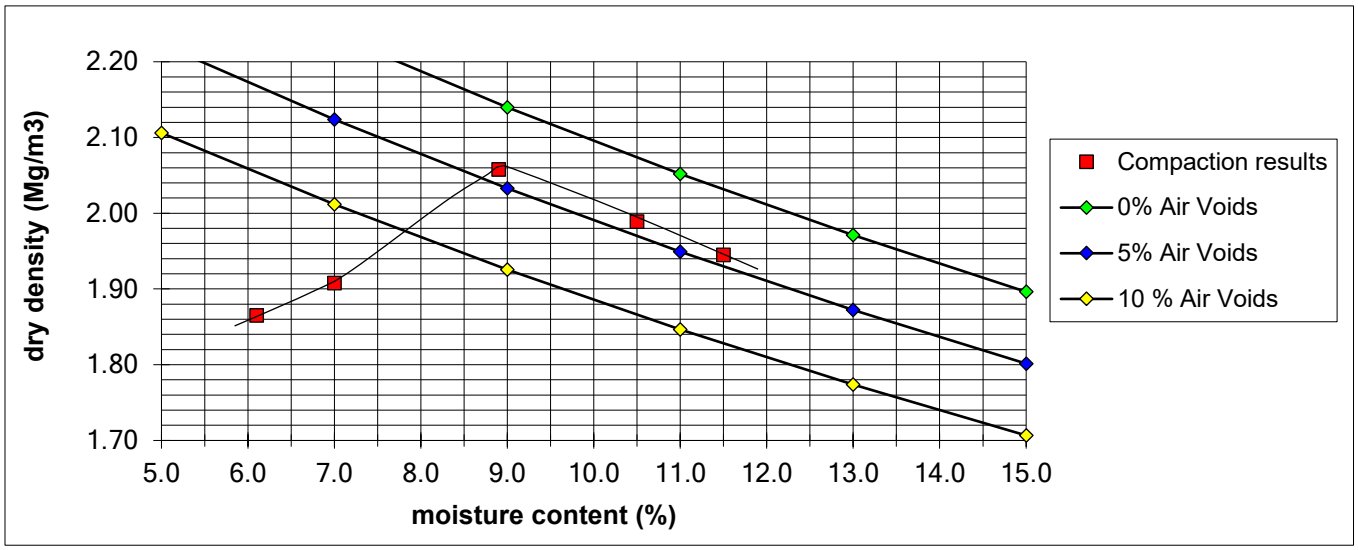
DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4297/8

SAMPLE LABEL	CR212	DATE SAMPLED	22-Mar-22
LAB SAMPLE No	110641	DATE RECEIVED	24-Mar-22
DATE TESTED	28-Mar-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried

Point Number	Moisture Content (%)	Dry Density (Mg/m3)
1	6.1	1.865
2	7.0	1.908
3	8.9	2.058
4	10.5	1.989
5	11.5	1.945
Optimum	9.0	
Maximum		2.06
Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 40mm sieve = 25%
Percentage of material retained on 20mm sieve = 45%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 07-Apr-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/8
Laboratory sample number	:	110641
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR212
Certificate of sampling received	:	No
Date and time of sampling	:	22 March 2022
Date received at Laboratory	:	24 March 2022
Date of start of test	:	01 April 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	74
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	2.9
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	23
Ra	Bituminous materials	0.1
Rg	Glass	0.1
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.2

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 07-Apr-22

M U R R A Y R I X

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UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 (Washing & Sieving Method)

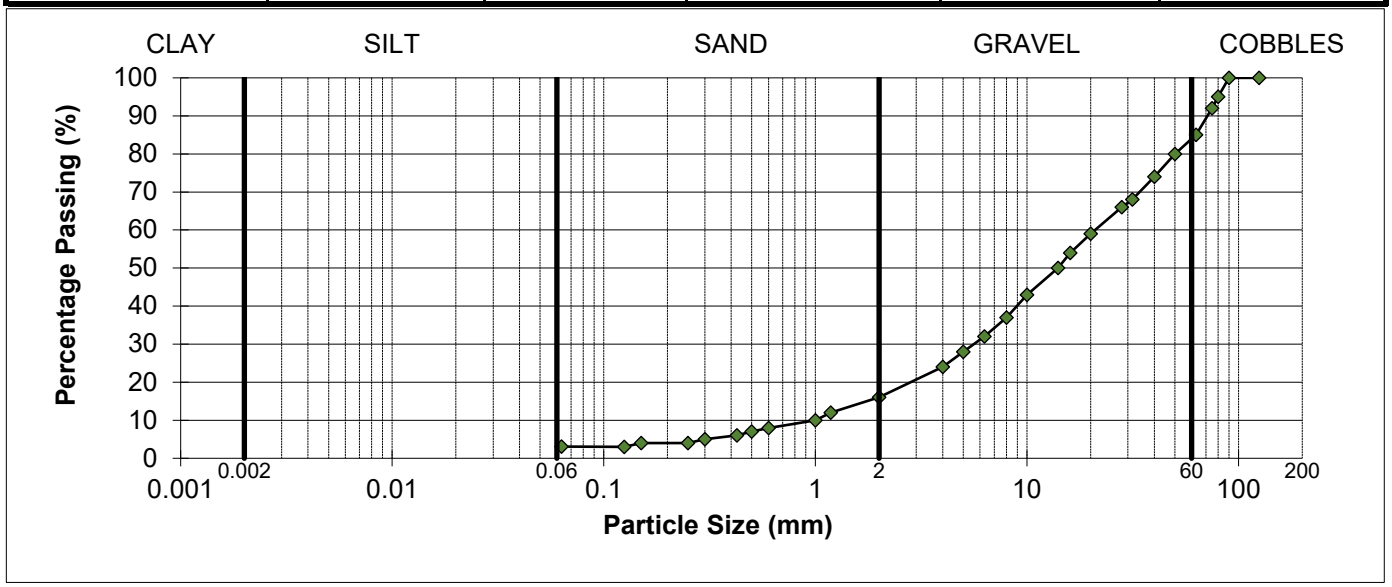
Determination of water content in accordance with BS EN 1097-5:2008

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4297/8

SAMPLE LABEL	CR213	DATE SAMPLED	22-Mar-22
LAB SAMPLE No	110642	DATE RECEIVED	24-Mar-22
DATE TESTED	28-Mar-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	6.3	32	
90	100		5	28	
80	95	75-99	4	24	
75	92		2	16	0-35
63	85		1.18	12	
50	80		1	10	
40	74	50-90	0.6	8	
31.5	68		0.5	7	
28	66		0.425	6	
20	59	30-75	0.3	5	
16	54		0.25	4	
14	50		0.15	4	
10	43	15-60	0.125	3	
8	37		0.063	3.1	0-12



REMARKS

As received water content = 7.8%

Sample complies with the advised grading specification for a 6F5 material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 07-Apr-22

M U R R A Y R I X

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UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF RESISTANCE TO FRAGMENTATION BY THE LOS ANGELES TEST METHOD

BS EN 1097-2:2020

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/8
Laboratory sample number	:	110642
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR213
Certificate of sampling received	:	No
Date and time of sampling	:	22-Mar-22
Date received at Laboratory	:	24-Mar-22
Date of start of test	:	28-Mar-22
Sampling Location	:	Site
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Size Fraction	:	37% passing 14mm retained 12.5mm 63% passing 12.5mm retained 10mm
Mass of dry sample tested	:	5000g
Target specification	:	<50

RESULT

Los Angeles Coefficient	:	**42**

Comment

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 07-Apr-22

form omcvib

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET
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UKAS TESTING 1580

TEST CERTIFICATE

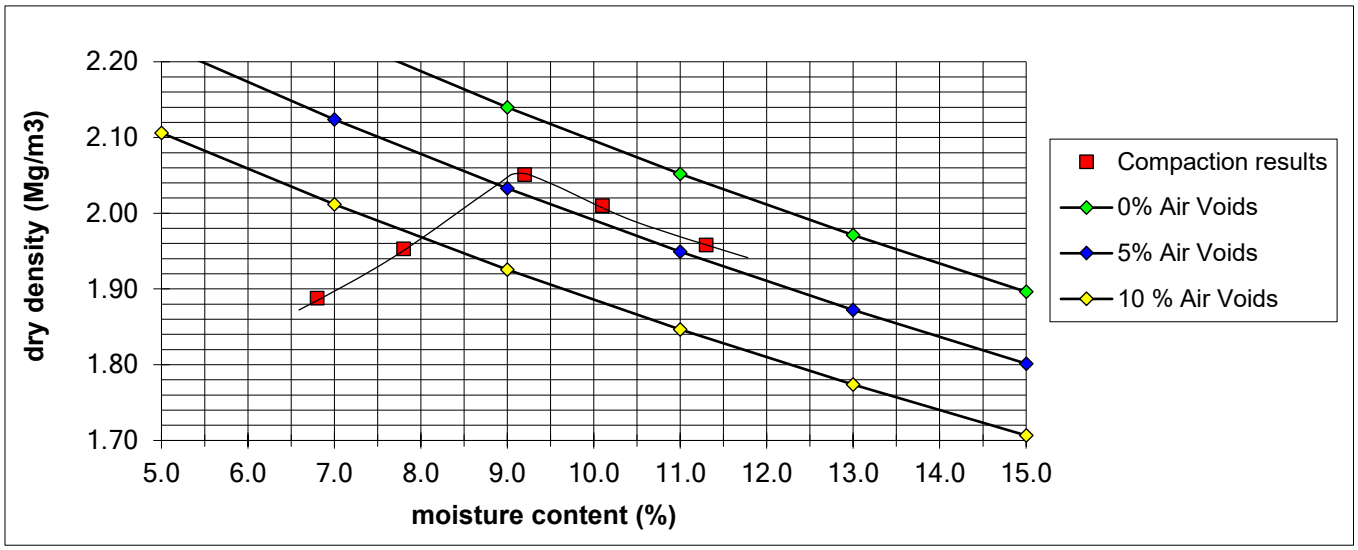
DRY DENSITY/WATER CONTENT RELATIONSHIP VIBRATING HAMMER
BS EN 13286-4:2003

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst
JOB NUMBER	MRN 4297/8

SAMPLE LABEL	CR213	DATE SAMPLED	22-Mar-22
LAB SAMPLE No	110642	DATE RECEIVED	24-Mar-22
DATE TESTED	28-Mar-22	SAMPLED BY	Client

MATERIAL	Recycled Aggregate
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried

Point Number		Moisture Content (%)	Dry Density (Mg/m3)
1		6.8	1.888
2		7.8	1.953
3		9.2	2.051
4		10.1	2.010
5		11.3	1.958
	Optimum	9.1	
	Maximum		2.07
	Particle Density	2.65 (Assumed)	



REMARKS/ABNORMALITIES
Percentage of material retained on 40mm sieve = 26%
Percentage of material retained on 20mm sieve = 41%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 07-Apr-22

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
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UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	LK Remediate Ltd
SITE	LKR 20 1044 - Collyhurst

SAMPLE DETAILS

Job Number	:	MRN 4297/8
Laboratory sample number	:	110642
Material	:	Recycled Aggregate
Advised source	:	Site Won
Site mark	:	CR213
Certificate of sampling received	:	No
Date and time of sampling	:	22 March 2022
Date received at Laboratory	:	24 March 2022
Date of start of test	:	01 April 2022
Sampling Location	:	Not advised
Method of sampling	:	BS EN 932-1 : 1997
Sampled by	:	Client
Mass of dry sample tested	:	50 kg
Drying Temperature	:	40 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	67
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	3.9
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	28
Ra	Bituminous materials	0.7
Rg	Glass	0.3
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.0
FL	Floating Particles (cm^3/kg)	0.7

Comments

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 07-Apr-22

Site and Project:	Collyhurst - FEC	
Sample No.:	CC 01	
Date:	26/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		318	g
Mass of dried soil + tray (m_2)	=		275	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	297	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	254	g
Mass of moisture (m_6)	=	$m_4 - m_5$	43	g
Water Content (w)	=	$\frac{m_6}{m_5}$	16.9%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3043	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2050	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.044	Mg m^{-3}
Water Content (w)	=		16.9%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.748	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.53	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.9%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

(c) LK Remediate 2017

Site and Project:	Collyhurst - FEC	
Sample No.:	CC 02	
Date:	26/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		319	g
Mass of dried soil + tray (m_2)	=		278	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	297	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	256	g
Mass of moisture (m_6)	=	$m_4 - m_5$	41	g
Water Content (w)	=	$\frac{m_6}{m_5}$	16.0%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3204	g
Mass of empty core (M_2)	=		1052	g
Mass of soil (M)	=	$M_1 - M_2$	2152	g
Height of core (h)	=		129.9	mm
Internal diameter of core (d)	=		101	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1040738.882	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.068	Mg m^{-3}
Water Content (w)	=		16.0%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.782	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.50	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.7%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 03	
Date:	26/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		356	g
Mass of dried soil + tray (m_2)	=		301	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	334	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	279	g
Mass of moisture (m_6)	=	$m_4 - m_5$	55	g
Water Content (w)	=	$\frac{m_6}{m_5}$	19.7%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3227	g
Mass of empty core (M_2)	=		1020	g
Mass of soil (M)	=	$M_1 - M_2$	2207	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		101	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1033528.22	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.135	Mg m^{-3}
Water Content (w)	=		19.7%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.784	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.50	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	-2.0%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

(c) LK Remediate 2017

Site and Project:	Collyhurst - FEC	
Sample No.:	CC 04	
Date:	26/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		336	g
Mass of dried soil + tray (m_2)	=		293	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	314	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	271	g
Mass of moisture (m_6)	=	$m_4 - m_5$	43	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.9%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3109	g
Mass of empty core (M_2)	=		1040	g
Mass of soil (M)	=	$M_1 - M_2$	2069	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.063	Mg m^{-3}
Water Content (w)	=		15.9%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.780	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.50	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	5.1%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 05	
Date:	30/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		344	g
Mass of dried soil + tray (m_2)	=		298	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	322	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	276	g
Mass of moisture (m_6)	=	$m_4 - m_5$	46	g
Water Content (w)	=	$\frac{m_6}{m_5}$	16.7%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3168	g
Mass of empty core (M_2)	=		1051	g
Mass of soil (M)	=	$M_1 - M_2$	2117	g
Height of core (h)	=		129.9	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1020232.214	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.075	Mg m^{-3}
Water Content (w)	=		16.7%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.779	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.50	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	3.7%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 06	
Date:	30/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		402	g
Mass of dried soil + tray (m_2)	=		345	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	381	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	324	g
Mass of moisture (m_6)	=	$m_4 - m_5$	57	g
Water Content (w)	=	$\frac{m_6}{m_5}$	17.6%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3033	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2040	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.034	Mg m^{-3}
Water Content (w)	=		17.6%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.730	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.54	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.8%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 07	
Date:	30/11/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		424	g
Mass of dried soil + tray (m_2)	=		366	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	403	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	345	g
Mass of moisture (m_6)	=	$m_4 - m_5$	58	g
Water Content (w)	=	$\frac{m_6}{m_5}$	16.8%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3165	g
Mass of empty core (M_2)	=		1020	g
Mass of soil (M)	=	$M_1 - M_2$	2145	g
Height of core (h)	=		129.8	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1019446.816	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.104	Mg m^{-3}
Water Content (w)	=		16.8%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.801	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.48	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	2.3%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 08	
Date:	09/12/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		427	g
Mass of dried soil + tray (m_2)	=		364	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	405	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	342	g
Mass of moisture (m_6)	=	$m_4 - m_5$	63	g
Water Content (w)	=	$\frac{m_6}{m_5}$	18.4%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3069	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2076	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	993001.6747	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.091	Mg m^{-3}
Water Content (w)	=		18.4%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.765	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.51	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	1.4%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 09	
Date:	09/12/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		315	g
Mass of dried soil + tray (m_2)	=		276	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	293	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	254	g
Mass of moisture (m_6)	=	$m_4 - m_5$	39	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.4%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3124	g
Mass of empty core (M_2)	=		1020	g
Mass of soil (M)	=	$M_1 - M_2$	2104	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1013163.631	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.077	Mg m^{-3}
Water Content (w)	=		15.4%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.800	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.48	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.9%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 10	
Date:	09/12/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		402	g
Mass of dried soil + tray (m_2)	=		349	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	380	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	327	g
Mass of moisture (m_6)	=	$m_4 - m_5$	53	g
Water Content (w)	=	$\frac{m_6}{m_5}$	16.2%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3048	g
Mass of empty core (M_2)	=		1017	g
Mass of soil (M)	=	$M_1 - M_2$	2031	g
Height of core (h)	=		130	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1021017.613	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	1.989	Mg m^{-3}
Water Content (w)	=		16.2%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.712	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.56	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	8.1%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 11	
Date:	09/12/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		374	g
Mass of dried soil + tray (m_2)	=		322	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	353	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	301	g
Mass of moisture (m_6)	=	$m_4 - m_5$	52	g
Water Content (w)	=	$\frac{m_6}{m_5}$	17.3%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3054	g
Mass of empty core (M_2)	=		1015	g
Mass of soil (M)	=	$M_1 - M_2$	2039	g
Height of core (h)	=		130	mm
Internal diameter of core (d)	=		99	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1000699.362	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.038	Mg m^{-3}
Water Content (w)	=		17.3%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.737	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.54	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.9%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 12	
Date:	09/12/2021	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		351	g
Mass of dried soil + tray (m_2)	=		300	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	329	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	278	g
Mass of moisture (m_6)	=	$m_4 - m_5$	51	g
Water Content (w)	=	$\frac{m_6}{m_5}$	18.3%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3063	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2070	g
Height of core (h)	=		129.9	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1020232.214	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.029	Mg m^{-3}
Water Content (w)	=		18.3%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.714	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.56	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.3%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
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Site and Project:	Collyhurst - FEC	
Sample No.:	CC 13	
Date:	14/01/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		346	g
Mass of dried soil + tray (m_2)	=		295	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	325	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	274	g
Mass of moisture (m_6)	=	$m_4 - m_5$	51	g
Water Content (w)	=	$\frac{m_6}{m_5}$	18.6%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3126	g
Mass of empty core (M_2)	=		1025	g
Mass of soil (M)	=	$M_1 - M_2$	2101	g
Height of core (h)	=		129.9	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1010055.398	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.080	Mg m^{-3}
Water Content (w)	=		18.6%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.754	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.52	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	1.7%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC14	
Date:	19/01/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		411	g
Mass of dried soil + tray (m_2)	=		350	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	390	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	329	g
Mass of moisture (m_6)	=	$m_4 - m_5$	61	g
Water Content (w)	=	$\frac{m_6}{m_5}$	18.5%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3014	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2021	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.015	Mg m^{-3}
Water Content (w)	=		18.5%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.700	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.57	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	4.8%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC15	
Date:	19/01/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		379	g
Mass of dried soil + tray (m_2)	=		331	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	358	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	310	g
Mass of moisture (m_6)	=	$m_4 - m_5$	48	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.5%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3023	g
Mass of empty core (M_2)	=		1040	g
Mass of soil (M)	=	$M_1 - M_2$	1983	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	1.977	Mg m^{-3}
Water Content (w)	=		15.5%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.712	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.56	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	9.4%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
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Site and Project:	Collyhurst - FEC	
Sample No.:	CC16	
Date:	19/01/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		403	g
Mass of dried soil + tray (m_2)	=		357	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	381	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	335	g
Mass of moisture (m_6)	=	$m_4 - m_5$	46	g
Water Content (w)	=	$\frac{m_6}{m_5}$	13.7%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3125	g
Mass of empty core (M_2)	=		1043	g
Mass of soil (M)	=	$M_1 - M_2$	2082	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		100	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1013163.631	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.055	Mg m^{-3}
Water Content (w)	=		13.7%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.807	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.48	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	7.5%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
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Site and Project:	Collyhurst - FEC	
Sample No.:	CC17	
Date:	24/01/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		381	g
Mass of dried soil + tray (m_2)	=		322	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	360	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	301	g
Mass of moisture (m_6)	=	$m_4 - m_5$	59	g
Water Content (w)	=	$\frac{m_6}{m_5}$	19.6%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3017	g
Mass of empty core (M_2)	=		1047	g
Mass of soil (M)	=	$M_1 - M_2$	1970	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	1.964	Mg m^{-3}
Water Content (w)	=		19.6%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.642	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.63	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	6.3%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC18	
Date:	23/02/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		350	g
Mass of dried soil + tray (m_2)	=		307	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	329	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	286	g
Mass of moisture (m_6)	=	$m_4 - m_5$	43	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.0%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3215	g
Mass of empty core (M_2)	=		1040	g
Mass of soil (M)	=	$M_1 - M_2$	2175	g
Height of core (h)	=		128.5	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	999169.5046	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.177	Mg m^{-3}
Water Content (w)	=		15.0%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.892	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.41	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	0.7%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC19	
Date:	23/02/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		373	g
Mass of dried soil + tray (m_2)	=		322	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	351	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	300	g
Mass of moisture (m_6)	=	$m_4 - m_5$	51	g
Water Content (w)	=	$\frac{m_6}{m_5}$	17.0%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3273	g
Mass of empty core (M_2)	=		1049	g
Mass of soil (M)	=	$M_1 - M_2$	2224	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		100.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1023320.596	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.173	Mg m^{-3}
Water Content (w)	=		17.0%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.858	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.44	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	-1.1%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

Revision Index

iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC20	
Date:	23/02/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		373	g
Mass of dried soil + tray (m_2)	=		326	g
Mass of empty tray (m_3)	=		21	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	352	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	305	g
Mass of moisture (m_6)	=	$m_4 - m_5$	47	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.4%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3169	g
Mass of empty core (M_2)	=		993	g
Mass of soil (M)	=	$M_1 - M_2$	2176	g
Height of core (h)	=		129	mm
Internal diameter of core (d)	=		99.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1003057.324	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.169	Mg m^{-3}
Water Content (w)	=		15.4%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.880	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.42	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	0.6%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Site and Project:	Collyhurst - FEC	
Sample No.:	CC21	
Date:	23/02/2022	**FTC-1012**
		Site Determination of Compaction

(1) Determination of Water Content				
Mass of damp soil + tray (m_1)	=		399	g
Mass of dried soil + tray (m_2)	=		349	g
Mass of empty tray (m_3)	=		22	g
Mass of damp soil (m_4)	=	$m_1 - m_3$	377	g
Mass of dried soil (m_5)	=	$m_2 - m_3$	327	g
Mass of moisture (m_6)	=	$m_4 - m_5$	50	g
Water Content (w)	=	$\frac{m_6}{m_5}$	15.3%	
(2) Determination of Dry Density				
Mass of core plus soil (M_1)	=		3306	g
Mass of empty core (M_2)	=		1019	g
Mass of soil (M)	=	$M_1 - M_2$	2287	g
Height of core (h)	=		129.5	mm
Internal diameter of core (d)	=		101.5	mm
Internal volume of core (V)	=	$\frac{\prod x\, d^2 x\, h}{4}$	1047832.186	mm^3
Bulk density (ρ) (see Note 4)	=	$\frac{M \times 1000}{V}$	2.183	Mg m^{-3}
Water Content (w)	=		15.3%	
Dry density (ρ_d) (see Note 4)	=	$\frac{\rho}{(1+w)}$	1.893	Mg m^{-3}
Average Particle Density (laboratory determination, G_s) =			2.67	Mg m^{-3}
Void Ratio (e)	=	$\frac{G_s * 1}{\rho_d} - 1$	0.41	
Air Voids (Av)	=	$\frac{e - (wG_s)}{1 + e}$	0.1%	

Notes:

(1) Before weighing, ensure balance is zeroed and plate is free from debris;

(2) Ensure steel core is trimmed flush, and any small depressions in soil surface are filled, prior to weighing and knocking out into tray;

(3) BS 1377 Test method requires 24 hours at 105^{0}C to ensure complete drying of samples; site determinations will yield conservative results after 12-16 hrs, although the longer the time, the more accurate the determination. Cohesive samples must be diced and spread out across tray before drying; granular samples similarly should be spread.

(4) Bulk and dry density should be expressed to three places of decimals. All formulae are adjusted for different measurement units, no further conversion factors are required.

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iv	Text amended	19/06/2014 Richard C
v	Converted to LKR format	07/03/2017 Richard C

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Appendix 9 : CBR Test Certificates

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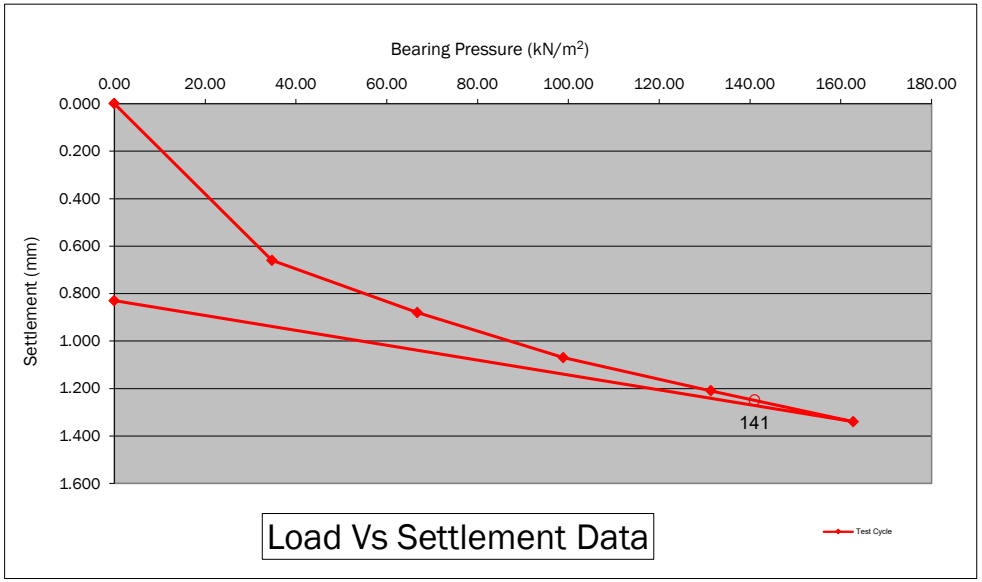
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1A	**REPORT NO:**	**DNR/78336A**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1A**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**1**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.66
66.71	0.88
98.90	1.07
131.35	1.21
162.72	1.34
0.00	0.83
Recovery %	38



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	1.34	mm	**15.3**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	141.0	kN/m²		
Modulus of Subgrade Reaction K762	70.3	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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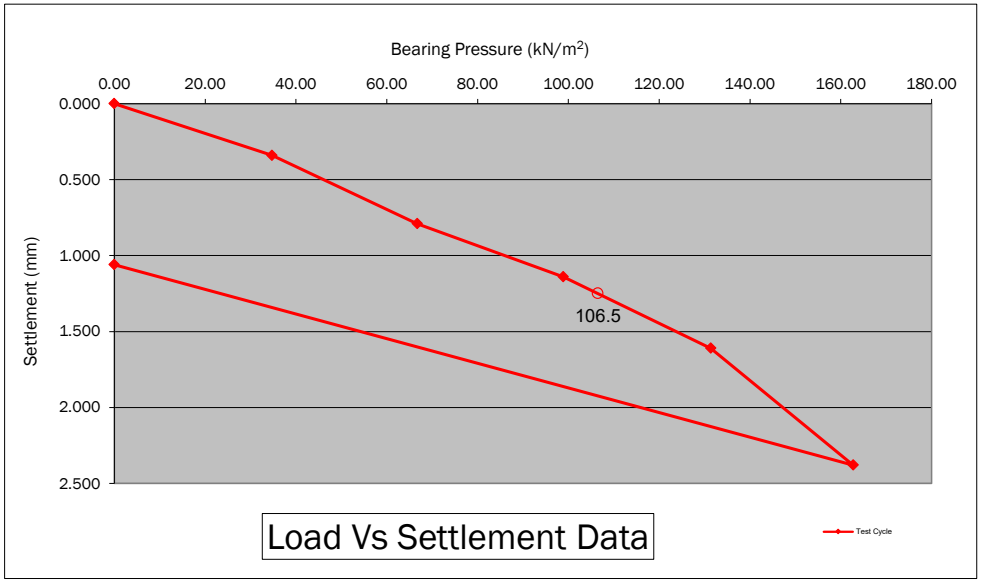
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1B	**REPORT NO:**	**DNR/78336B**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1B**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**2**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.34
66.71	0.79
98.90	1.14
131.35	1.61
162.72	2.38
0.00	1.06
Recovery %	56



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	2.38	mm	**9.4**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	106.5	kN/m²		
Modulus of Subgrade Reaction K762	53.1	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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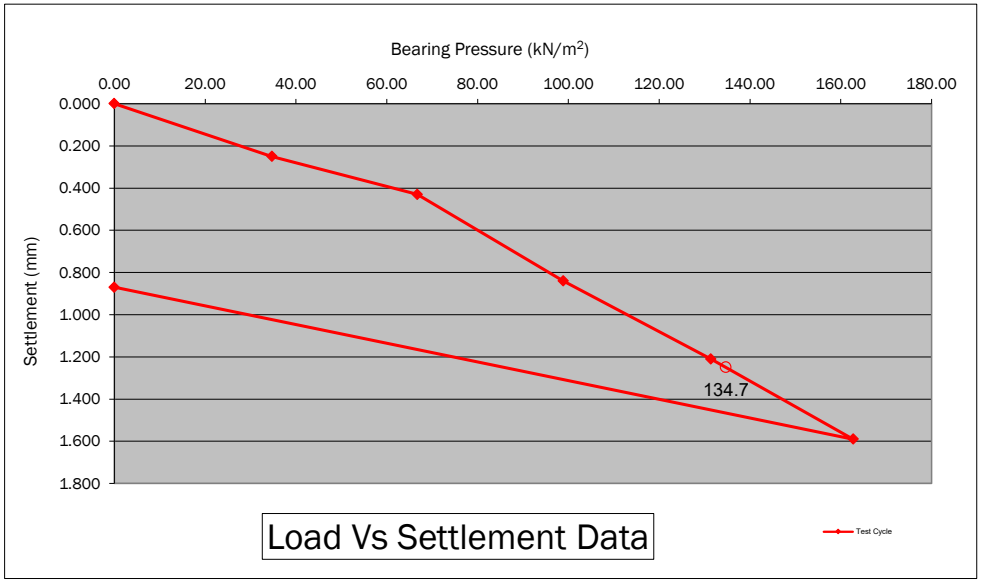
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1C	**REPORT NO:**	**DNR/78336C**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1C**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**3**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.25
66.71	0.43
98.90	0.84
131.35	1.21
162.72	1.59
0.00	0.87
Recovery %	45



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	1.59	mm	**14.1**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	134.7	kN/m²		
Modulus of Subgrade Reaction K762	67.1	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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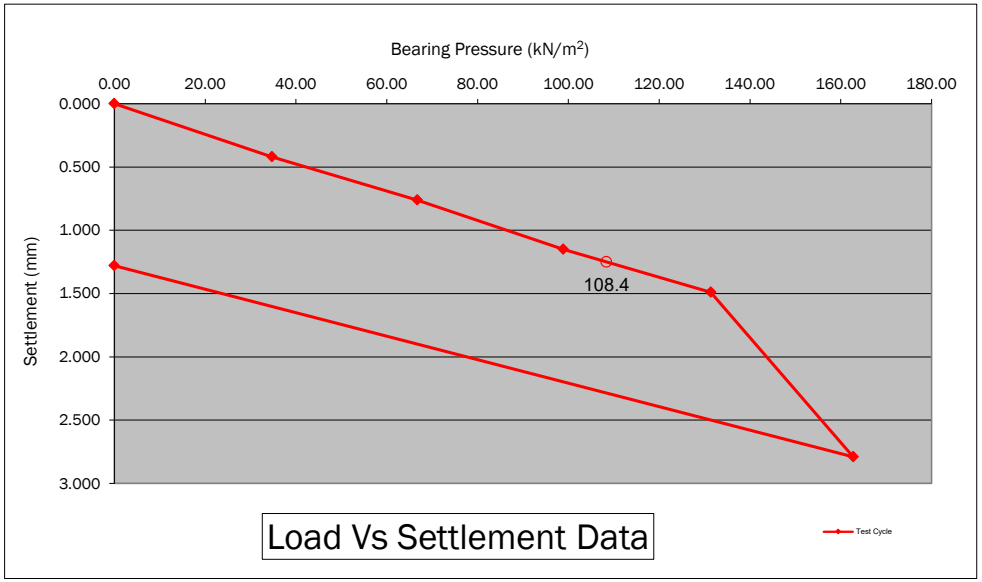
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1D	**REPORT NO:**	**DNR/78336D**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1D**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**4**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.42
66.71	0.76
98.90	1.15
131.35	1.49
162.72	2.79
0.00	1.28
Recovery %	54



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	2.79	mm	**9.7**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	108.4	kN/m²		
Modulus of Subgrade Reaction K762	54.0	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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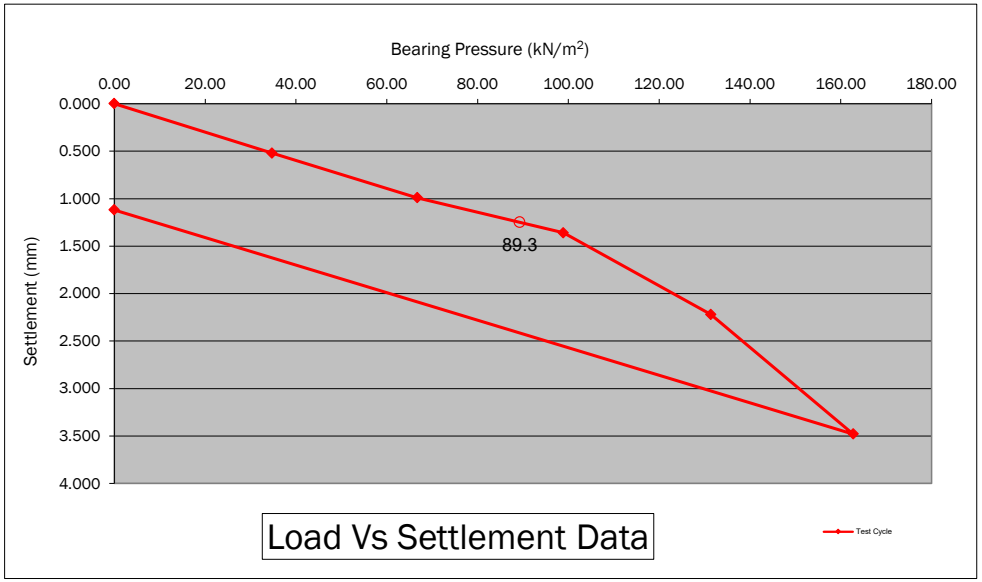
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1E	**REPORT NO:**	**DNR/78336E**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1E**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**5**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.52
66.71	0.99
98.90	1.36
131.35	2.22
162.72	3.48
0.00	1.12
Recovery %	68



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	3.48	mm	**6.9**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	89.3	kN/m²		
Modulus of Subgrade Reaction K762	44.5	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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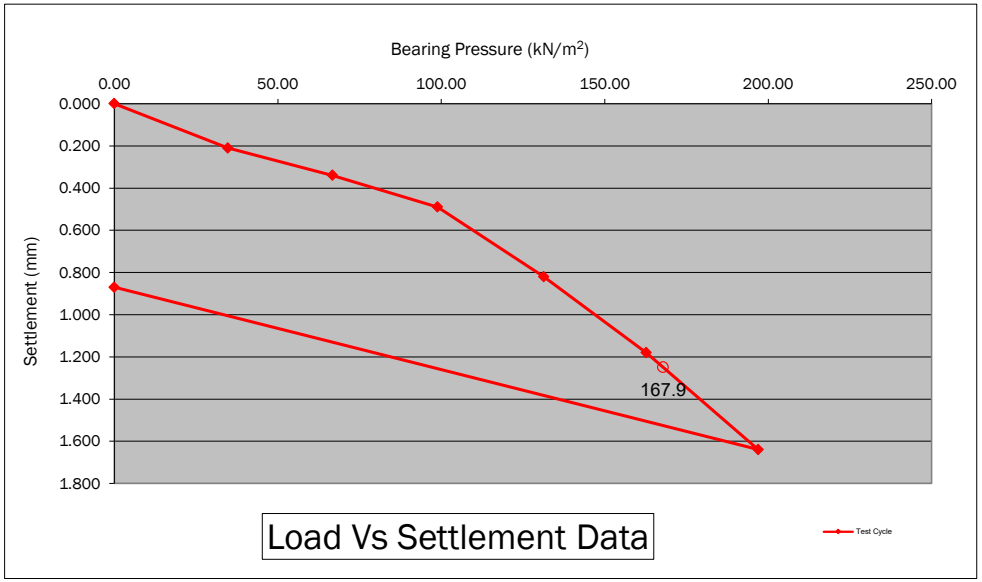
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1F	**REPORT NO:**	**DNR/78336F**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1F**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**6**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.21
66.71	0.34
98.90	0.49
131.35	0.82
162.72	1.18
196.93	1.64
0.00	0.87
Recovery %	47



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	196.9	kN/m²		
Maximum Settlement	1.64	mm	**20.7**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	167.9	kN/m²		
Modulus of Subgrade Reaction K762	83.7	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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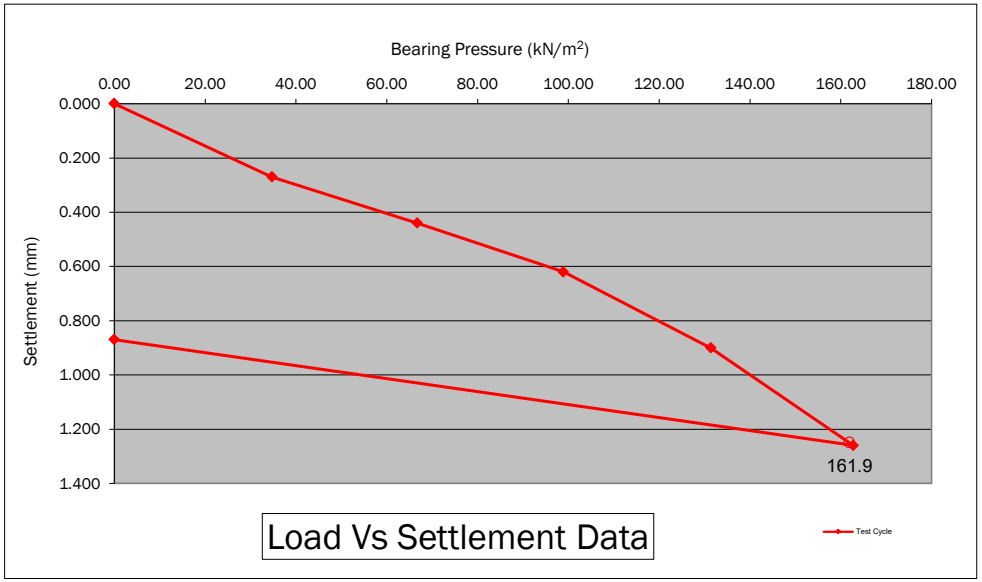
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1G	**REPORT NO:**	**DNR/78336G**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1G**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**7**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.27
66.71	0.44
98.90	0.62
131.35	0.90
162.72	1.26
0.00	0.87
Recovery %	31



Depth of Test	**Surface**		Plate Diameter	**450mm**
Distance from edge of plate to wall of excavation	**N/A**	mm	Moisture Content*	**Not Taken**
Reaction Load	**15 Tonne**		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	**0.62**		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	**162.7**	kN/m²		
Maximum Settlement	**1.26**	mm	**19.4**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	**161.9**	kN/m²		
Modulus of Subgrade Reaction K762	**80.7**	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

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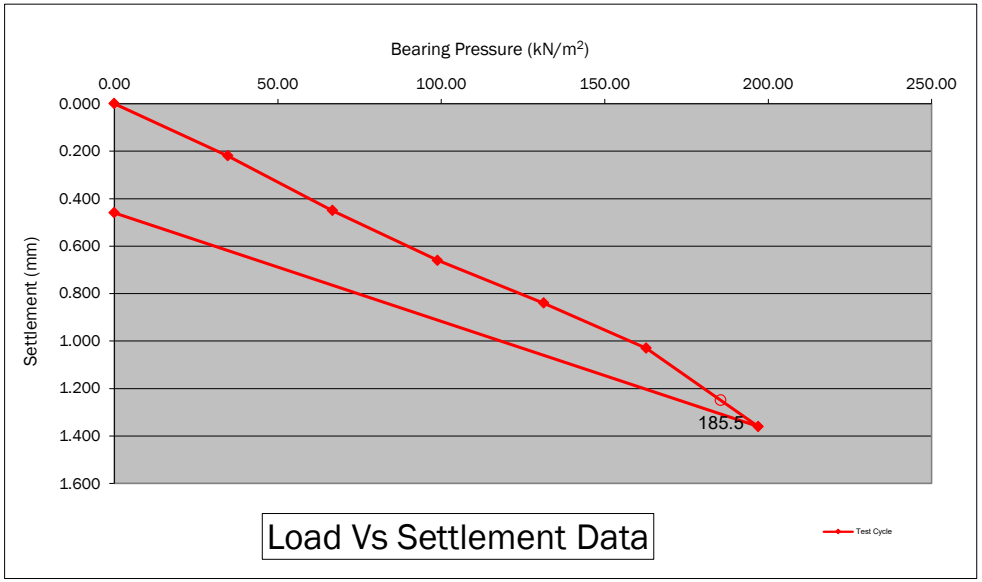
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Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1H	**REPORT NO:**	**DNR/78336H**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1H**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**8**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.22
66.71	0.45
98.90	0.66
131.35	0.84
162.72	1.03
196.93	1.36
0.00	0.46
Recovery %	66



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	196.9	kN/m²		
Maximum Settlement	1.36	mm		
Test Cycle Values			**24.6**	
Bearing Pressure @ 1.25mm Settlement	185.5	kN/m²		
Modulus of Subgrade Reaction K762	92.5	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

Template Version: 2.8

LK Remediate Limited
Eton Business Park
Eton Hill Road
Manchester
M26 2ZS

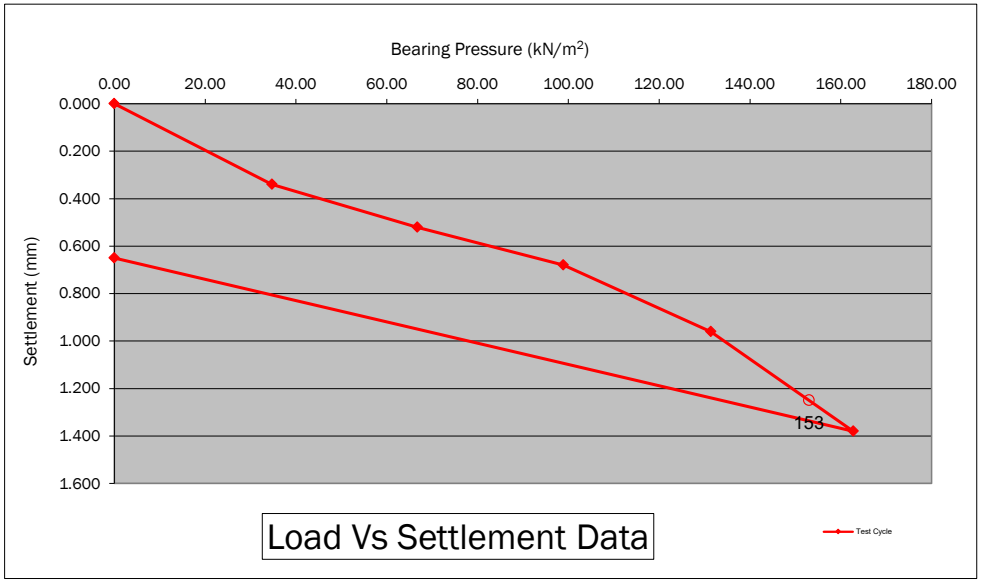
Needwood Close, Manchester

Construction Testing Solutions
Bootham Lane Industrial Estate
Dunscroft | Doncaster | DN7 4JU
T | (01302) 352652
E | enquiries@constructiontesting.co.uk
W | www.constructiontesting.co.uk
UKAS TESTING 4161

Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1l	**REPORT NO:**	**DNR/78336l**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1l**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**9**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.34
66.71	0.52
98.90	0.68
131.35	0.96
162.72	1.38
0.00	0.65
Recovery %	53



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	Not Taken
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	1.38	mm	**17.6**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	153.0	kN/m²		
Modulus of Subgrade Reaction K762	76.3	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

Template Version: 2.8

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Eton Business Park
Eton Hill Road
Manchester
M26 2ZS

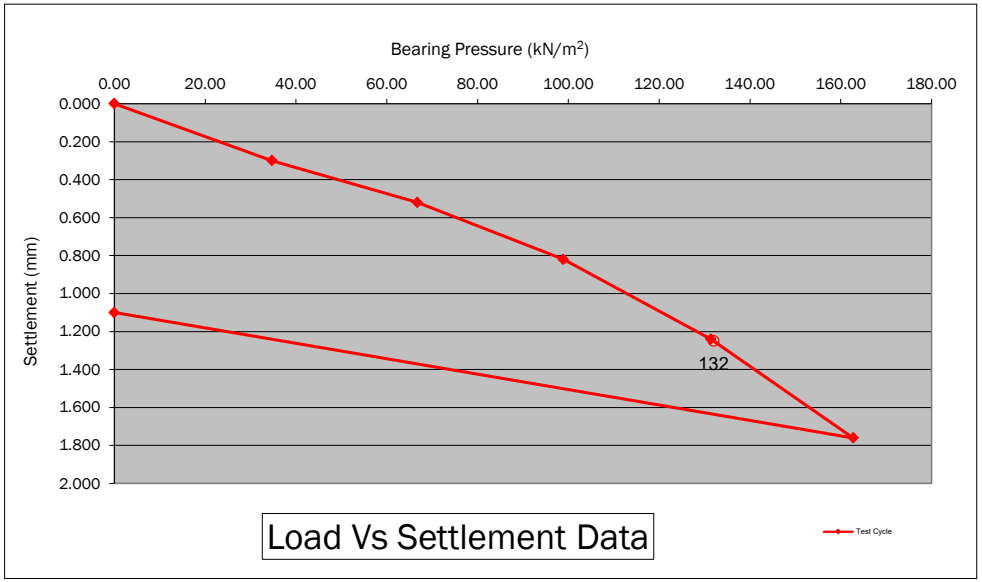
Needwood Close, Manchester

Construction Testing Solutions
Bootham Lane Industrial Estate
Dunscroft | Doncaster | DN7 4JU
T | (01302) 352652
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W | www.constructiontesting.co.uk
UKAS TESTING 4161

Plate Loading Test to determine equivalent CBR Value	Contract Test Reference:	DN3565/1J	**REPORT NO:**	**DNR/78336J**
In accordance with CTS' In-house procedure based on HD 25/94 (replaced by IAN 73/06 Revision 1 :2009)	Clients Reference:	**DN3565/1J**	Report Date:	28/07/2021

Material Description:	Soil/Mix	Date Tested:	**27/06/2021**
Test Location:	**10**	Supplier/Source:	Not Stated
Weather	Overcast		

Test Cycle	
Bearing Pressure (See Notes below)	*Settlement*
kN/m²	*mm*
34.71	0.30
66.71	0.52
98.90	0.82
131.35	1.24
162.72	1.76
0.00	1.10
Recovery %	38



Depth of Test	Surface		Plate Diameter	450mm
Distance from edge of plate to wall of excavation	N/A	mm	Moisture Content*	**Not Taken**
Reaction Load	15 Tonne		*Carried out in accordance with BS1377: Part 2: 1990.	
Plate Correction Factor	0.62		**Equivalent CBR Value (%)**	
Maximum Applied Pressure	162.7	kN/m²		
Maximum Settlement	1.76	mm	**13.7**	
Test Cycle Values				
Bearing Pressure @ 1.25mm Settlement	132.0	kN/m²		
Modulus of Subgrade Reaction K762	65.8	kN/m²/mm		

Authorised Signatory

J Williams - Field Services Manager

Notes: Initial load applied by test equipment calculated to be less than 0.5 kN

Template Version: 2.8

Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-1
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 1
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: Ground Level
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

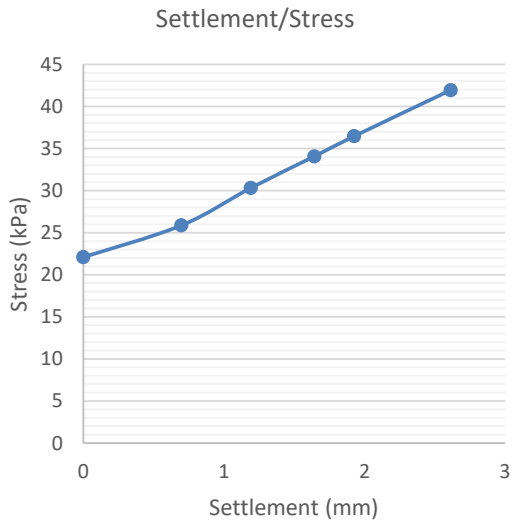
Test Results

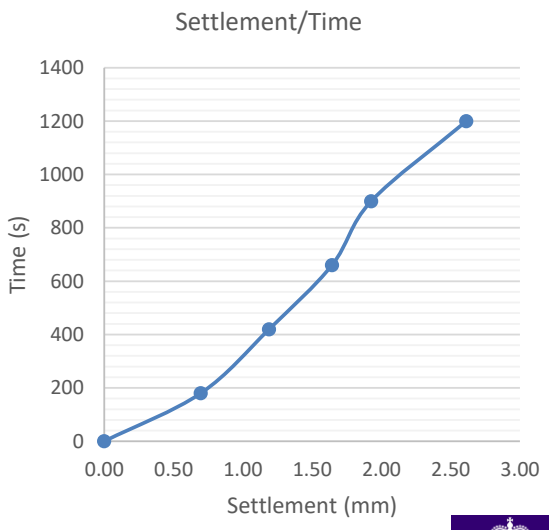
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
180	0.70	26
420	1.19	30
660	1.64	34
900	1.93	36
1200	2.61	42

Maximum Applied Stress (kPa):	42
Maximum Settlement (mm):	2.61
Equivalent CBR Value (%):	2
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	20

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-2
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 2
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: 500mm BGL
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

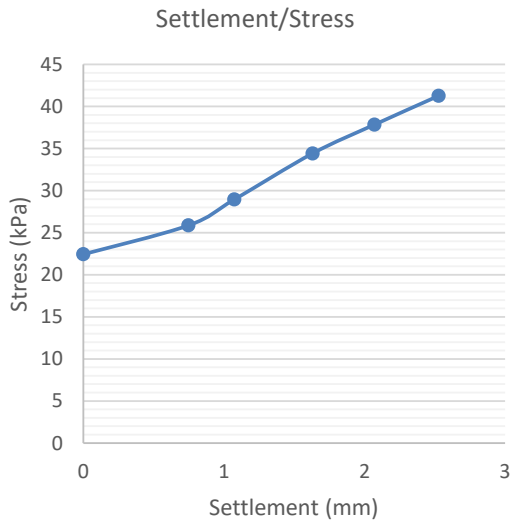
Test Results

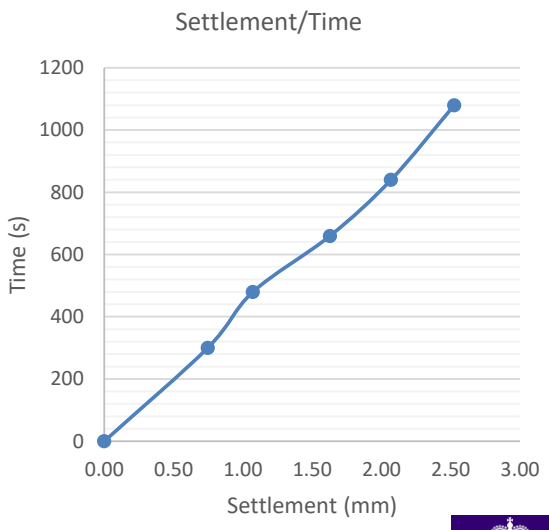
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
300	0.75	26
480	1.07	29
660	1.63	34
840	2.07	38
1080	2.53	41

Maximum Applied Stress (kPa):	41
Maximum Settlement (mm):	2.53
Equivalent CBR Value (%):	2
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	20

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-3
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 3
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: 1000mm BGL
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

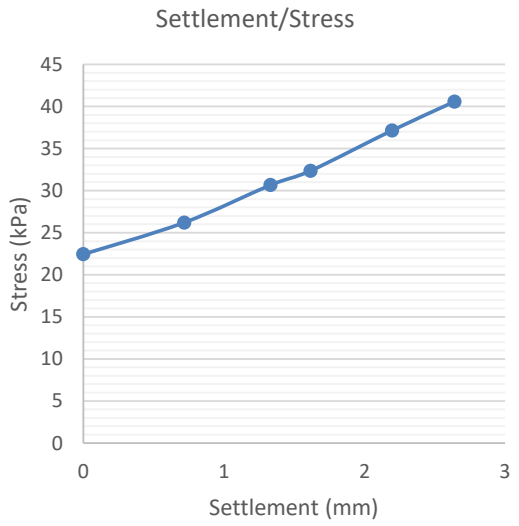
Test Results

Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
180	0.72	26
480	1.33	31
660	1.62	32
840	2.20	37
1020	2.64	41

Maximum Applied Stress (kPa):	41
Maximum Settlement (mm):	2.64
Equivalent CBR Value (%):	2
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	20

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-4
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 4
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: Ground Level
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

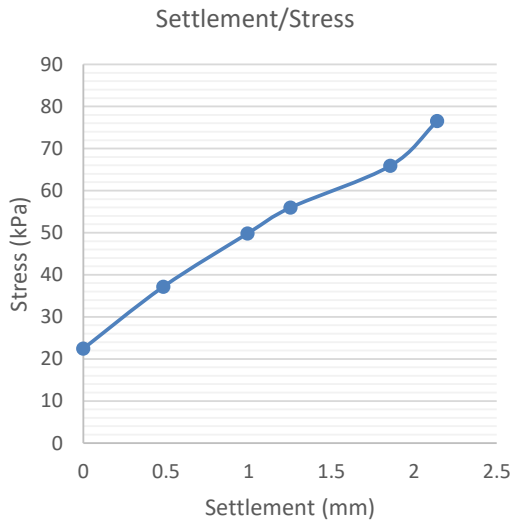
Test Results

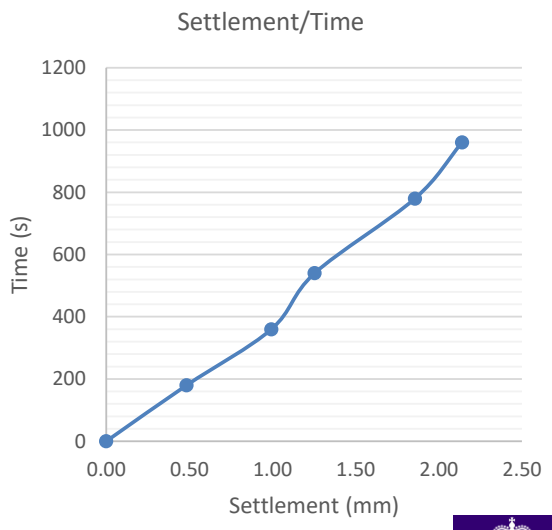
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
180	0.48	37
360	0.99	50
540	1.25	56
780	1.86	66
960	2.14	77

Maximum Applied Stress (kPa):	77
Maximum Settlement (mm):	2.14
Equivalent CBR Value (%):	5
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	37

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-5
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 5
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: 500mm BGL
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

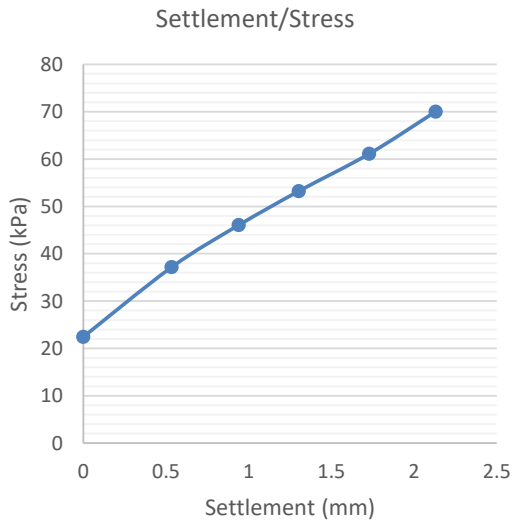
Test Results

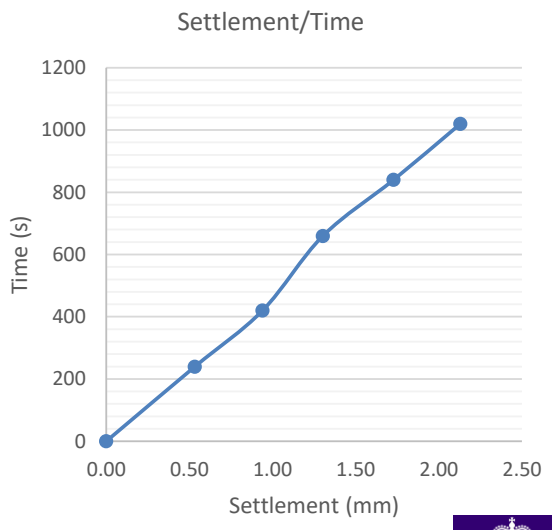
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
240	0.53	37
420	0.94	46
660	1.30	53
840	1.73	61
1020	2.13	70

Maximum Applied Stress (kPa):	70
Maximum Settlement (mm):	2.13
Equivalent CBR Value (%):	4
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	34

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6234-6
Report Date: 14/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 6
Date of Test: 14/09/2021
Description: Brown CLAY with crushed brick/concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Dry
Layer: 1000mm BGL
Plate Diameter (mm): 610
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

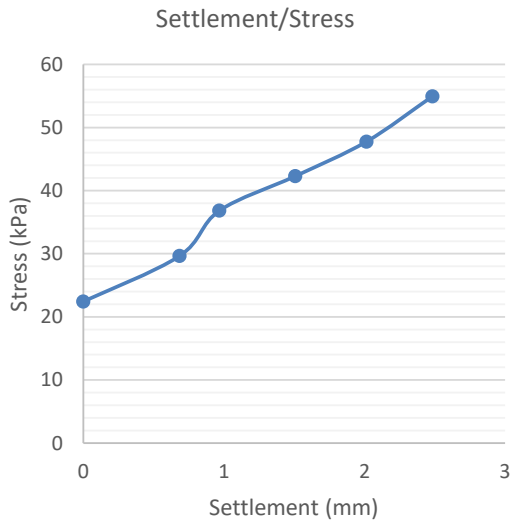
Test Results

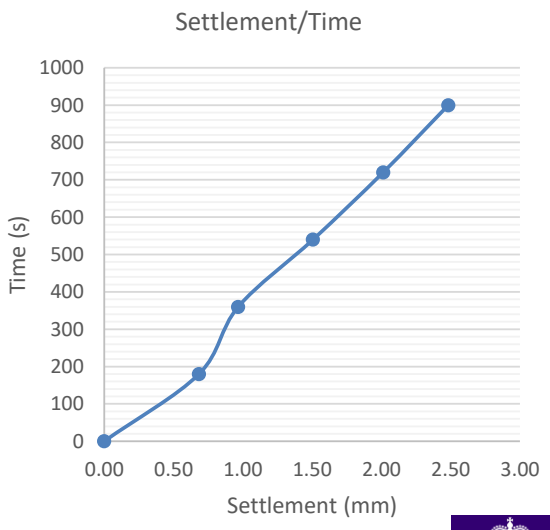
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	22
180	0.68	30
360	0.97	37
540	1.51	42
720	2.01	48
900	2.48	55

Maximum Applied Stress (kPa):	55
Maximum Settlement (mm):	2.48
Equivalent CBR Value (%):	3
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	26

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-1
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 8
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

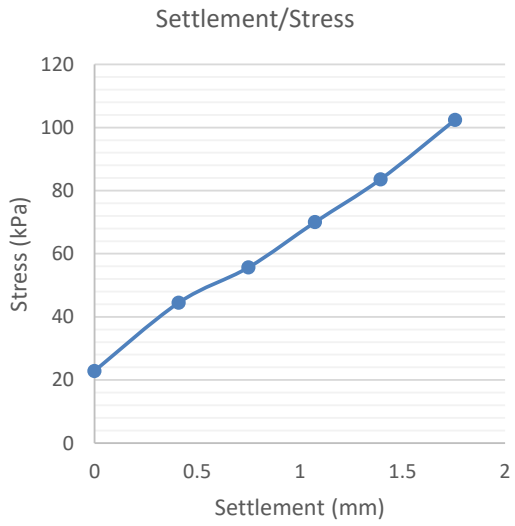
Test Results

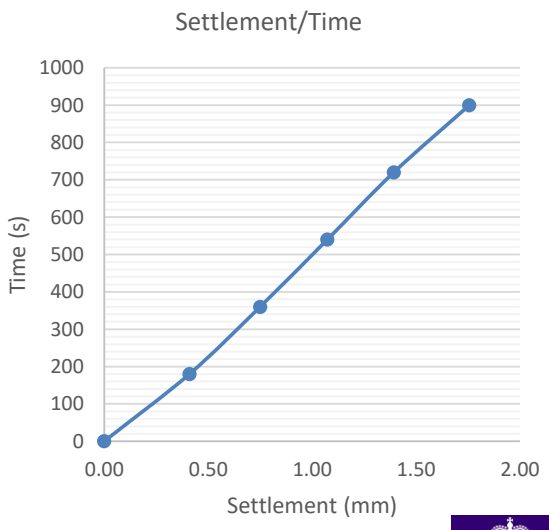
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.41	44
360	0.75	56
540	1.07	70
720	1.39	84
900	1.76	102

Maximum Applied Stress (kPa):	102
Maximum Settlement (mm):	1.76
Equivalent CBR Value (%):	9
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	50

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Milton Keynes
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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-2
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 17
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

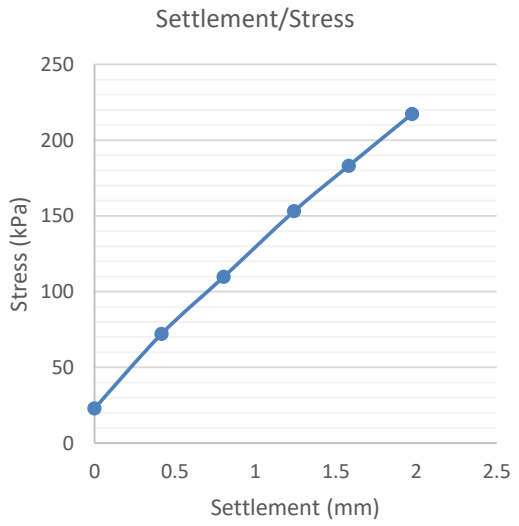
Test Results

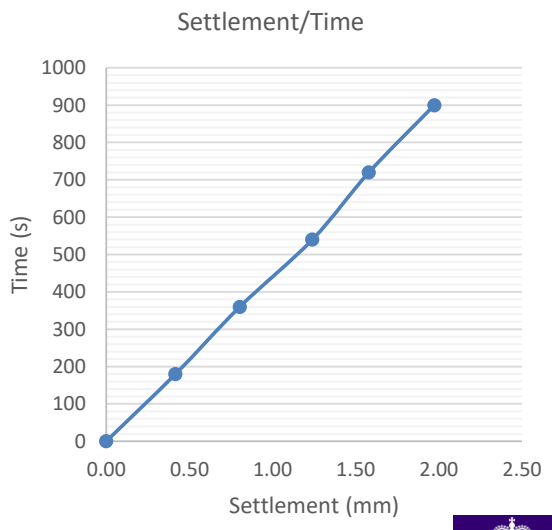
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.42	72
360	0.80	110
540	1.24	153
720	1.58	183
900	1.97	217

Maximum Applied Stress (kPa):	217
Maximum Settlement (mm):	1.97
Equivalent CBR Value (%):	28
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	100

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-3
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 14
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

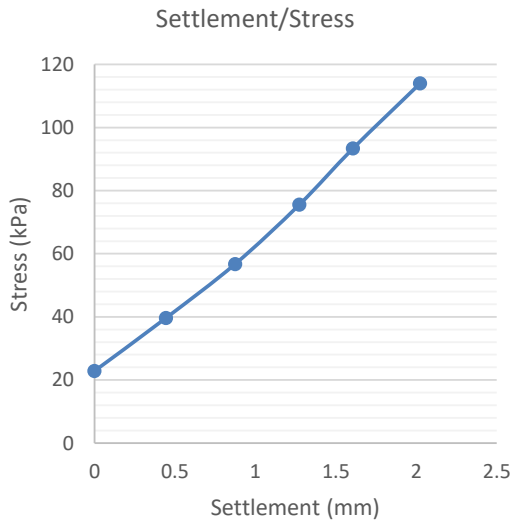
Test Results

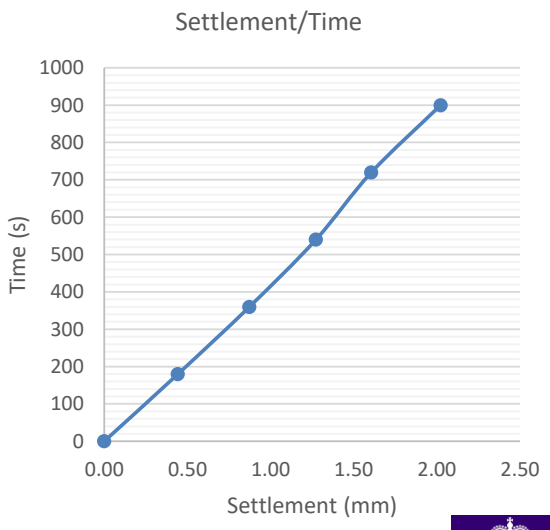
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.44	40
360	0.87	57
540	1.27	76
720	1.61	93
900	2.02	114

Maximum Applied Stress (kPa):	114
Maximum Settlement (mm):	2.02
Equivalent CBR Value (%):	8
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	48

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-4
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 41
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

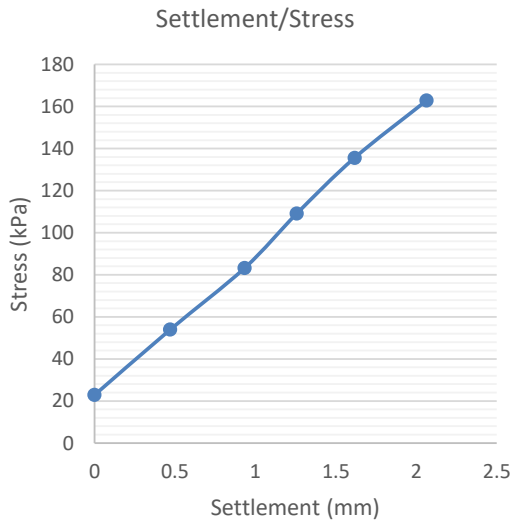
Test Results

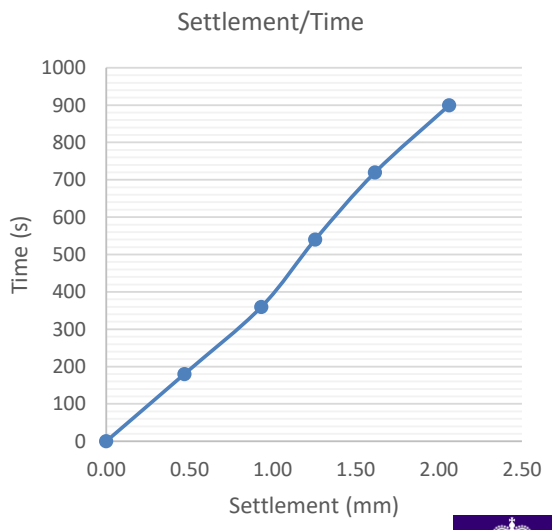
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.47	54
360	0.93	83
540	1.26	109
720	1.62	136
900	2.06	163

Maximum Applied Stress (kPa):	163
Maximum Settlement (mm):	2.06
Equivalent CBR Value (%):	15
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	70

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-5
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 38
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

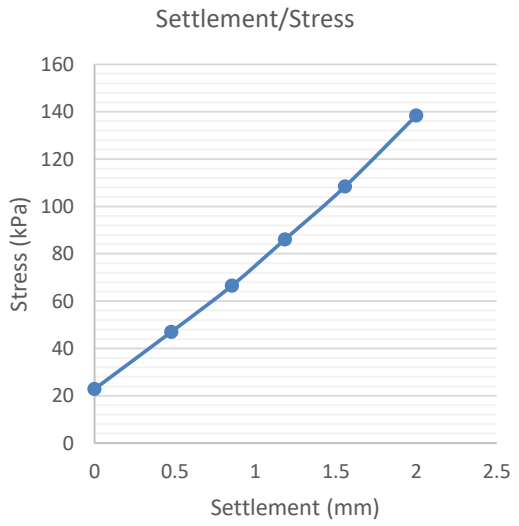
Test Results

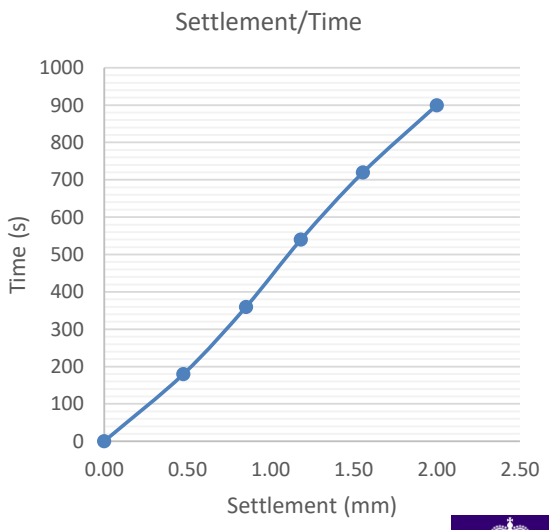
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.48	47
360	0.85	66
540	1.18	86
720	1.56	108
900	2.00	138

Maximum Applied Stress (kPa):	138
Maximum Settlement (mm):	2.00
Equivalent CBR Value (%):	11
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	58

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-6
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 7
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

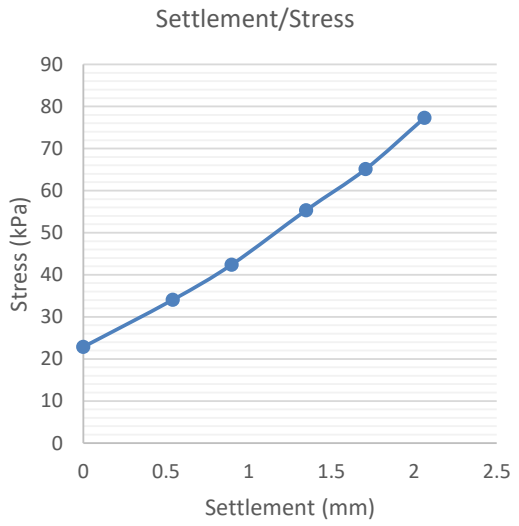
Test Results

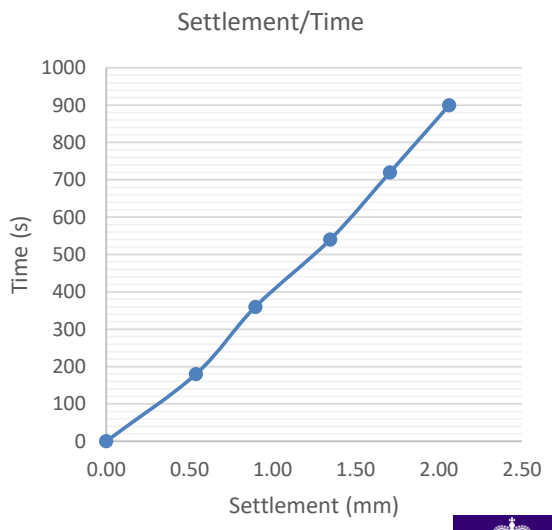
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.54	34
360	0.90	42
540	1.35	55
720	1.71	65
900	2.06	77

Maximum Applied Stress (kPa):	77
Maximum Settlement (mm):	2.06
Equivalent CBR Value (%):	4
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	34

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6264-7
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 36
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

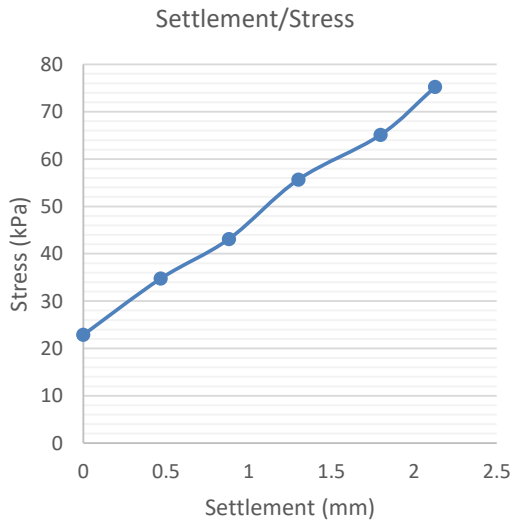
Test Results

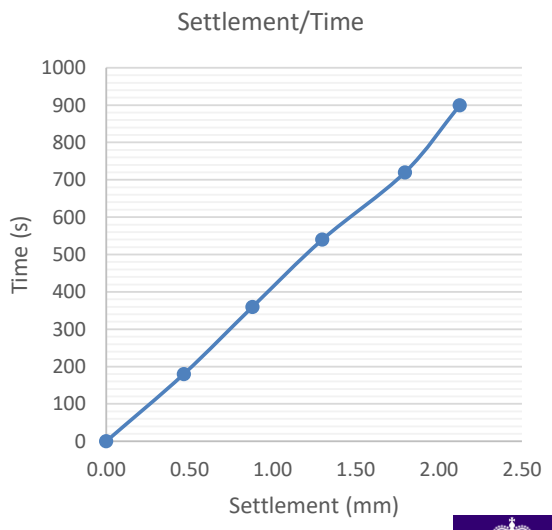
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.47	35
360	0.88	43
540	1.30	56
720	1.80	65
900	2.13	75

Maximum Applied Stress (kPa):	75
Maximum Settlement (mm):	2.13
Equivalent CBR Value (%):	5
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	35

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Report No: HS6264-8
Report Date: 21/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 22
Date of Test: 21/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Sunny
Layer: Ground Level
Plate Diameter (mm): 604
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

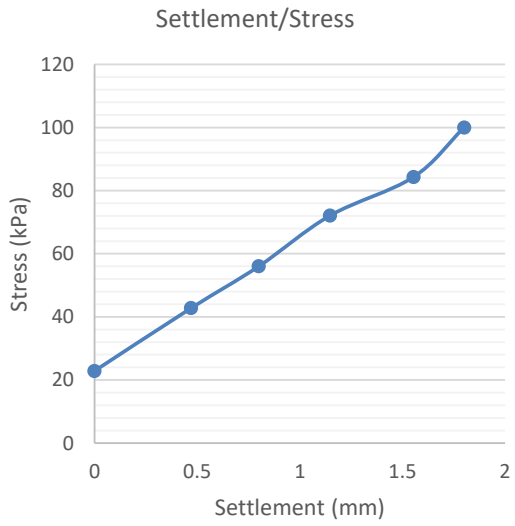
Test Results

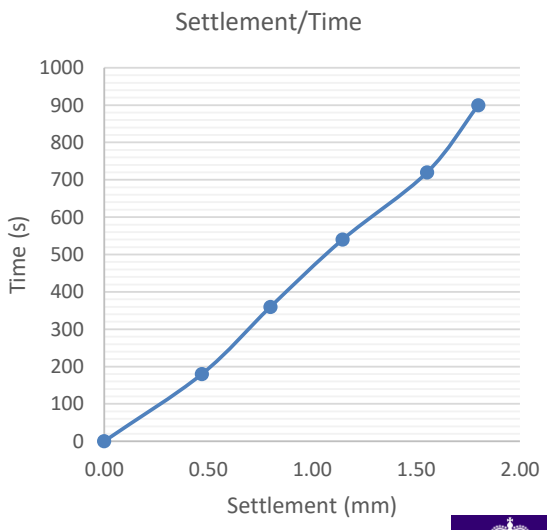
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.47	43
360	0.80	56
540	1.15	72
720	1.55	84
900	1.80	100

Maximum Applied Stress (kPa):	100
Maximum Settlement (mm):	1.80
Equivalent CBR Value (%):	8
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	49

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6269-1
Report Date: 22/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 31
Date of Test: 22/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

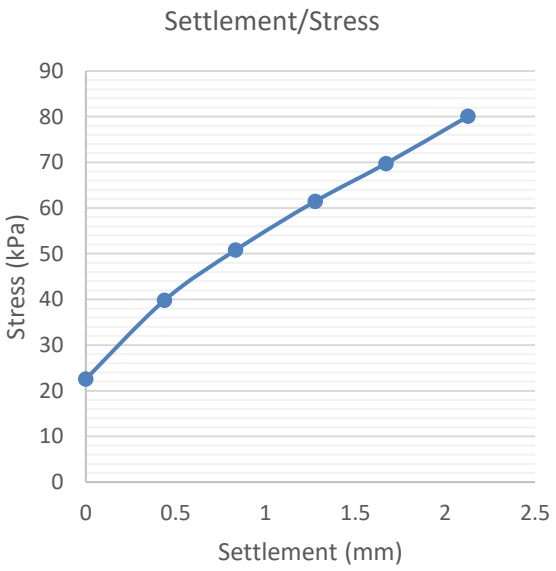
Test Results

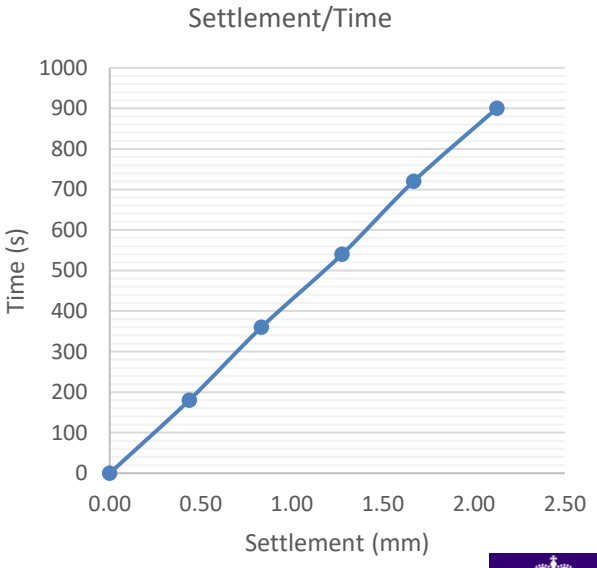
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.44	40
360	0.83	51
540	1.28	61
720	1.67	70
900	2.13	80

Maximum Applied Stress (kPa):	80
Maximum Settlement (mm):	2.13
Equivalent CBR Value (%):	6
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	40

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6269-2
Report Date: 22/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 45
Date of Test: 22/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

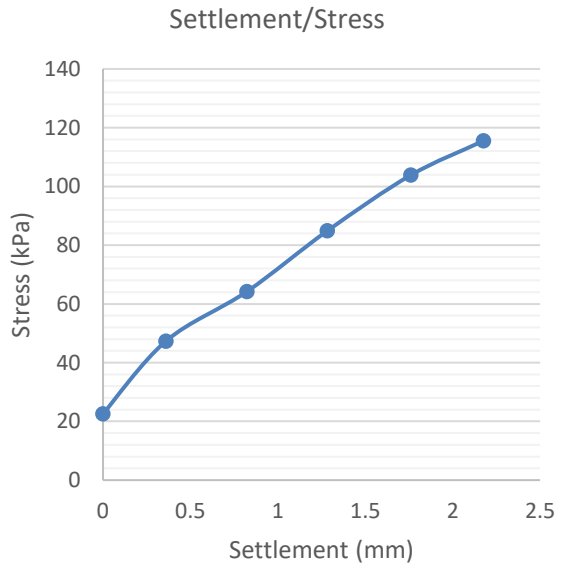
Test Results

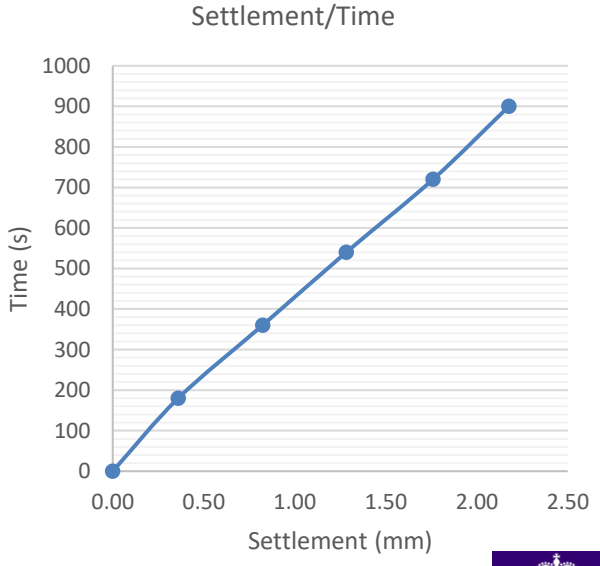
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.36	47
360	0.82	64
540	1.28	85
720	1.76	104
900	2.18	116

Maximum Applied Stress (kPa):	116
Maximum Settlement (mm):	2.18
Equivalent CBR Value (%):	10
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	54

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Garamonde Drive
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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6269-3
Report Date: 22/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 24
Date of Test: 22/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

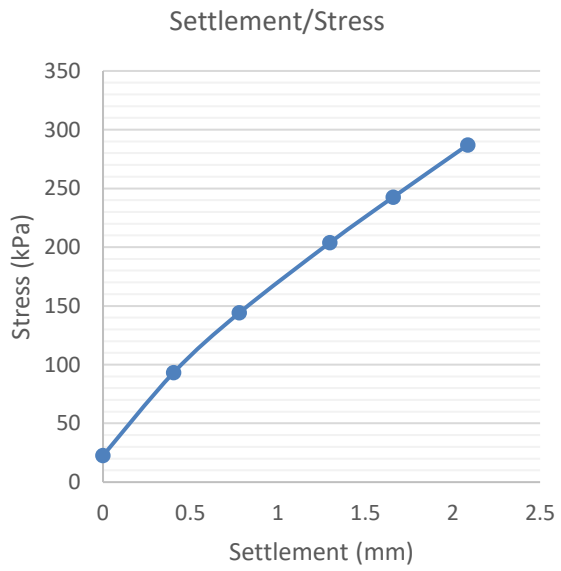
Test Results

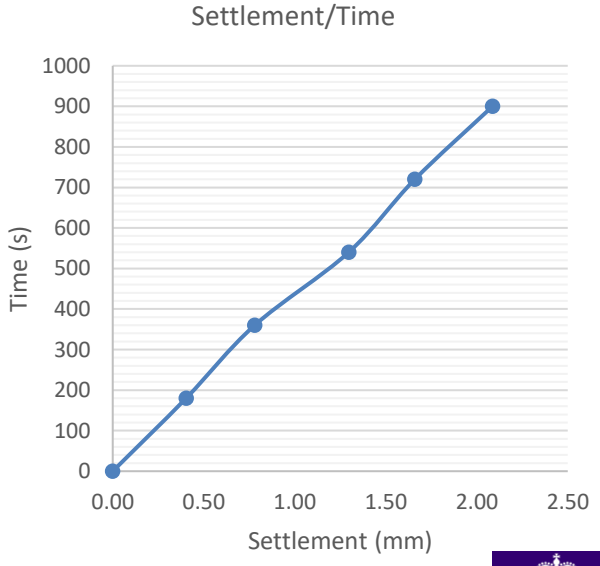
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.40	93
360	0.78	144
540	1.30	204
720	1.66	243
900	2.09	287

Maximum Applied Stress (kPa):	287
Maximum Settlement (mm):	2.09
Equivalent CBR Value (%):	44
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	129

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6269-4
Report Date: 22/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 43
Date of Test: 22/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Formation
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

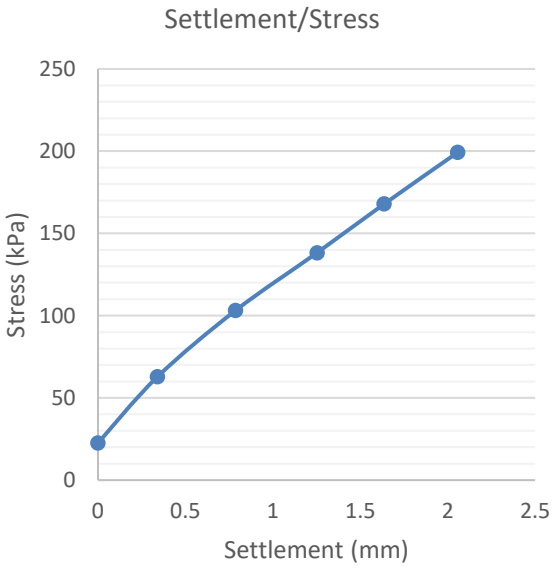
Test Results

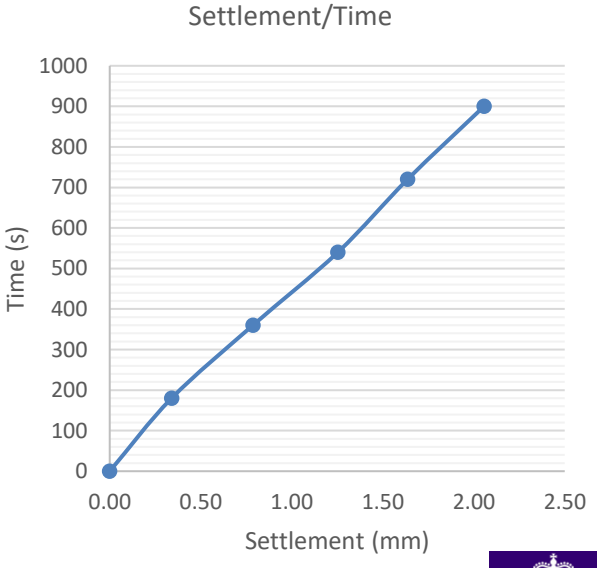
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.34	63
360	0.79	103
540	1.25	138
720	1.64	168
900	2.06	199

Maximum Applied Stress (kPa):	199
Maximum Settlement (mm):	2.06
Equivalent CBR Value (%):	23
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	90

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6269-5
Report Date: 22/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: CBR 57
Date of Test: 22/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Formation
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

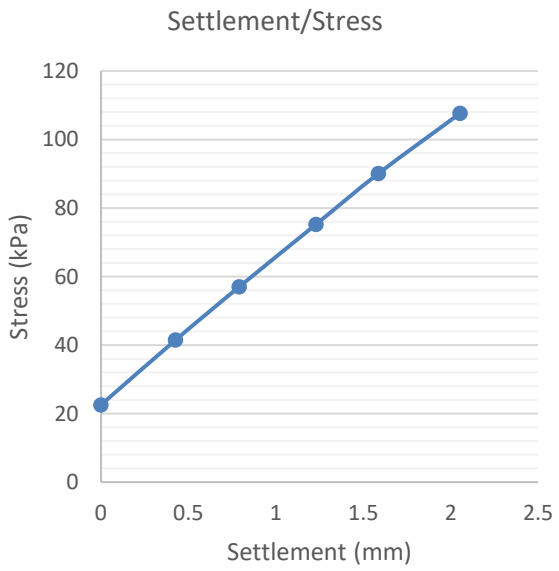
Test Results

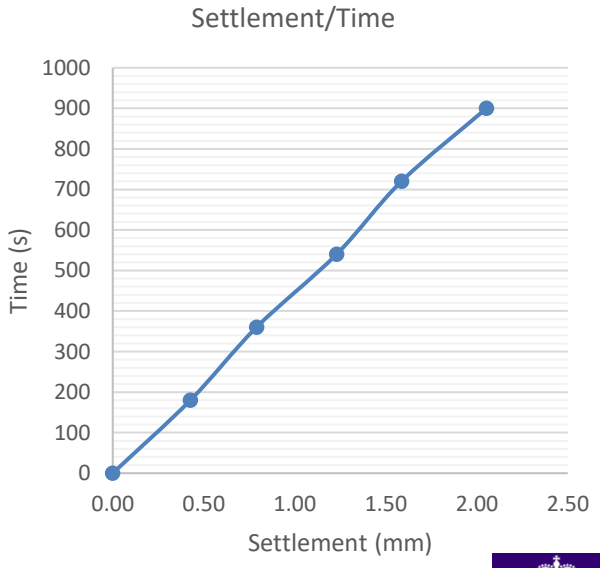
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.43	41
360	0.79	57
540	1.23	75
720	1.59	90
900	2.05	108

Maximum Applied Stress (kPa):	108
Maximum Settlement (mm):	2.05
Equivalent CBR Value (%):	8
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	50

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

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Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6275-1
Report Date: 23/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: 3
Date of Test: 23/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Crane Mat
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

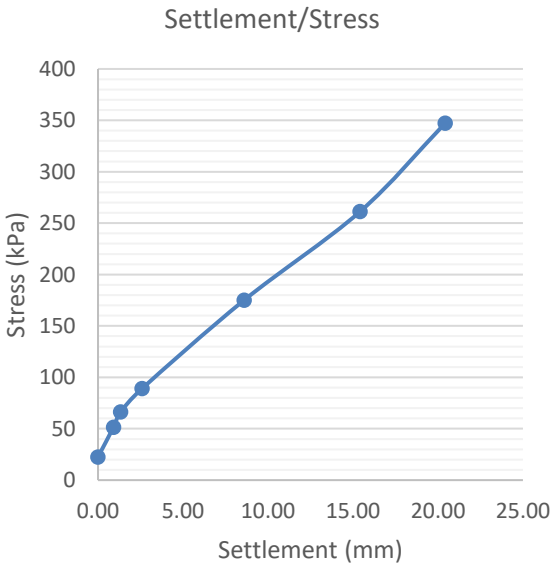
Test Results

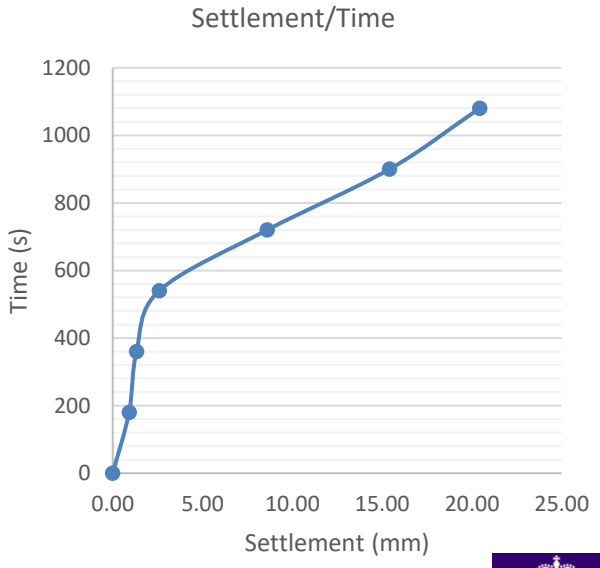
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.91	51
360	1.32	66
540	2.59	89
720	8.60	175
900	15.42	261
1080	20.43	347

Maximum Applied Stress (kPa):	347
Maximum Settlement (mm):	20.43
Equivalent CBR Value (%):	6
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	41

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

.





For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

UKAS TESTING
8996

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Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6275-2
Report Date: 23/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: 3A
Date of Test: 23/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 20 Tonne Excavator
Material Class: Crane Mat
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

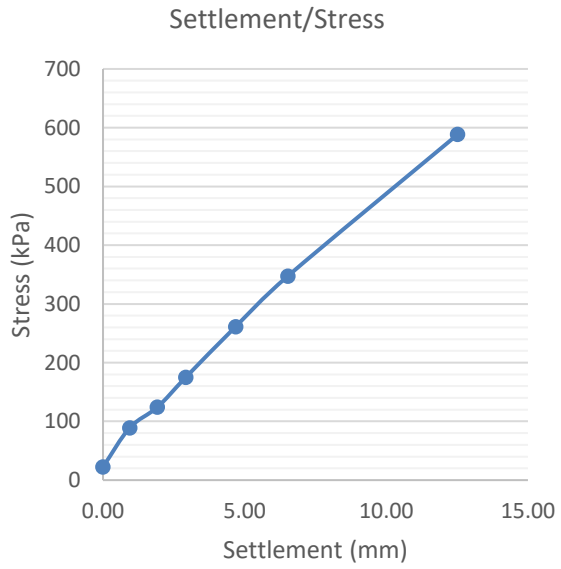
Test Results

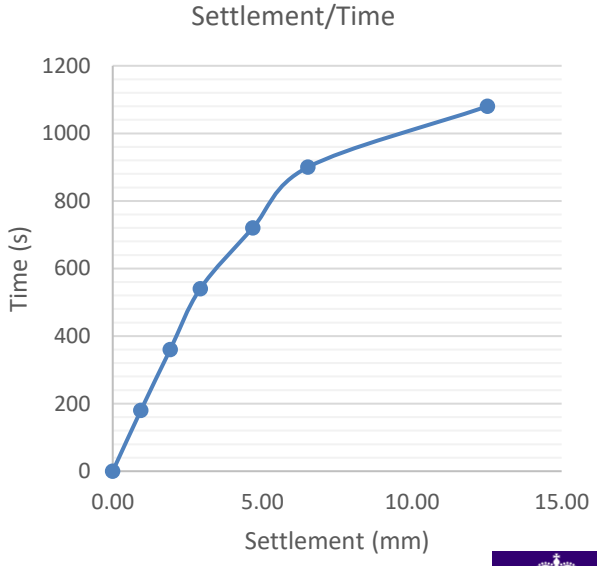
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.94	89
360	1.92	124
540	2.92	175
720	4.68	261
900	6.52	347
1080	12.52	588

Maximum Applied Stress (kPa):	588
Maximum Settlement (mm):	12.52
Equivalent CBR Value (%):	13
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	65

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

.





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Kevin Shorthouse
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Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6275-3
Report Date: 23/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: 6
Date of Test: 23/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Crane Mat
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

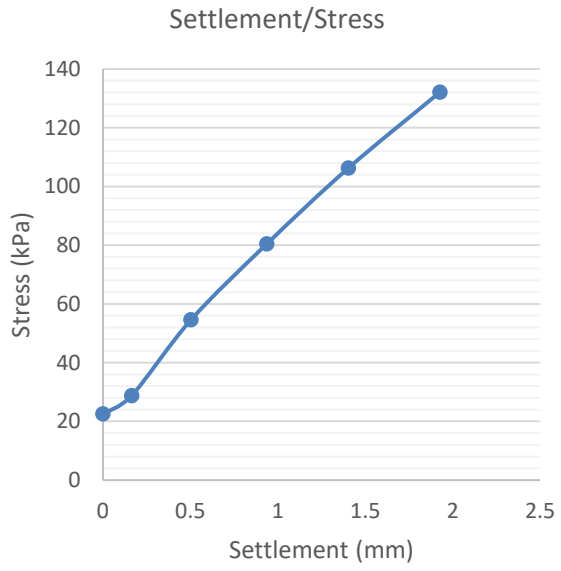
Test Results

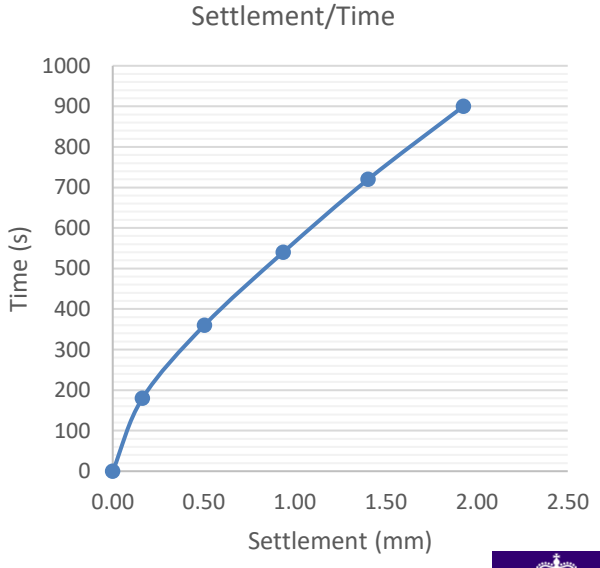
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.16	29
360	0.50	55
540	0.94	80
720	1.40	106
900	1.93	132

Maximum Applied Stress (kPa):	132
Maximum Settlement (mm):	1.93
Equivalent CBR Value (%):	13
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	64

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

.





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Kevin Shorthouse
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Hixtra Ltd
Unit 103, Caxton Court
Garamonde Drive
Milton Keynes
MK8 8DD

Certificate for the Determination of the Vertical Deformation and Strength Characteristics of Soil by the Incremental Plate Loading Test to BS 1377 Part 9: 1990

Report No: HS6275-4
Report Date: 23/09/2021
Client: LK Group
Address: Unit 29, Eton Business Park
Eton Hill Road, Radcliffe
Greater Manchester
M26 2ZS
Site: Needwood Close, Collyhurst, Manchester, M40 8LB

Test Details

Test Location: 5
Date of Test: 23/09/2021
Description: Brown CLAY with Crushed Brick and Concrete
Reaction Load: 13 Tonne Roller
Material Class: Crane Mat
Weather: Overcast
Layer: Ground Level
Plate Diameter (mm): 608
Condition: The results apply only to the location tested and the material was tested in an 'as found' condition

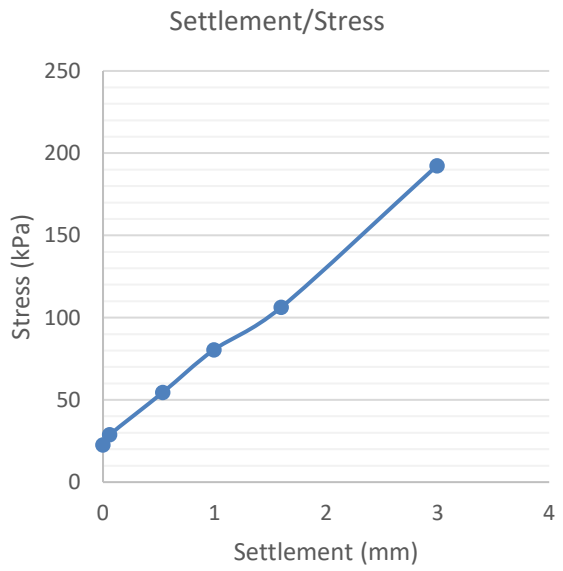
Test Results

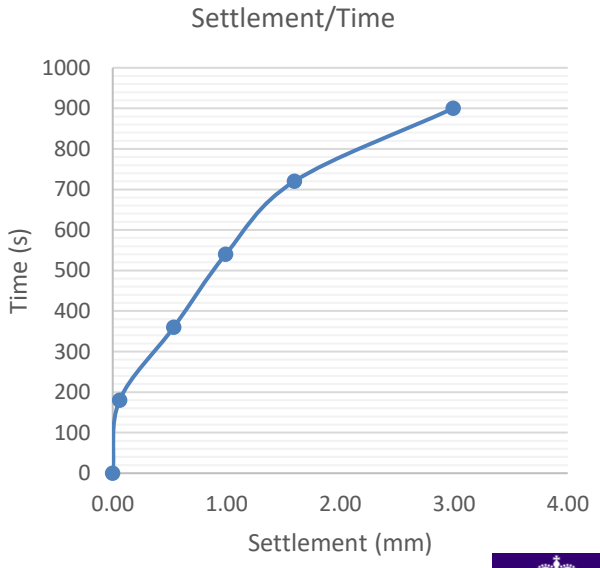
Time (s)	Settlement (mm)	Plate Stress (kPa)
0	0.00	23
180	0.06	29
360	0.54	55
540	0.99	80
720	1.60	106
900	2.99	192

Maximum Applied Stress (kPa):	192
Maximum Settlement (mm):	2.99
Equivalent CBR Value (%):	11
Modulus of Subgrade Reaction, k_{762} ($MN/m^2/m$):	60

Note: Supplemental test method, calculation of Equivalent CBR Value and Modulus of Subgrade Reaction: IAN 73/06 revision 1 (2009), HD 25/94 (withdrawn)

.





For and on behalf of Hixtra Ltd

Kevin Shorthouse
Authorised signatory

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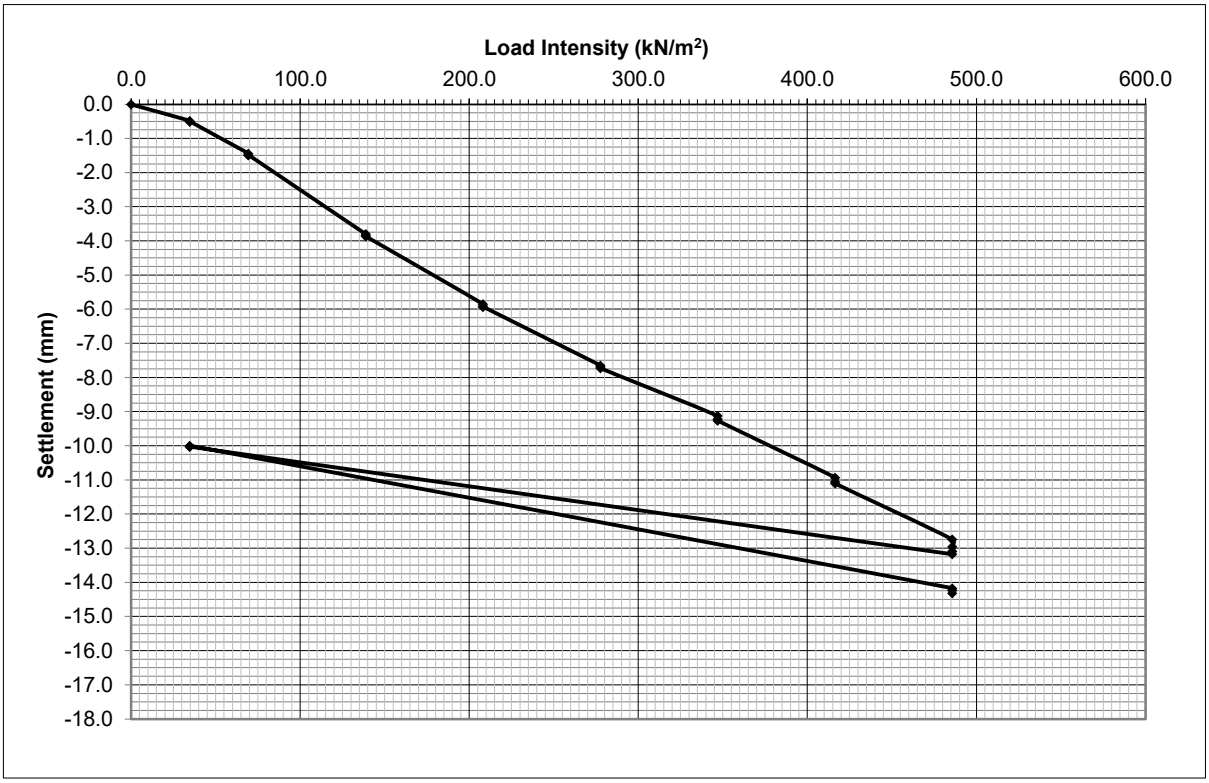
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LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	15/10/2021
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM1	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-14.31	**Weather:**	Cold and bright
Strata Description:	Formation		



Equivalent CBR Value of:	**5.6**	%
Corrected Subgrade Reaction (k_{762}):	**39,360**	**kN/m²**

Comments

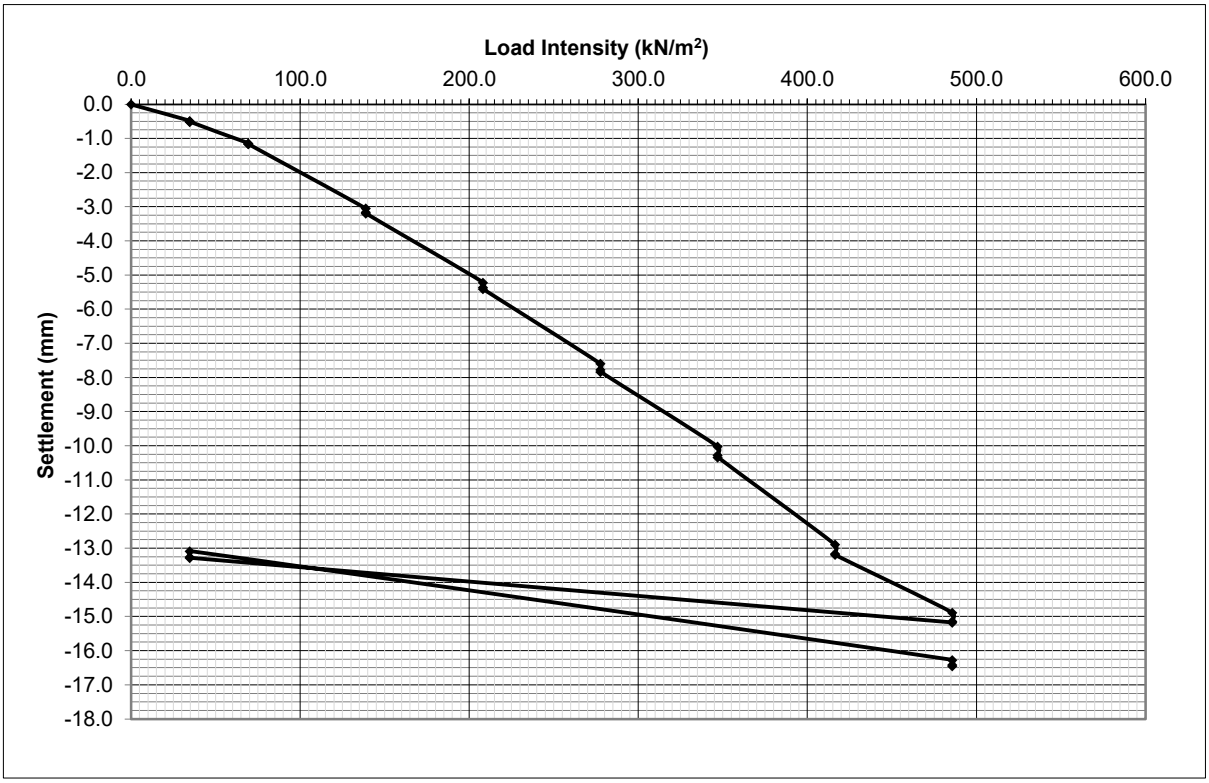
Site Engineer:	Date:	Approved By:	Date:
PW	15.10.2021	CW	18.10.21

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	15/10/2021
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM2	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-16.45	**Weather:**	Cold and bright
Strata Description:	Formation		



Equivalent CBR Value of:	**7.3**	%
Corrected Subgrade Reaction (k_{762}):	**45,920**	**kN/m²**

Comments

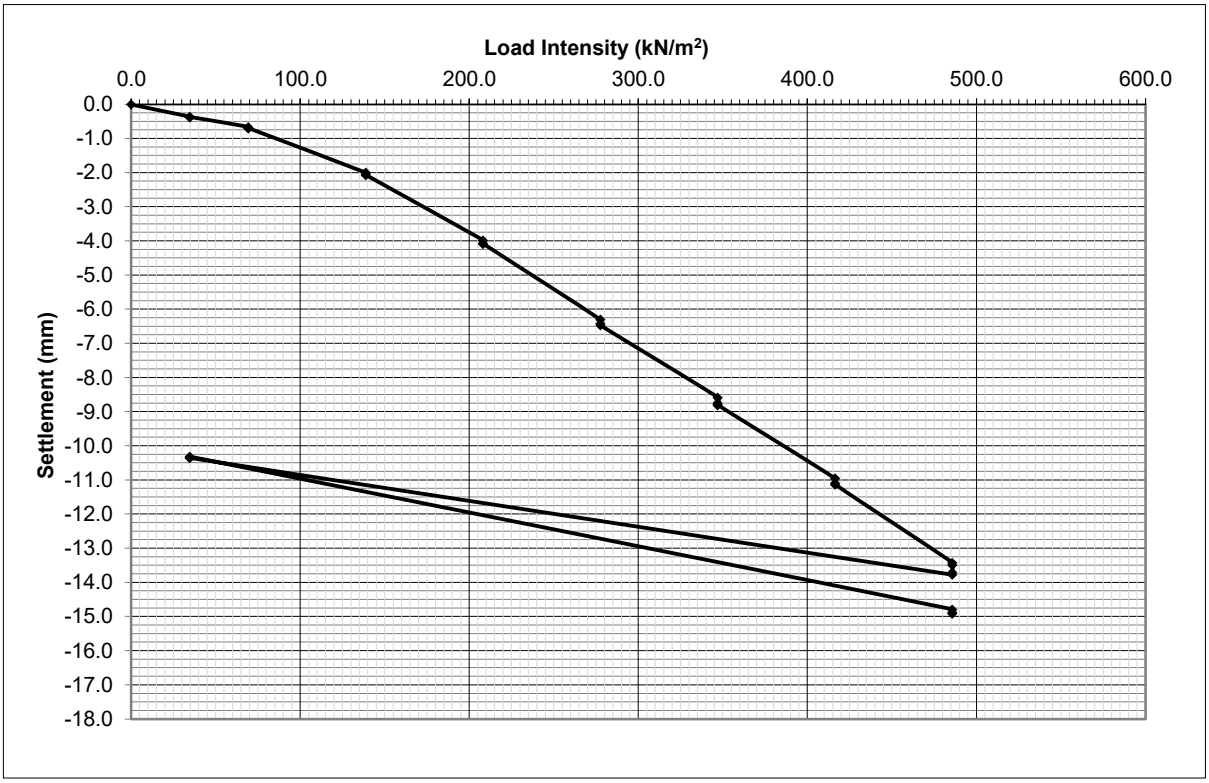
Site Engineer:	Date:	Approved By:	Date:
PW	15.10.2021	CW	18.10.21

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	15/10/2021
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM3	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-14.91	**Weather:**	Cold and bright
Strata Description:	Formation		



Equivalent CBR Value of:	**12.4**	%
Corrected Subgrade Reaction (k_{762}):	**62,320**	**kN/m²**

Comments

Site Engineer:	Date:	Approved By:	Date:
PW	15.10.2021	CW	18.10.21

MURRAY RIX

CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client	LK Remediate Ltd
Address	Unit 29 Eton Business Park Eton Hill Road Radcliffe Greater Manchester M26 2ZS
Contract	LKR 20 1044 - Collyhurst
Job Number	MRN 4297/1
Date of Issue	04 February 2022
Pages	1 of 11

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

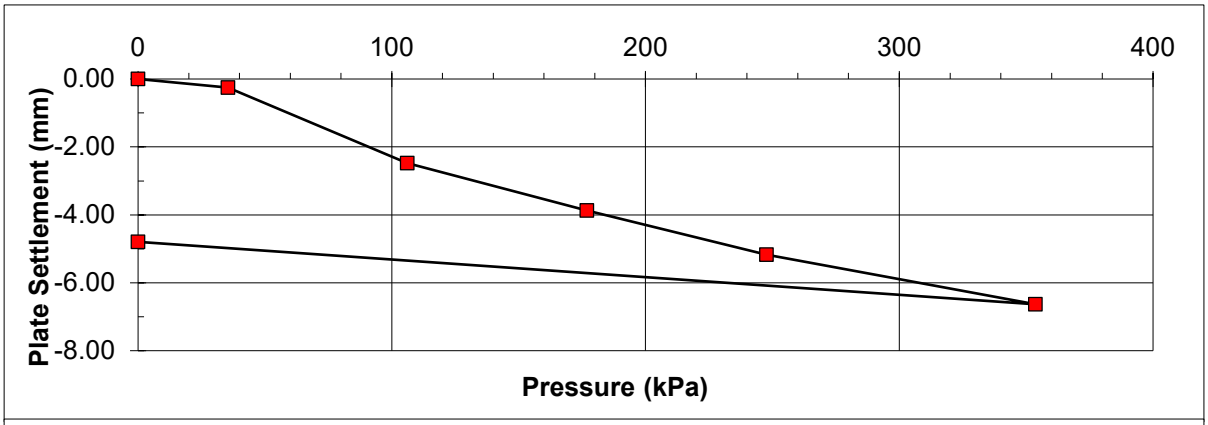
TEST CERTIFICATE

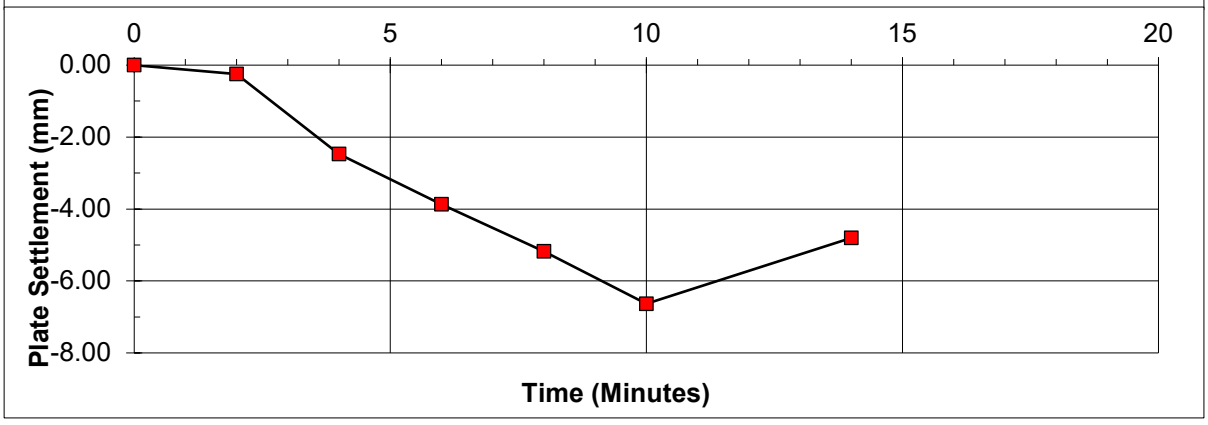
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C1	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4677	4689	4772	4713	0.00	0.00	0.0
4652	4651	4760	4688	-0.25	10.00	35.4
4371	4413	4612	4465	-2.47	30.00	106.1
4237	4258	4482	4326	-3.87	50.00	176.8
4092	4117	4376	4195	-5.18	70.00	247.6
3935	3960	4253	4049	-6.63	100.00	353.7
4098	4186	4414	4233	-4.80	0.00	0.0





Pressure at 1.25 mm deflexion =	67	kPa
Modulus of subgrade reaction (k) =	54	MPa/m
Equivalent 762 mm plate reaction =	43	MPa/m
Equivalent CBR =	6.6	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

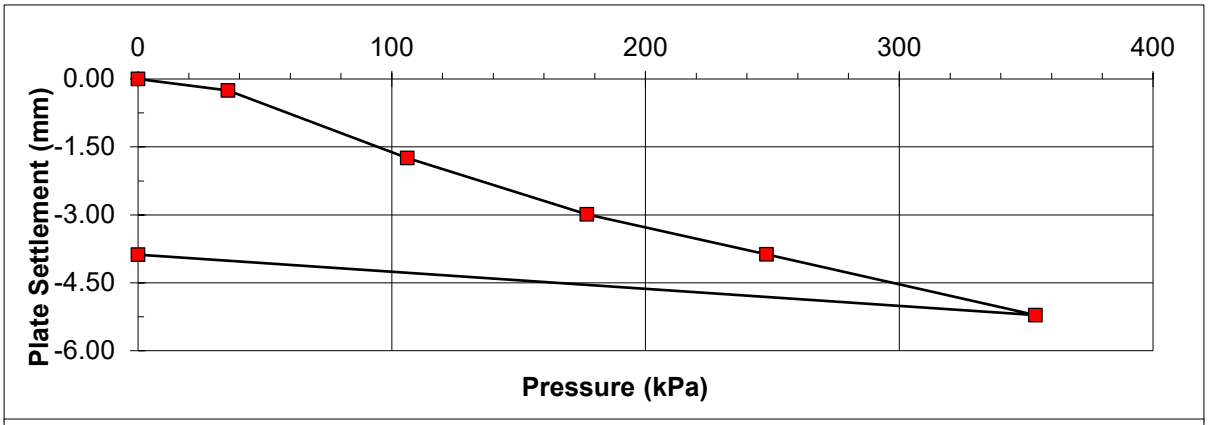
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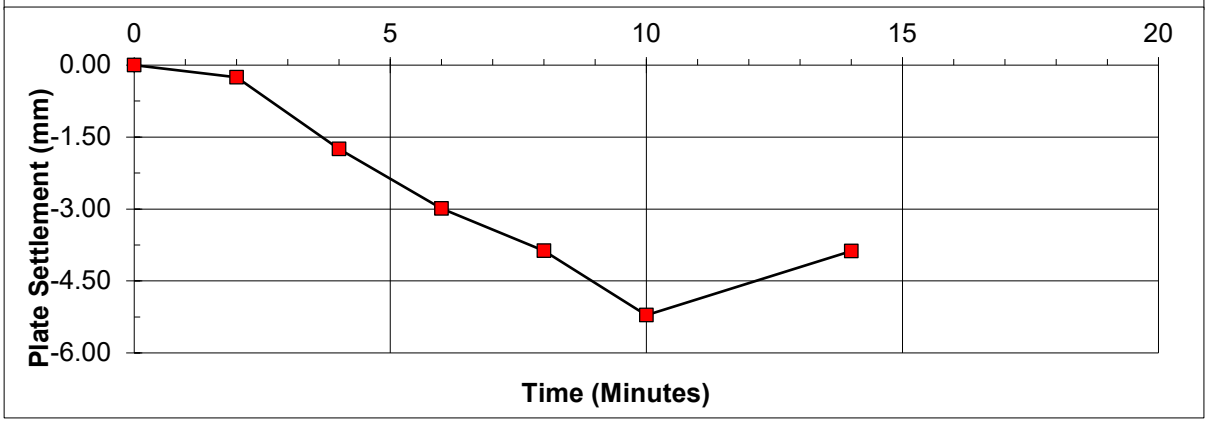
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C2	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4827	4859	4754	4813	0.00	0.00	0.0
4802	4827	4735	4788	-0.25	10.00	35.4
4637	4698	4581	4639	-1.75	30.00	106.1
4497	4571	4476	4515	-2.99	50.00	176.8
4419	4464	4396	4426	-3.87	70.00	247.6
4294	4296	4286	4292	-5.21	100.00	353.7
4381	4480	4416	4426	-3.88	0.00	0.0





Pressure at 1.25 mm deflexion =	83	kPa
Modulus of subgrade reaction (k) =	66	MPa/m
Equivalent 762 mm plate reaction =	53	MPa/m
Equivalent CBR =	9.4	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

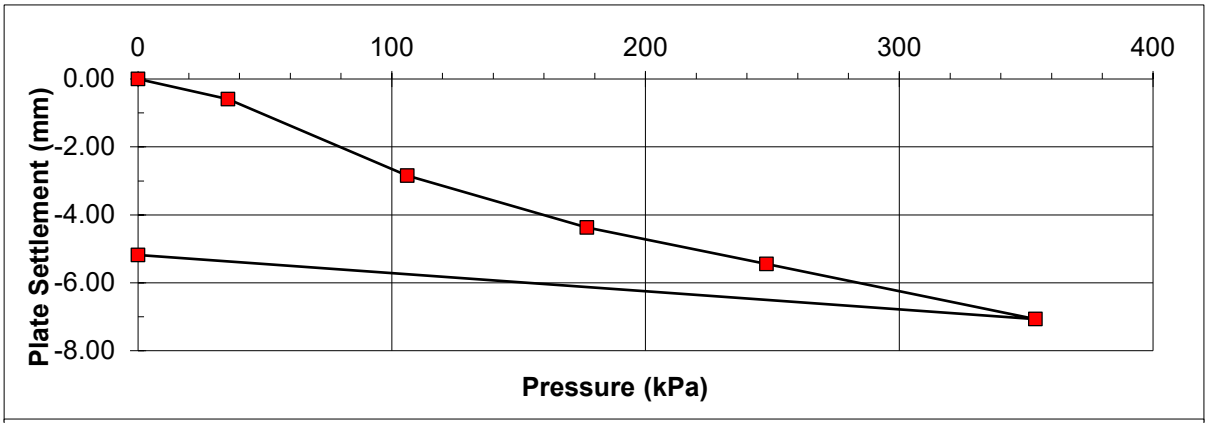
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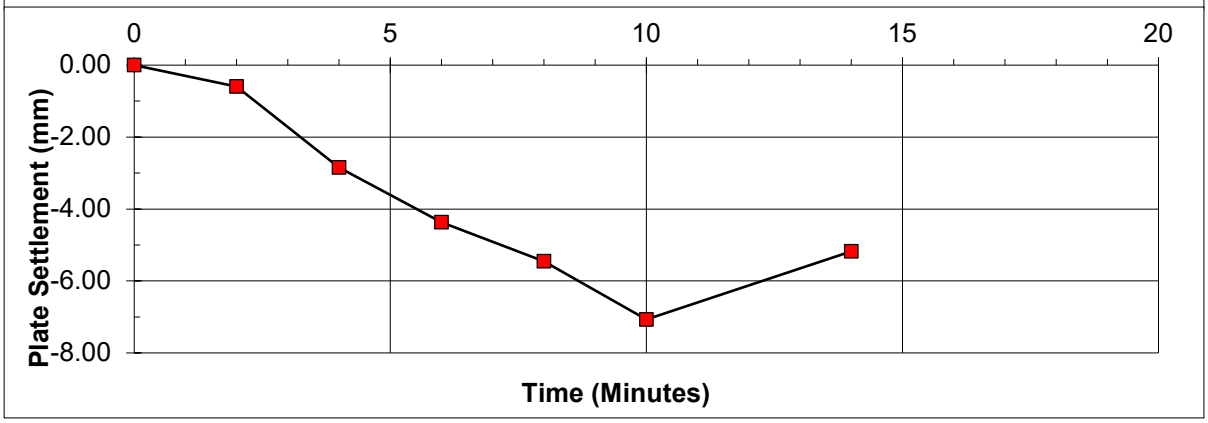
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C3	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4580	4734	4611	4642	0.00	0.00	0.0
4480	4707	4560	4582	-0.59	10.00	35.4
4192	4531	4349	4357	-2.84	30.00	106.1
4028	4398	4188	4205	-4.37	50.00	176.8
3911	4302	4077	4097	-5.45	70.00	247.6
3728	4151	3925	3935	-7.07	100.00	353.7
3970	4346	4055	4124	-5.18	0.00	0.0





Pressure at 1.25 mm deflexion =	56	kPa
Modulus of subgrade reaction (k) =	45	MPa/m
Equivalent 762 mm plate reaction =	36	MPa/m
Equivalent CBR =	4.8	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

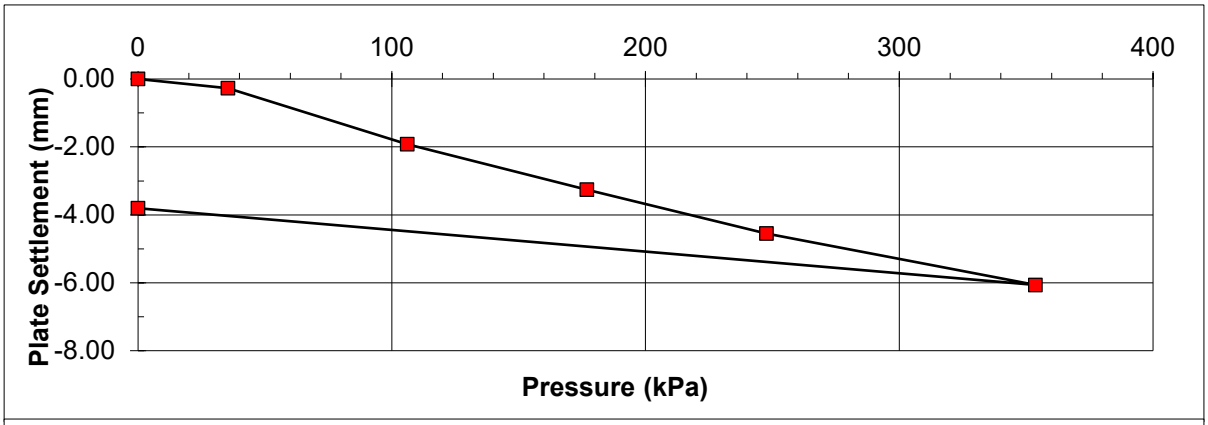
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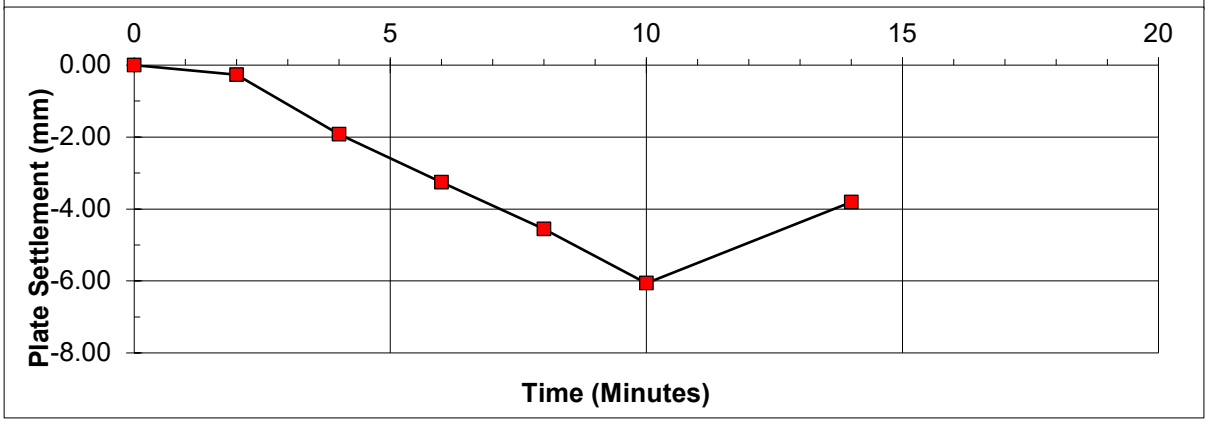
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C4	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4681	4829	4841	4784	0.00	0.00	0.0
4657	4784	4829	4757	-0.27	10.00	35.4
4508	4617	4649	4591	-1.92	30.00	106.1
4369	4466	4538	4458	-3.26	50.00	176.8
4248	4334	4403	4328	-4.55	70.00	247.6
4129	4132	4271	4177	-6.06	100.00	353.7
4303	4413	4493	4403	-3.81	0.00	0.0





Pressure at 1.25 mm deflexion =	77	kPa
Modulus of subgrade reaction (k) =	62	MPa/m
Equivalent 762 mm plate reaction =	50	MPa/m
Equivalent CBR =	8.4	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

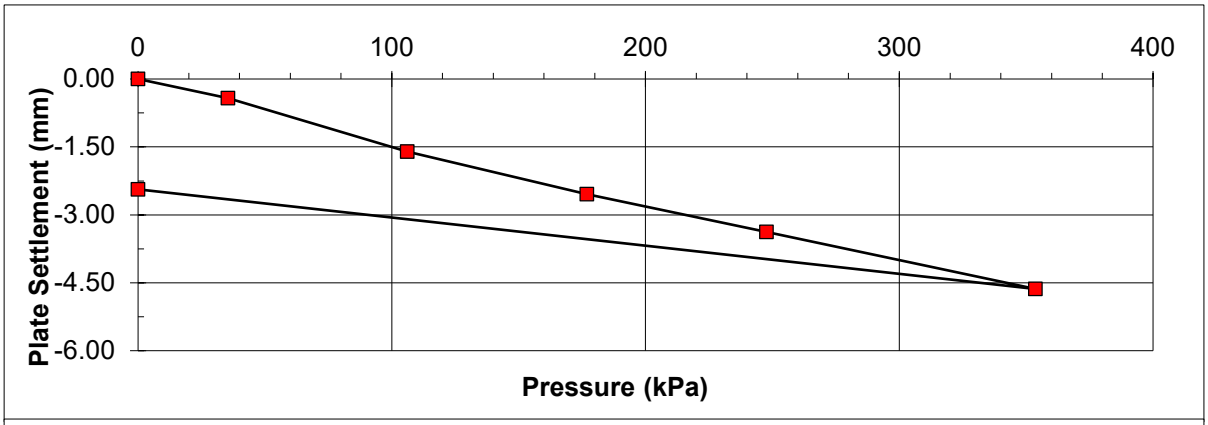
TEST CERTIFICATE

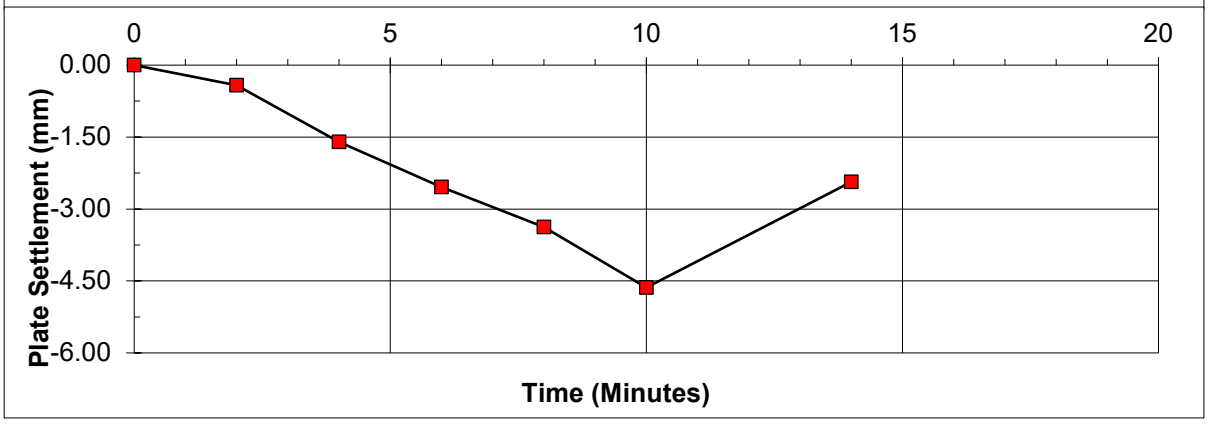
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C5	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4744	4679	4840	4754	0.00	0.00	0.0
4710	4625	4802	4712	-0.42	10.00	35.4
4568	4484	4730	4594	-1.60	30.00	106.1
4451	4381	4668	4500	-2.54	50.00	176.8
4374	4292	4584	4417	-3.38	70.00	247.6
4239	4145	4488	4291	-4.64	100.00	353.7
4478	4391	4663	4511	-2.44	0.00	0.0





Pressure at 1.25 mm deflexion =	85	kPa
Modulus of subgrade reaction (k) =	68	MPa/m
Equivalent 762 mm plate reaction =	55	MPa/m
Equivalent CBR =	9.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

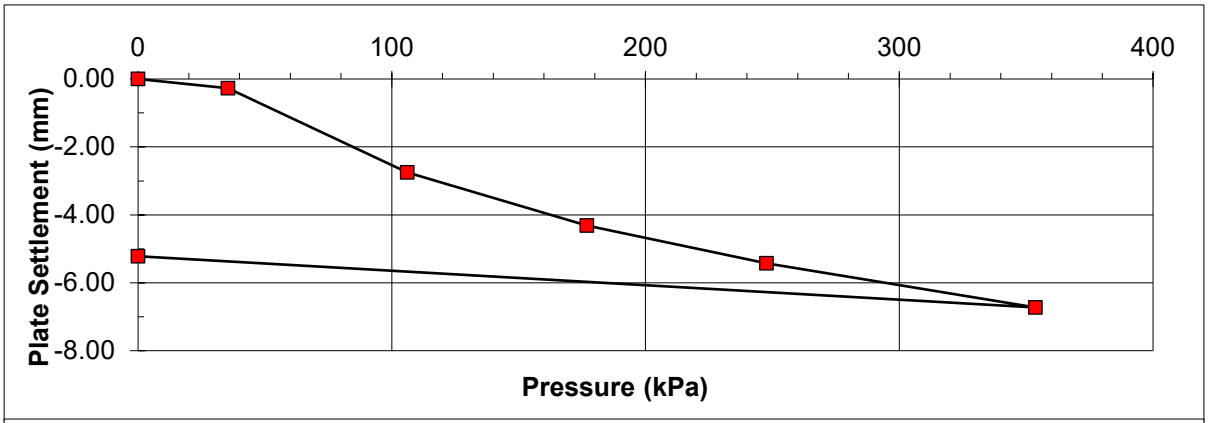
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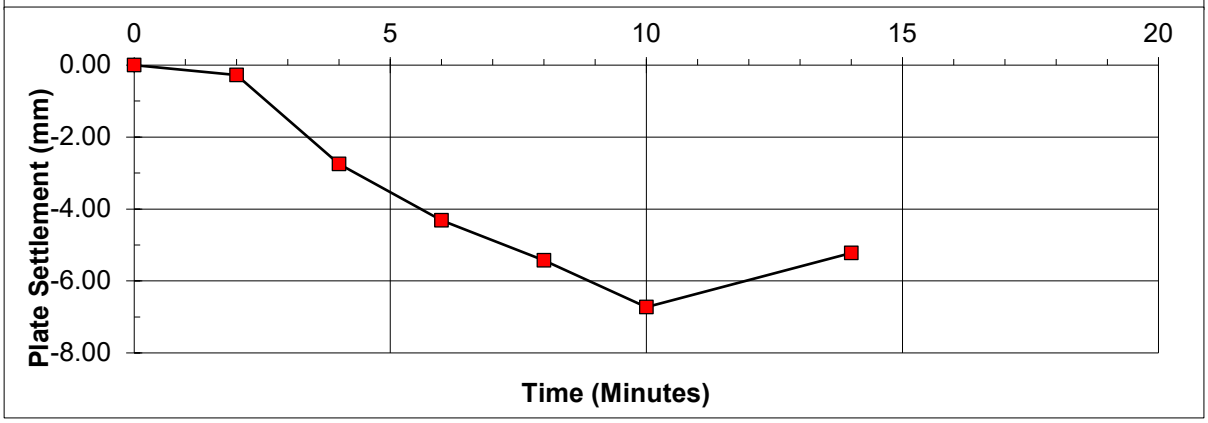
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C6	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4663	4831	4771	4755	0.00	0.00	0.0
4635	4792	4756	4728	-0.27	10.00	35.4
4445	4405	4590	4480	-2.75	30.00	106.1
4291	4251	4428	4323	-4.32	50.00	176.8
4185	4134	4318	4212	-5.43	70.00	247.6
4069	4025	4153	4082	-6.73	100.00	353.7
4173	4161	4364	4233	-5.22	0.00	0.0





Pressure at 1.25 mm deflexion =	63	kPa
Modulus of subgrade reaction (k) =	51	MPa/m
Equivalent 762 mm plate reaction =	41	MPa/m
Equivalent CBR =	5.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

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UKAS TESTING 1580

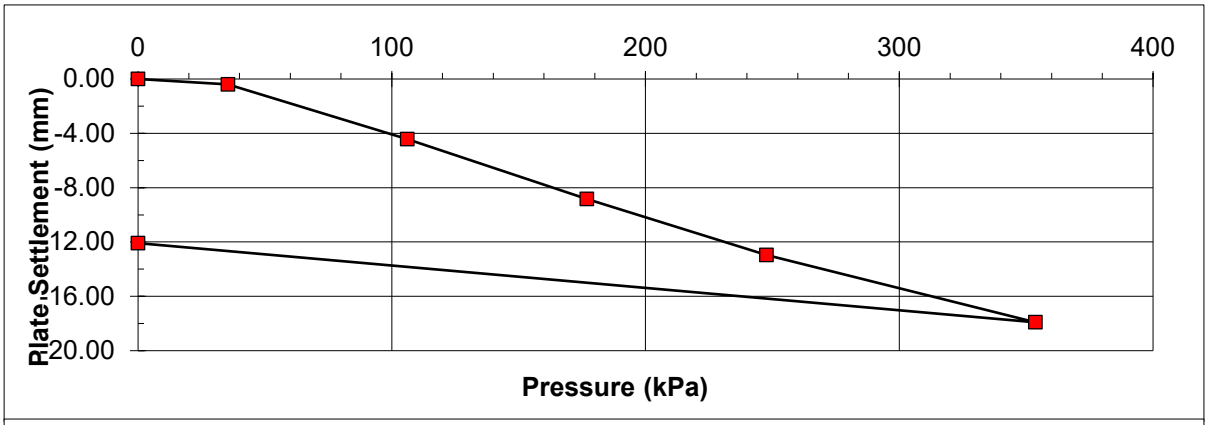
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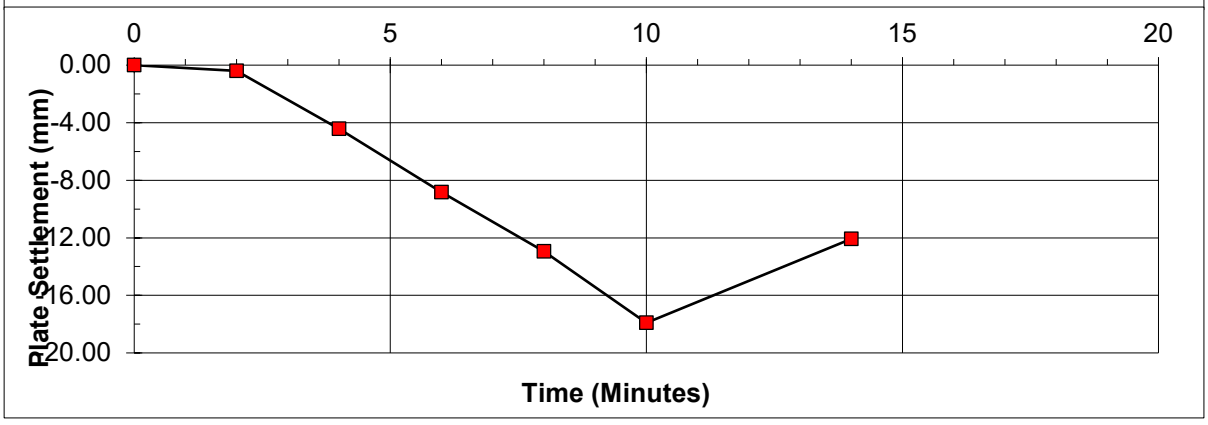
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C7	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4698	4716	4892	4769	0.00	0.00	0.0
4661	4651	4872	4728	-0.41	10.00	35.4
4254	4209	4513	4325	-4.43	30.00	106.1
3829	3717	4110	3885	-8.83	50.00	176.8
3416	3260	3745	3474	-12.95	70.00	247.6
2855	2780	3298	2978	-17.91	100.00	353.7
3378	3398	3905	3560	-12.08	0.00	0.0





Pressure at 1.25 mm deflexion =	50	kPa
Modulus of subgrade reaction (k) =	40	MPa/m
Equivalent 762 mm plate reaction =	32	MPa/m
Equivalent CBR =	4.0	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

MURRAY RIX

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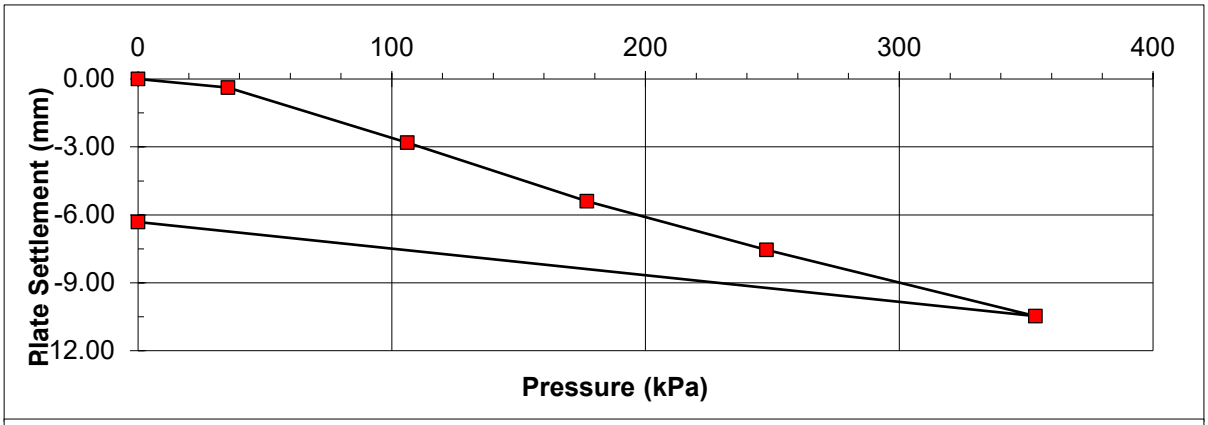
TEST CERTIFICATE

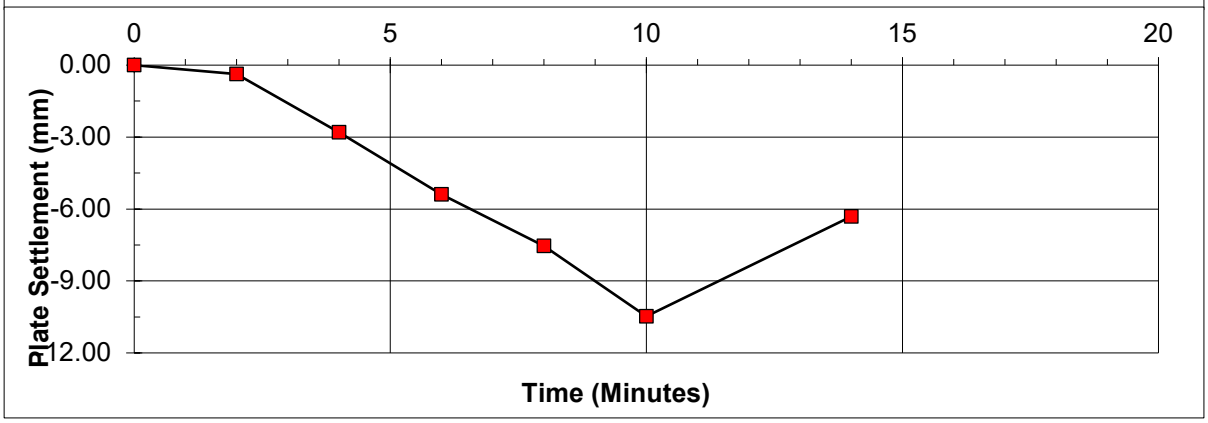
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C8	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4611	4791	4741	4714	0.00	0.00	0.0
4563	4754	4713	4677	-0.38	10.00	35.4
4291	4517	4493	4434	-2.81	30.00	106.1
4023	4240	4262	4175	-5.39	50.00	176.8
3812	4001	4068	3960	-7.54	70.00	247.6
3510	3686	3805	3667	-10.47	100.00	353.7
3849	4119	4281	4083	-6.31	0.00	0.0





Pressure at 1.25 mm deflexion =	61	kPa
Modulus of subgrade reaction (k) =	49	MPa/m
Equivalent 762 mm plate reaction =	39	MPa/m
Equivalent CBR =	5.5	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

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UKAS TESTING 1580

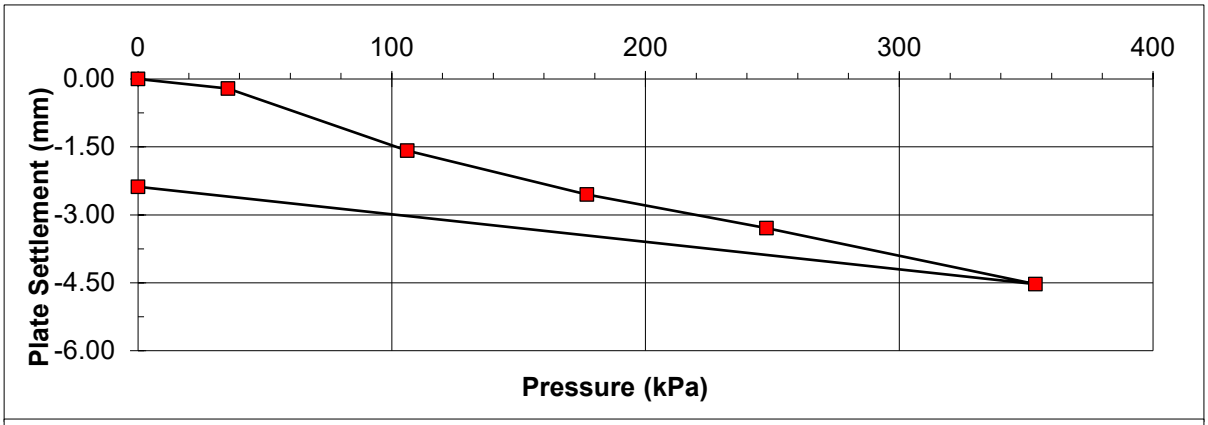
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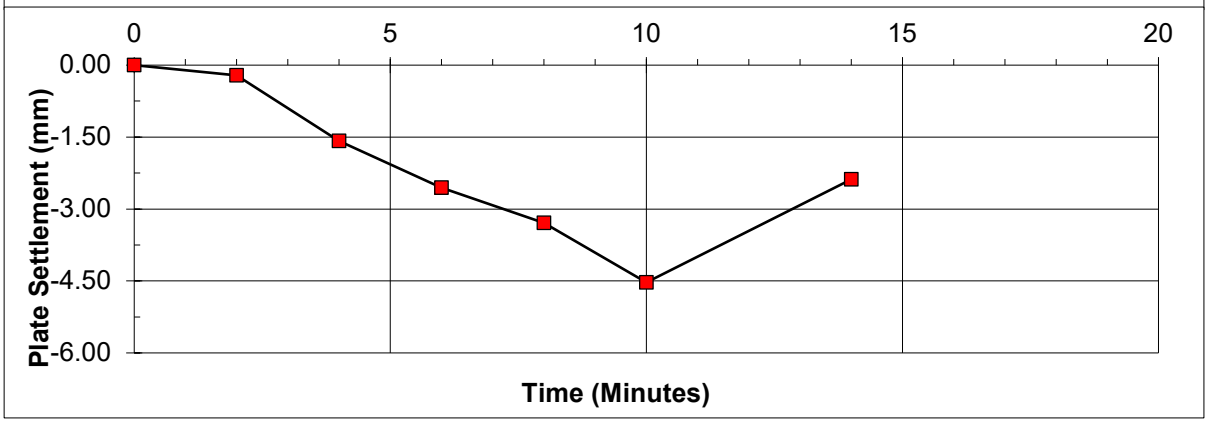
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C9	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4821	4860	4793	4825	0.00	0.00	0.0
4796	4832	4782	4803	-0.21	10.00	35.4
4655	4699	4645	4666	-1.58	30.00	106.1
4549	4610	4549	4569	-2.55	50.00	176.8
4469	4549	4469	4496	-3.29	70.00	247.6
4340	4430	4345	4372	-4.53	100.00	353.7
4551	4640	4569	4587	-2.38	0.00	0.0





Pressure at 1.25 mm deflexion =	89	kPa
Modulus of subgrade reaction (k) =	71	MPa/m
Equivalent 762 mm plate reaction =	57	MPa/m
Equivalent CBR =	10.7	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

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UKAS TESTING 1580

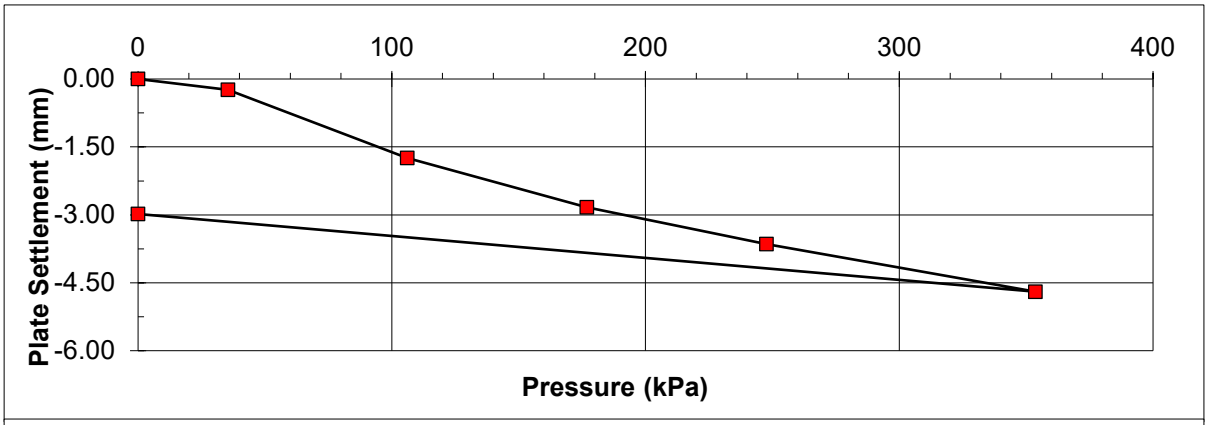
TEST CERTIFICATE

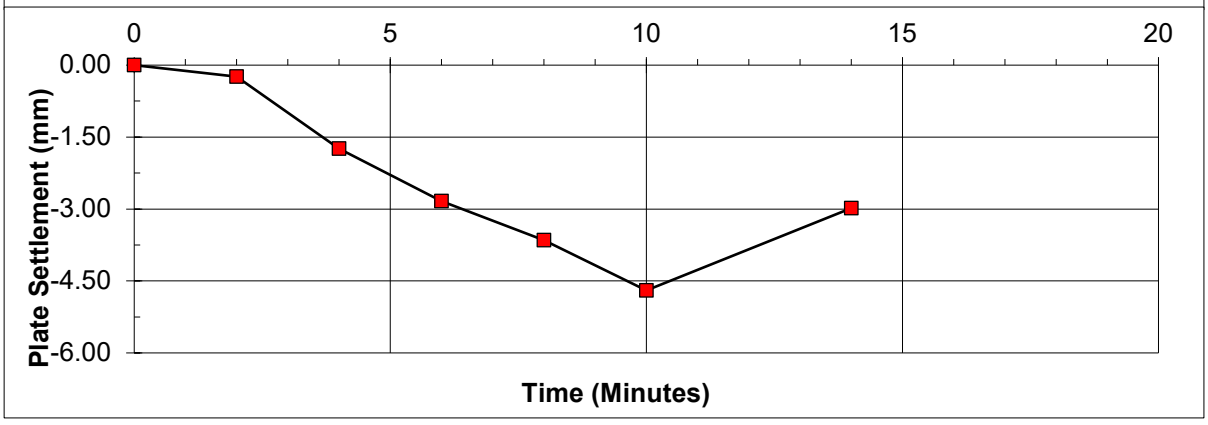
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/1		
TEST LOCATION	C10	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	03-Feb-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4894	4672	4804	4790	0.00	0.00	0.0
4877	4633	4788	4766	-0.24	10.00	35.4
4725	4443	4679	4616	-1.74	30.00	106.1
4617	4309	4594	4507	-2.83	50.00	176.8
4546	4200	4530	4425	-3.65	70.00	247.6
4454	4060	4447	4320	-4.70	100.00	353.7
4529	4312	4634	4492	-2.98	0.00	0.0





Pressure at 1.25 mm deflexion =	83	kPa
Modulus of subgrade reaction (k) =	66	MPa/m
Equivalent 762 mm plate reaction =	53	MPa/m
Equivalent CBR =	9.5	%

REMARKS

SIGNED

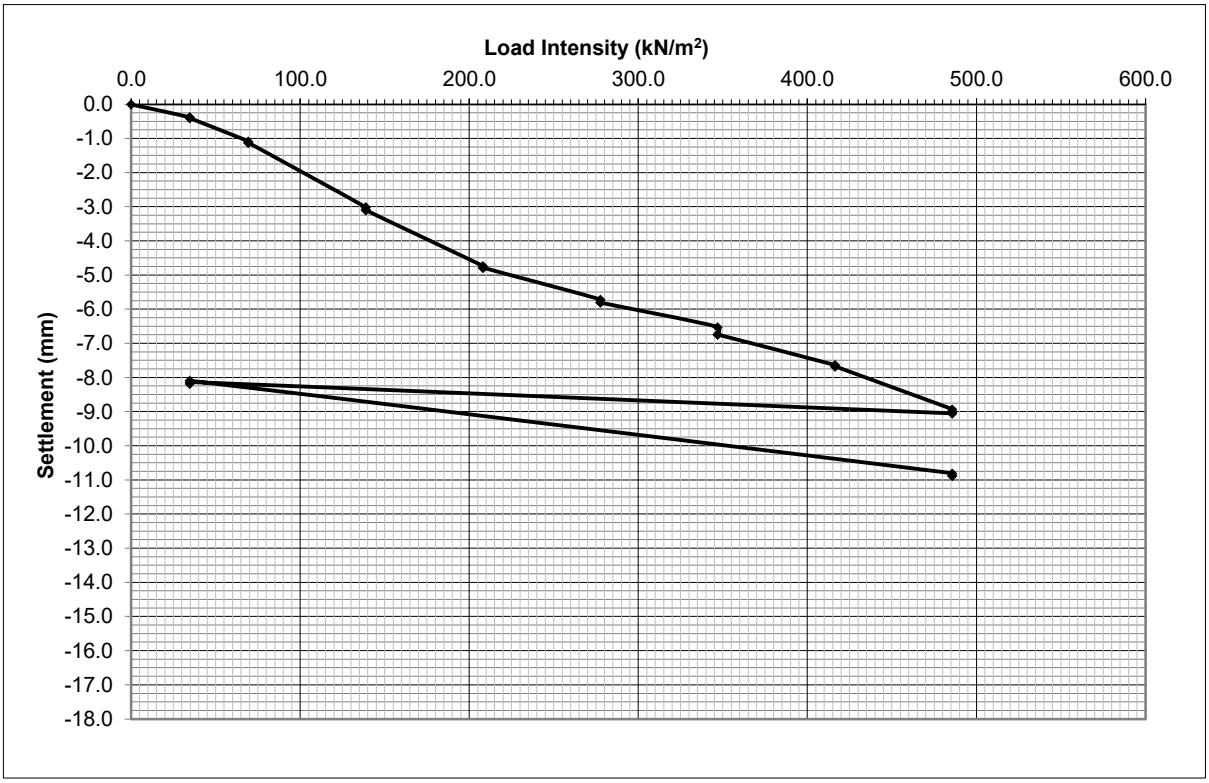
NAME O.P. Davies BA (Hons) DATE 04-Feb-22
(Laboratory Manager)

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	14/02/2022
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM4	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-10.88	**Weather:**	Overcast
Strata Description:	Formation		



Equivalent CBR Value of:	**8.3**	%
Corrected Subgrade Reaction (k_{762}):	**49,200**	**kN/m²**

Comments

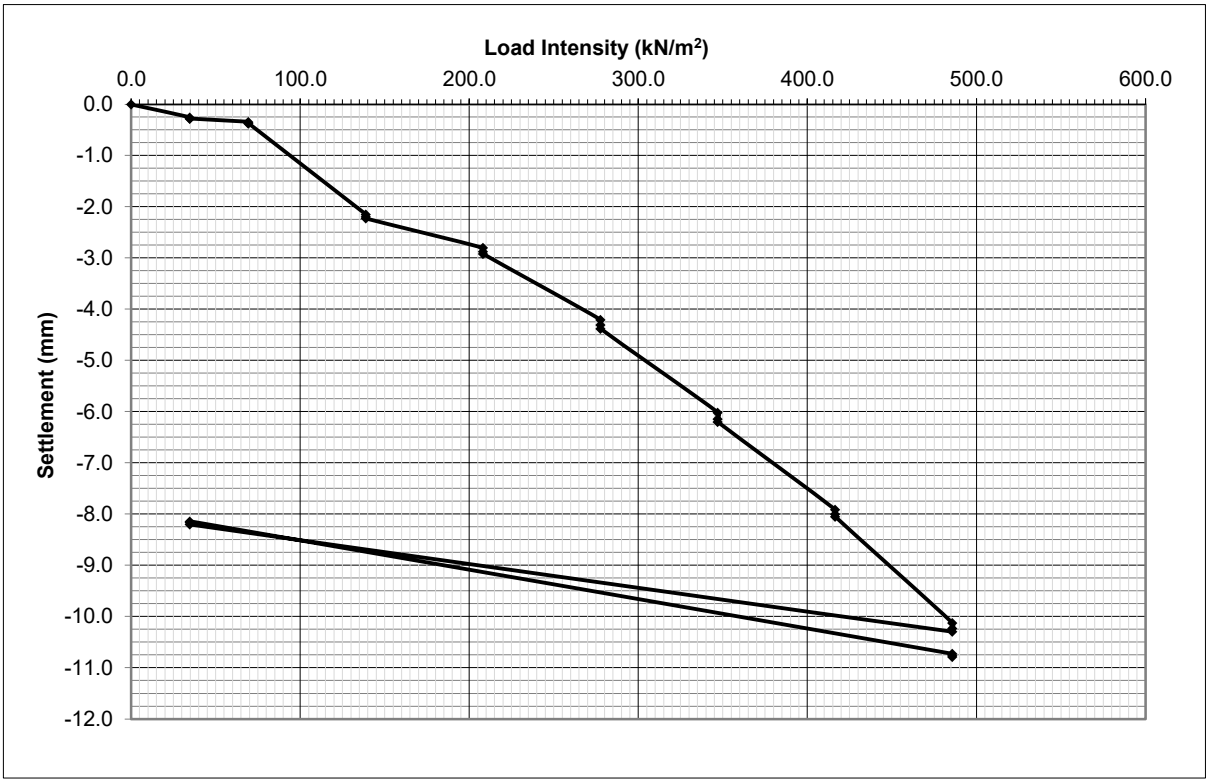
Site Engineer:	Date:	Approved By:	Date:
RC	14.2.22	PD	15.2.22

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	14/02/2022
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM5	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-10.78	**Weather:**	Overcast
Strata Description:	Formation		



Equivalent CBR Value of:	**14.8**	%
Corrected Subgrade Reaction (k_{762}):	**68,880**	**kN/m²**

Comments

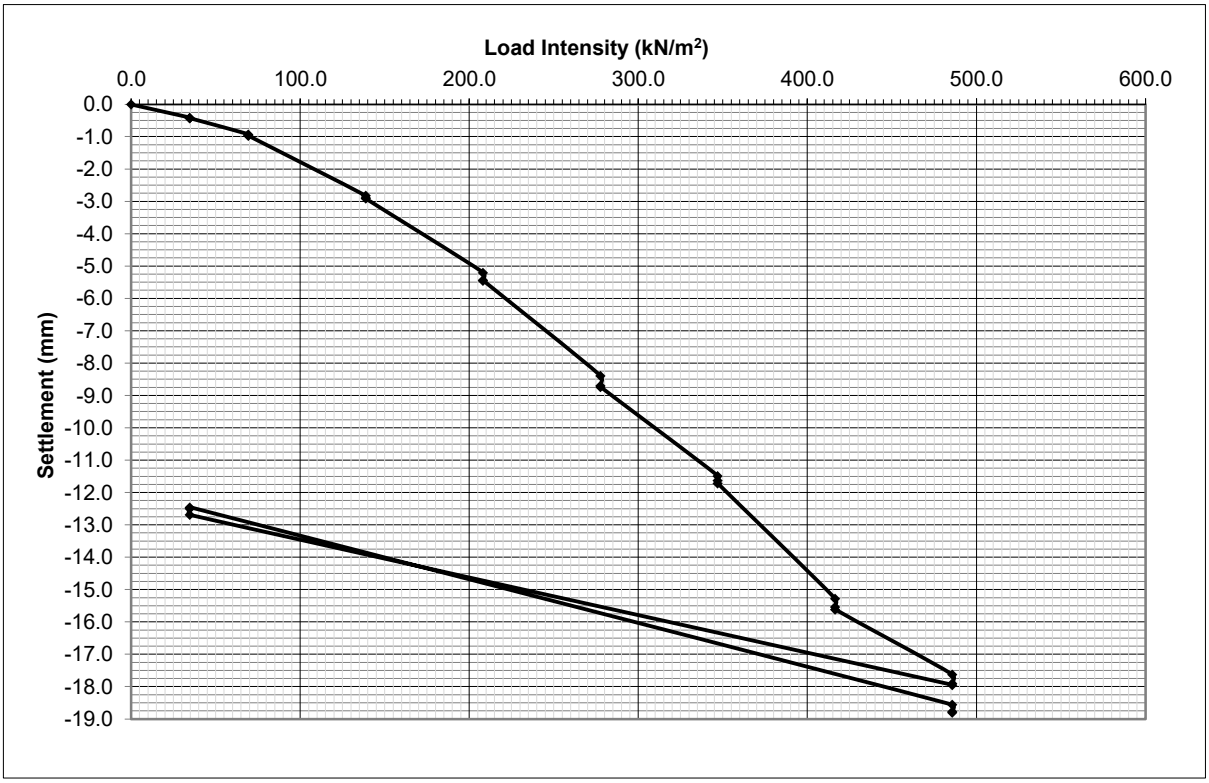
Site Engineer:	Date:	Approved By:	Date:
RC	14.2.22	PD	15.2.22

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	14/02/2022
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM6	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-18.79	**Weather:**	Overcast
Strata Description:	Formation		



Equivalent CBR Value of:	**9.2**	%
Corrected Subgrade Reaction (k_{762}):	**52,480**	**kN/m²**

Comments

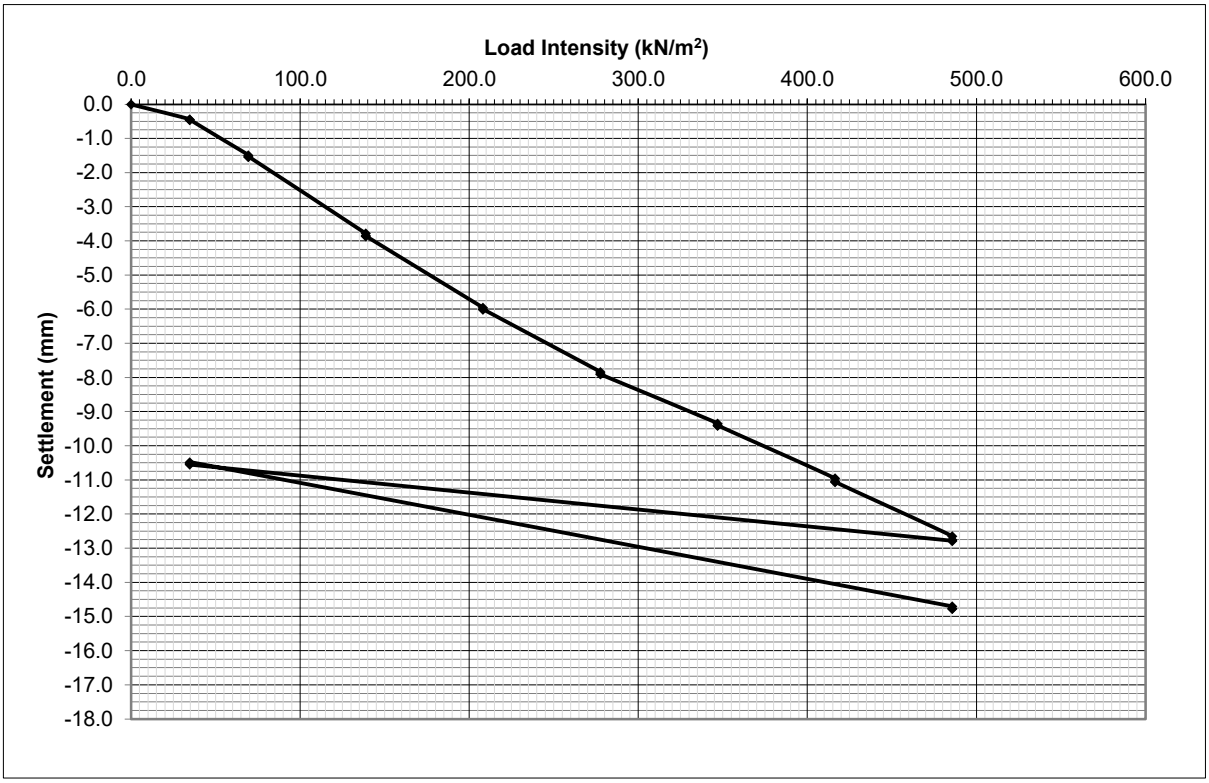
Site Engineer:	Date:	Approved By:	Date:
RC	14.2.22	PD	15.2.22

LK CONSULT LIMITED

Vertical Deformation Test-Equivalent CBR Value

In Accordance with BS1377: Part 9:1990

Site Name:	Collyhurst	**Test Date:**	14/02/2022
Site Ref:	LKR201044	**Type of Kentledge:**	25T Excavator
Test No.:	TM7	**Test Depth (m bgl):**	0.00
Plate Diameter (mm)	600	**Easting:**	0
Maximum Applied Pressure (kN/m2):	485.74	**Northing:**	0
Maximum Deformation (mm):	-14.77	**Weather:**	Overcast
Strata Description:	Formation		



Equivalent CBR Value of:	**6.4**	%
Corrected Subgrade Reaction (k_{762}):	**42,640**	**kN/m²**

Comments

Site Engineer:	Date:	Approved By:	Date:
RC	14.2.22	PD	15.2.22

MURRAY RIX

CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client	LK Remediate Ltd
Address	Unit 29 Eton Business Park Eton Hill Road Radcliffe Greater Manchester M26 2ZS
Contract	LKR 20 1044 - Collyhurst
Job Number	MRN 4297/5A
Date of Issue	05 April 2022
Pages	1 of 10

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

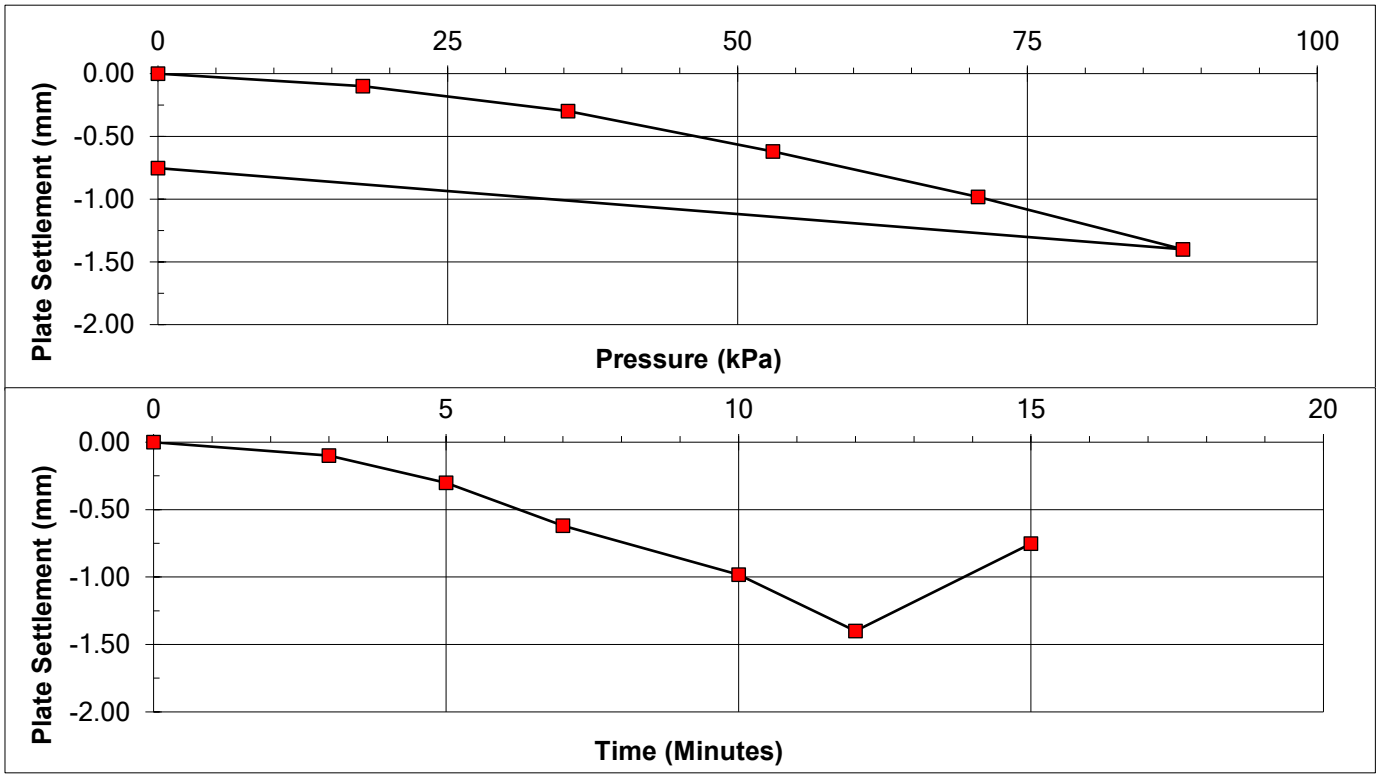
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 01 - 25	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4472	4486	4527	4495	0.00	0.00	0.0
4463	4472	4520	4485	-0.10	5.00	17.7
4436	4451	4508	4465	-0.30	10.00	35.4
4402	4420	4477	4433	-0.62	15.00	53.1
4367	4382	4441	4397	-0.98	20.00	70.7
4318	4347	4400	4355	-1.40	25.00	88.4
4383	4408	4468	4420	-0.75	0.00	0.0



Pressure at 1.25 mm deflexion =	82	kPa
Modulus of subgrade reaction (k) =	66	MPa/m
Equivalent 762 mm plate reaction =	53	MPa/m
Equivalent CBR =	9.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

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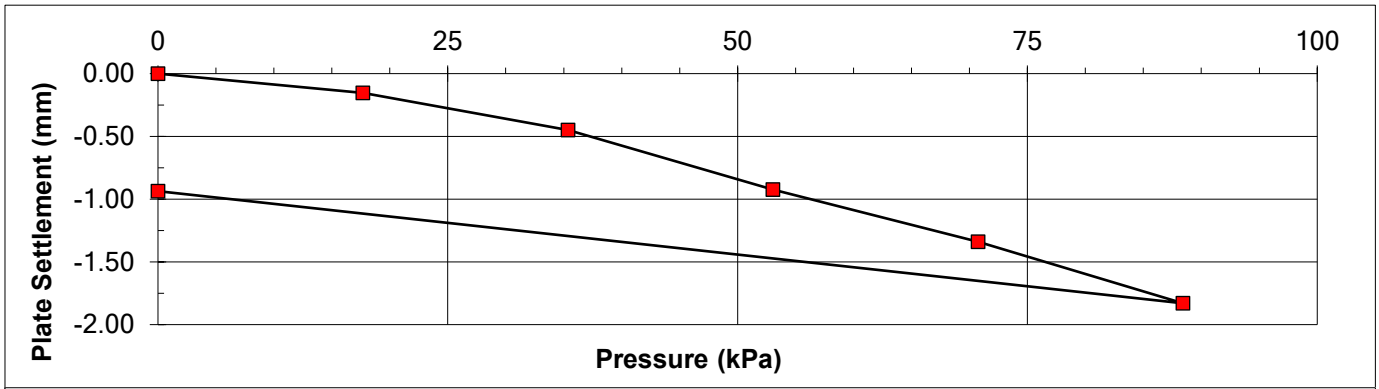
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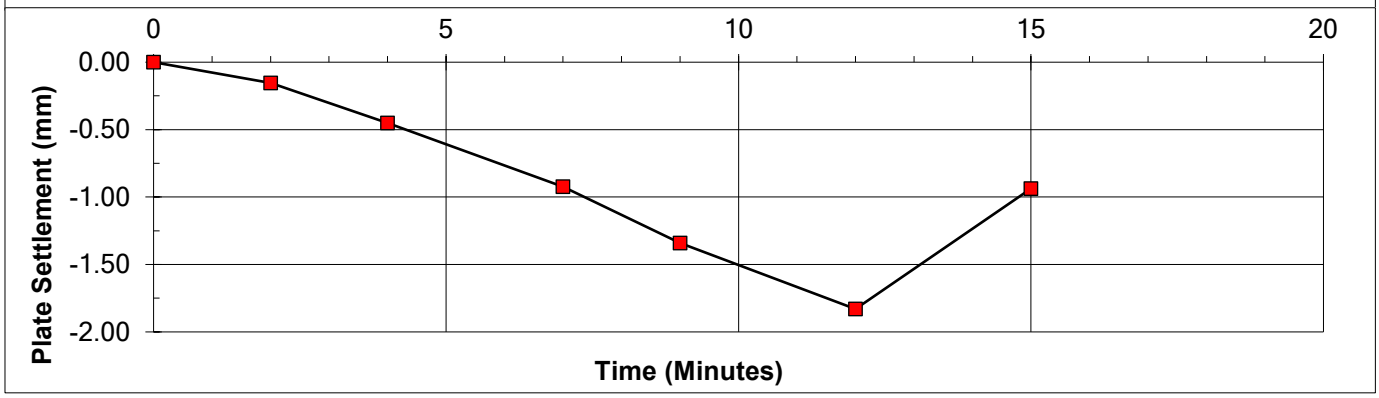
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 02 - 24	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4534	4481	4607	4541	0.00	0.00	0.0
4516	4469	4591	4525	-0.15	5.00	17.7
4475	4447	4565	4496	-0.45	10.00	35.4
4426	4406	4513	4448	-0.92	15.00	53.1
4371	4372	4477	4407	-1.34	20.00	70.7
4321	4322	4430	4358	-1.83	25.00	88.4
4434	4409	4498	4447	-0.94	0.00	0.0





Pressure at 1.25 mm deflexion =	67	kPa
Modulus of subgrade reaction (k) =	54	MPa/m
Equivalent 762 mm plate reaction =	43	MPa/m
Equivalent CBR =	6.5	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

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TEL 0161 475 0870

UKAS TESTING 1580

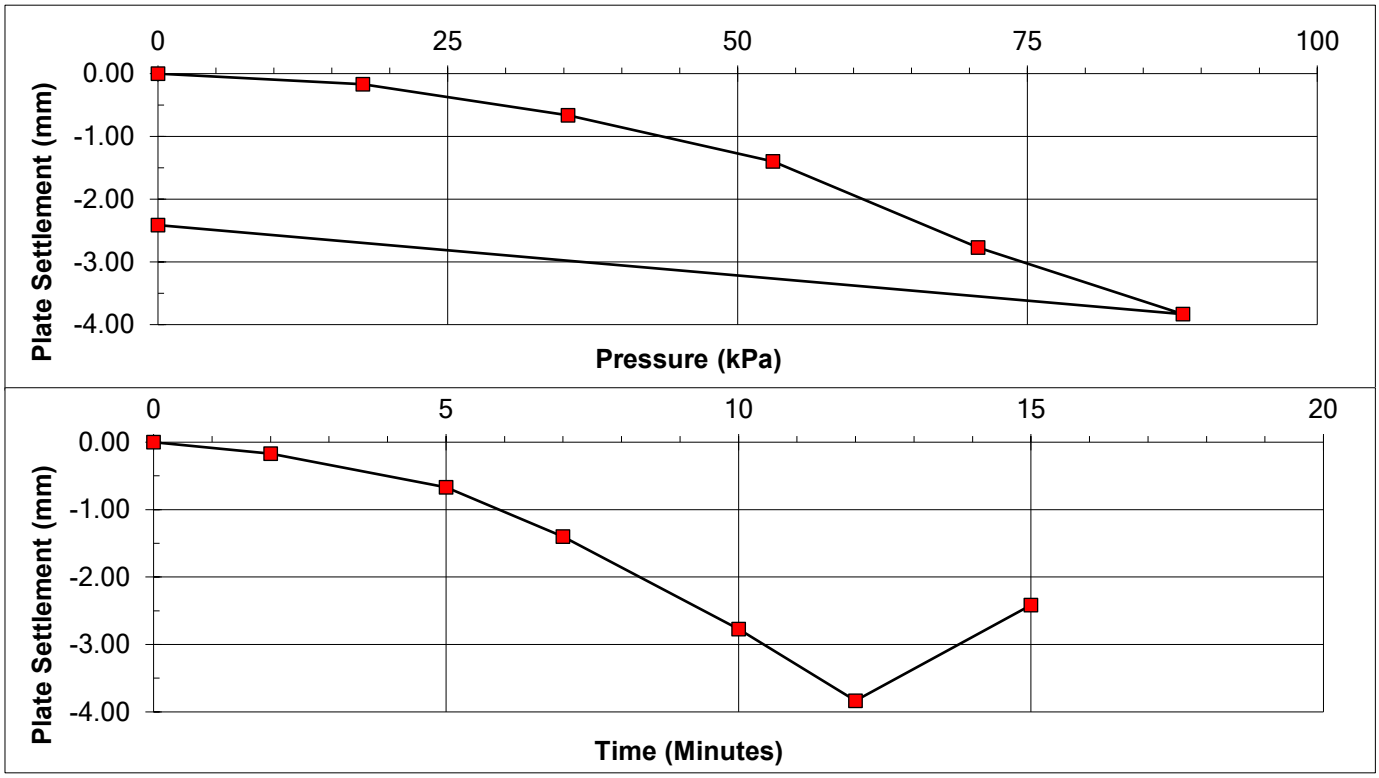
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/5A				
TEST LOCATION	Test 03 - 22	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4425	4473	4459	4452	0.00	0.00	0.0
4403	4461	4442	4435	-0.17	5.00	17.7
4353	4416	4388	4386	-0.67	10.00	35.4
4261	4349	4327	4312	-1.40	15.00	53.1
4126	4205	4195	4175	-2.77	20.00	70.7
4035	4106	4066	4069	-3.83	25.00	88.4
4175	4297	4160	4211	-2.42	0.00	0.0



Pressure at 1.25 mm deflexion =	49	kPa
Modulus of subgrade reaction (k) =	40	MPa/m
Equivalent 762 mm plate reaction =	32	MPa/m
Equivalent CBR =	3.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 05-Apr-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

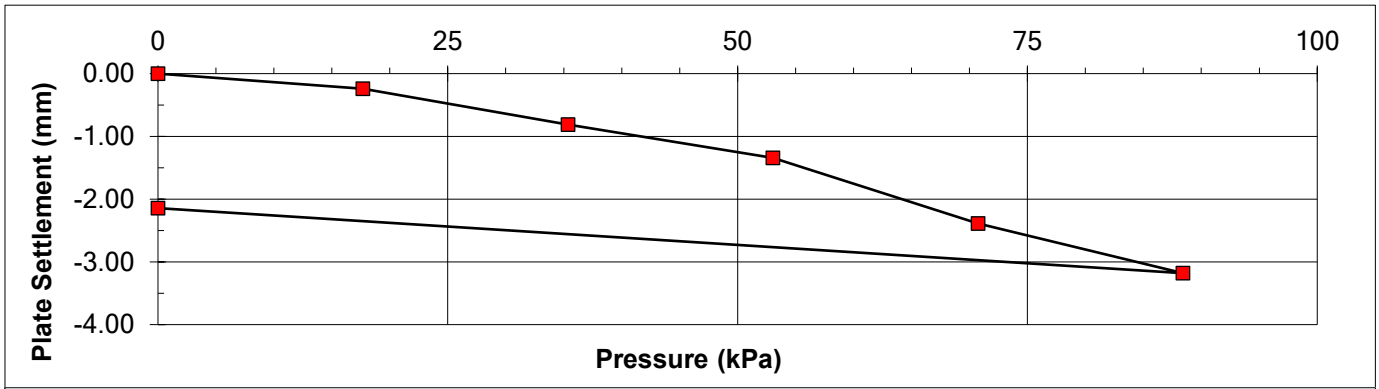
TEST CERTIFICATE

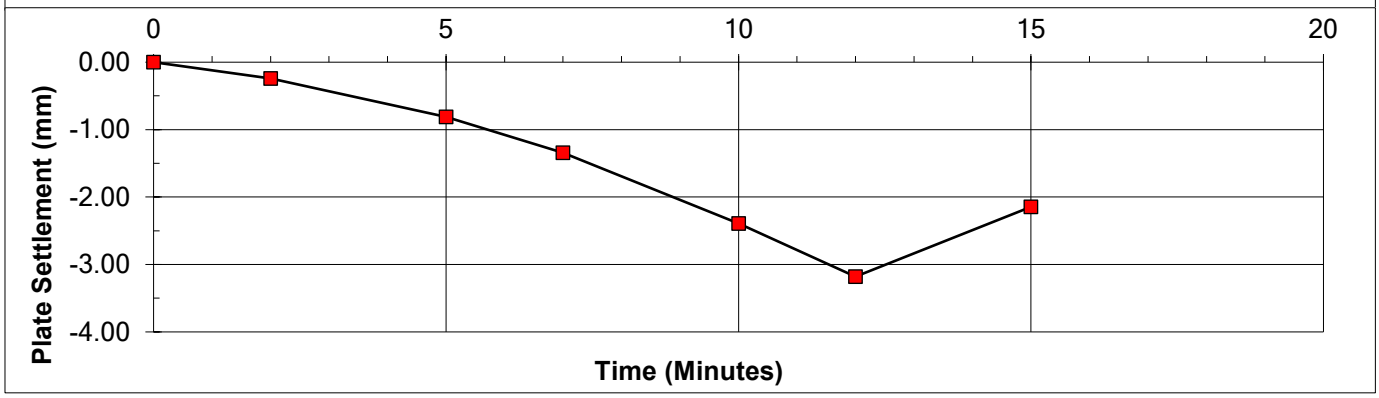
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 04 - 21	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4362	4444	4474	4427	0.00	0.00	0.0
4335	4412	4460	4402	-0.24	5.00	17.7
4271	4362	4404	4346	-0.81	10.00	35.4
4218	4323	4336	4292	-1.34	15.00	53.1
4127	4160	4276	4188	-2.39	20.00	70.7
4041	4091	4194	4109	-3.18	25.00	88.4
4148	4186	4303	4212	-2.14	0.00	0.0





Pressure at 1.25 mm deflexion =	50	kPa
Modulus of subgrade reaction (k) =	40	MPa/m
Equivalent 762 mm plate reaction =	32	MPa/m
Equivalent CBR =	3.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

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TEL 0161 475 0870

UKAS TESTING 1580

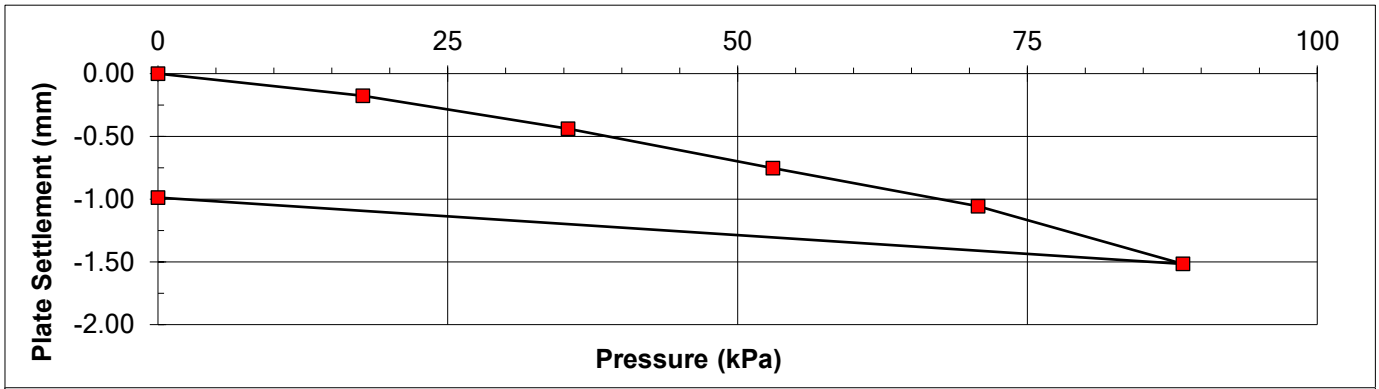
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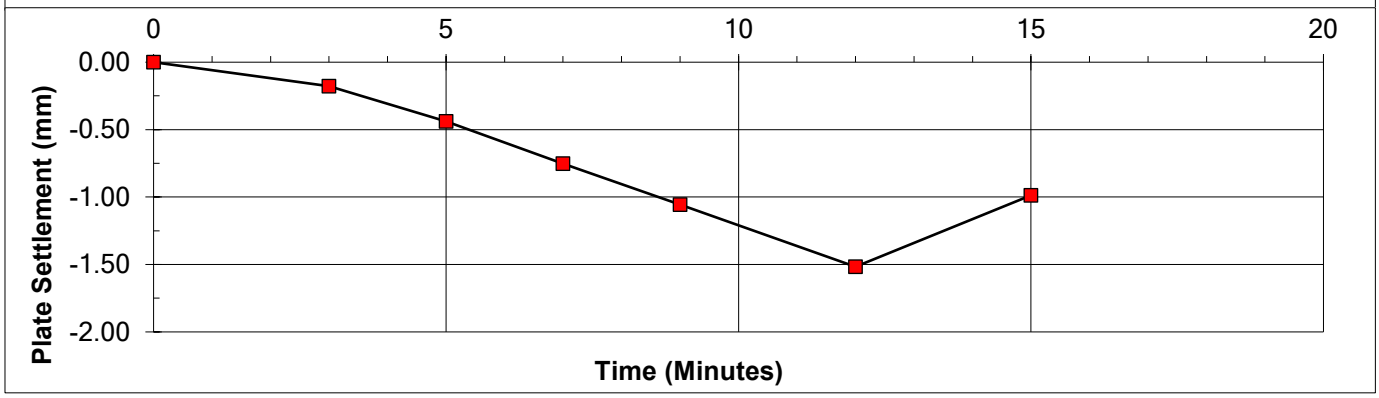
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/5A				
TEST LOCATION	Test 05 - 20	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4529	4593	4514	4545	0.00	0.00	0.0
4505	4577	4501	4528	-0.18	5.00	17.7
4481	4547	4476	4501	-0.44	10.00	35.4
4456	4516	4438	4470	-0.75	15.00	53.1
4436	4481	4402	4440	-1.06	20.00	70.7
4392	4444	4345	4394	-1.52	25.00	88.4
4437	4485	4418	4447	-0.99	0.00	0.0





Pressure at 1.25 mm deflexion =	78	kPa
Modulus of subgrade reaction (k) =	63	MPa/m
Equivalent 762 mm plate reaction =	50	MPa/m
Equivalent CBR =	8.6	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

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UKAS TESTING 1580

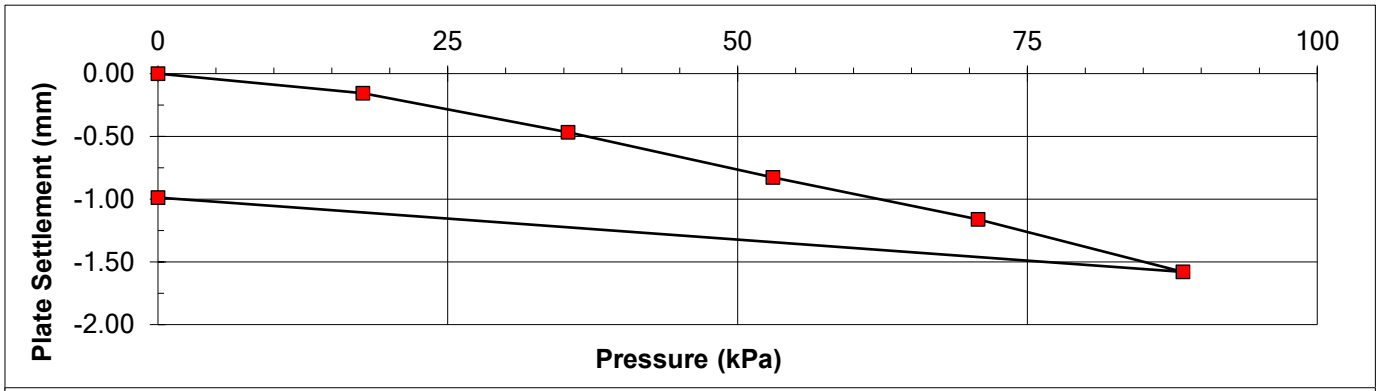
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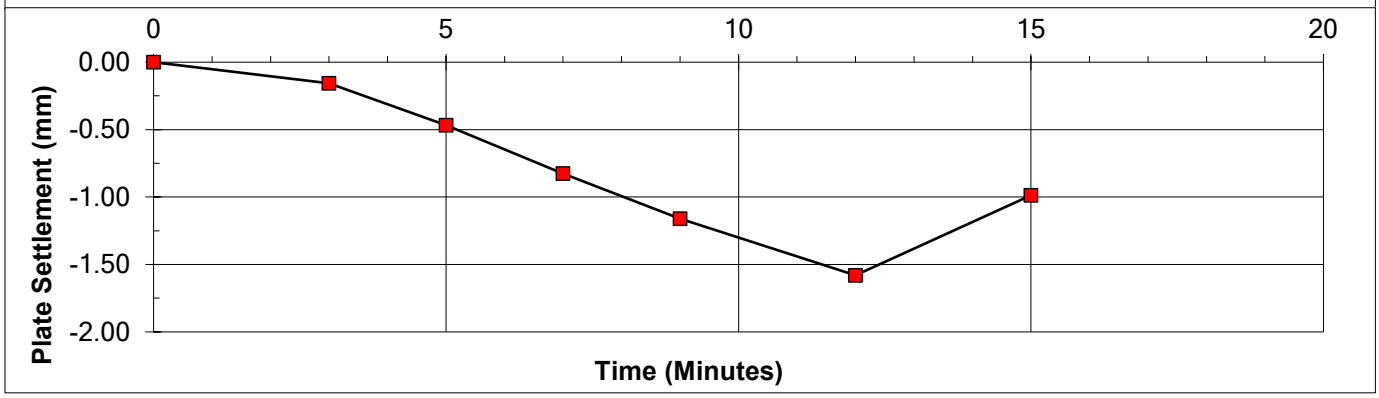
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 06 - 23	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4533	4486	4513	4511	0.00	0.00	0.0
4518	4469	4498	4495	-0.16	5.00	17.7
4485	4437	4470	4464	-0.47	10.00	35.4
4444	4407	4433	4428	-0.83	15.00	53.1
4410	4373	4401	4395	-1.16	20.00	70.7
4355	4336	4367	4353	-1.58	25.00	88.4
4406	4393	4437	4412	-0.99	0.00	0.0





Pressure at 1.25 mm deflexion =	75	kPa
Modulus of subgrade reaction (k) =	60	MPa/m
Equivalent 762 mm plate reaction =	48	MPa/m
Equivalent CBR =	7.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
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TEL 0161 475 0870

UKAS TESTING 1580

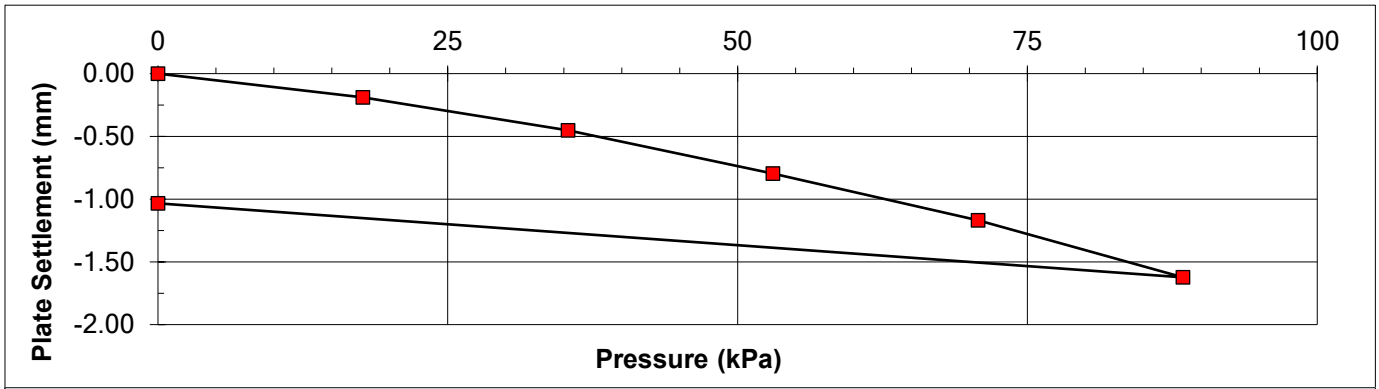
TEST CERTIFICATE

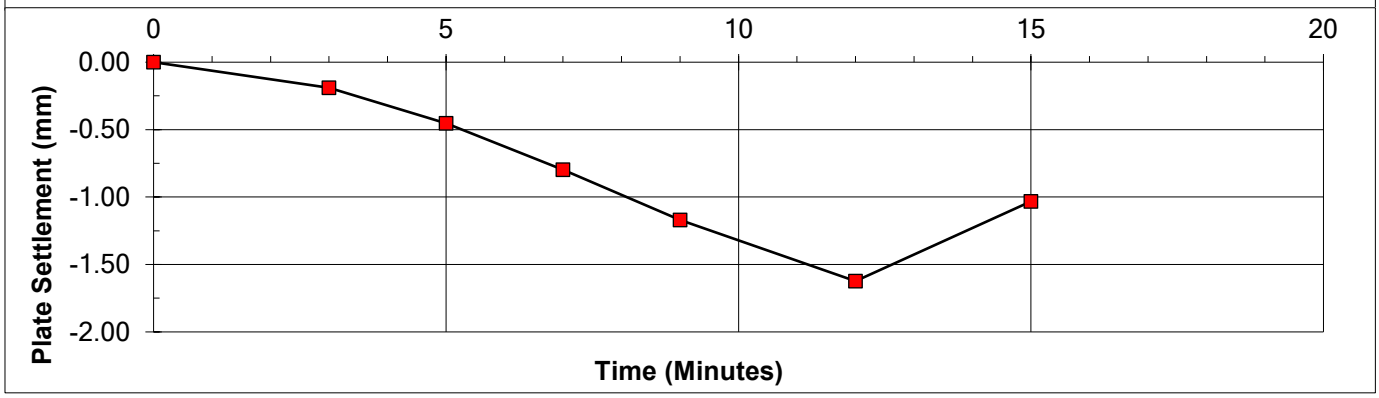
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/5A				
TEST LOCATION	Test 07 - 17	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4529	4533	4443	4502	0.00	0.00	0.0
4504	4518	4426	4483	-0.19	5.00	17.7
4475	4492	4402	4456	-0.45	10.00	35.4
4438	4461	4367	4422	-0.80	15.00	53.1
4404	4420	4330	4385	-1.17	20.00	70.7
4362	4380	4276	4339	-1.62	25.00	88.4
4433	4446	4316	4398	-1.03	0.00	0.0





Pressure at 1.25 mm deflexion =	74	kPa
Modulus of subgrade reaction (k) =	59	MPa/m
Equivalent 762 mm plate reaction =	48	MPa/m
Equivalent CBR =	7.8	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 05-Apr-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

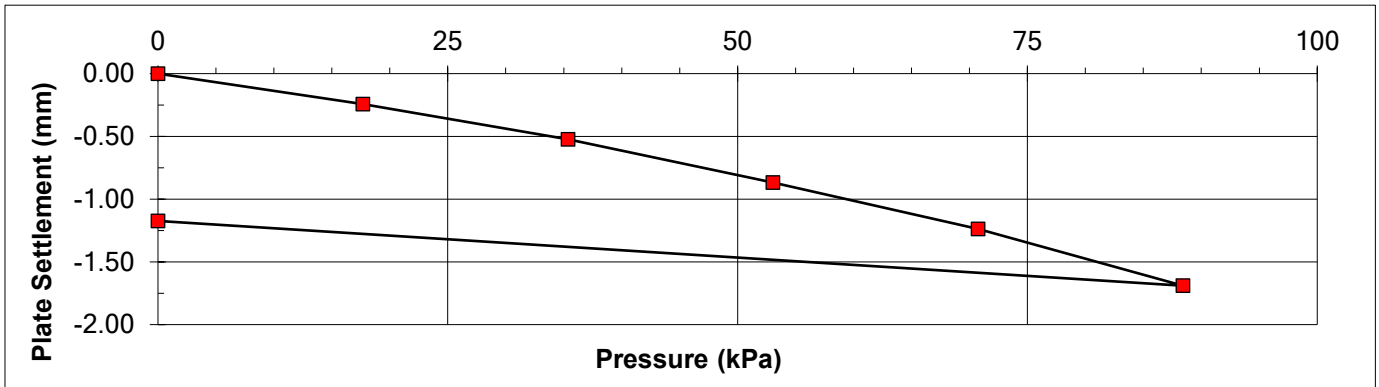
TEST CERTIFICATE

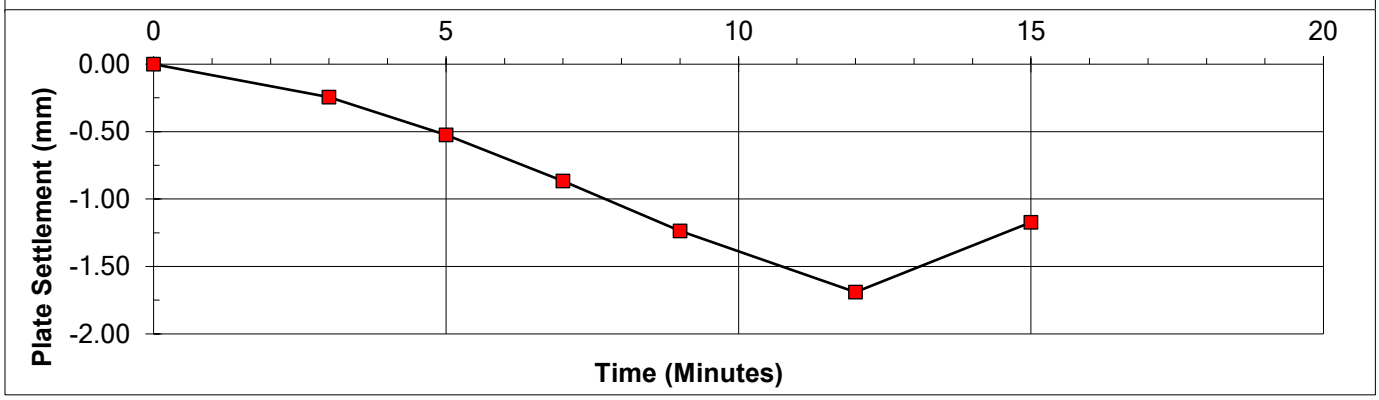
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 08 - 18	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4569	4566	4615	4583	0.00	0.00	0.0
4538	4544	4595	4559	-0.24	5.00	17.7
4512	4518	4563	4531	-0.52	10.00	35.4
4478	4491	4521	4497	-0.87	15.00	53.1
4442	4454	4483	4460	-1.24	20.00	70.7
4392	4405	4446	4414	-1.69	25.00	88.4
4434	4457	4507	4466	-1.17	0.00	0.0





Pressure at 1.25 mm deflexion =	71	kPa
Modulus of subgrade reaction (k) =	57	MPa/m
Equivalent 762 mm plate reaction =	46	MPa/m
Equivalent CBR =	7.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

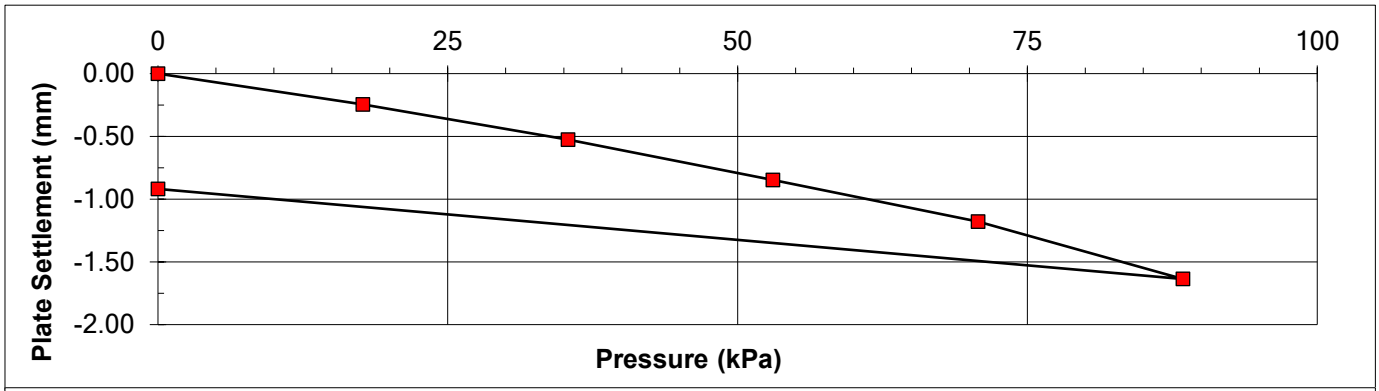
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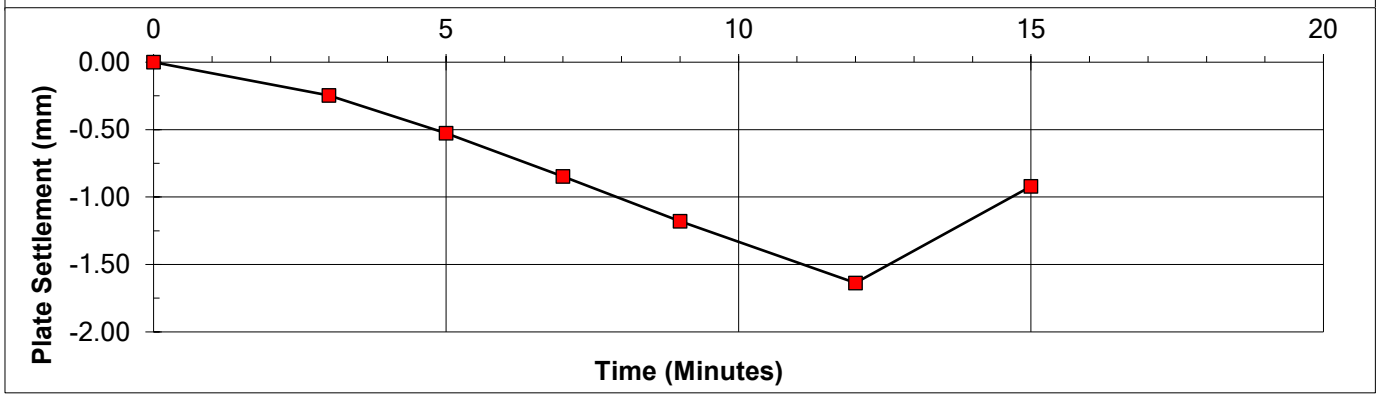
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/5A		
TEST LOCATION	Test 09 - 19	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	21-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4441	4463	4486	4463	0.00	0.00	0.0
4417	4444	4455	4439	-0.25	5.00	17.7
4391	4415	4426	4411	-0.53	10.00	35.4
4358	4382	4396	4379	-0.85	15.00	53.1
4327	4343	4366	4345	-1.18	20.00	70.7
4276	4297	4326	4300	-1.64	25.00	88.4
4339	4377	4398	4371	-0.92	0.00	0.0





Pressure at 1.25 mm deflexion =	73	kPa
Modulus of subgrade reaction (k) =	59	MPa/m
Equivalent 762 mm plate reaction =	47	MPa/m
Equivalent CBR =	7.7	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 05-Apr-22

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR 20 1044 -
Collyhurst

Job Number MRN 4297/6
Date of Issue 25 March 2022
Pages 1 of 14

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

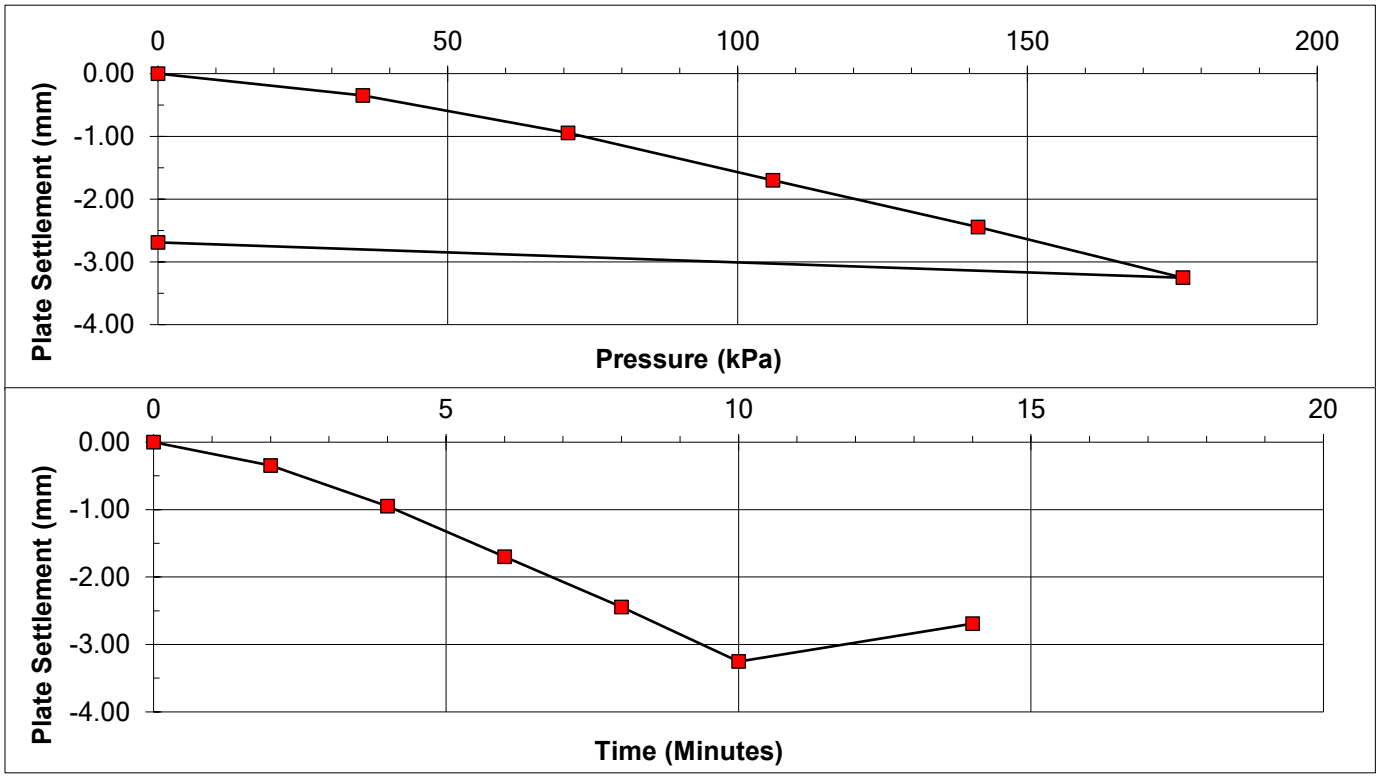
TEST CERTIFICATE

PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	26	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4648	4504	4709	4620	0.00	0.00	0.0
4614	4480	4663	4586	-0.35	10.00	35.4
4563	4414	4600	4526	-0.95	20.00	70.7
4498	4334	4519	4450	-1.70	30.00	106.1
4435	4265	4428	4376	-2.44	40.00	141.5
4356	4178	4351	4295	-3.25	50.00	176.8
4401	4224	4429	4351	-2.69	0.00	0.0



Pressure at 1.25 mm deflexion =	85	kPa
Modulus of subgrade reaction (k) =	68	MPa/m
Equivalent 762 mm plate reaction =	55	MPa/m
Equivalent CBR =	9.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
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UKAS TESTING 1580

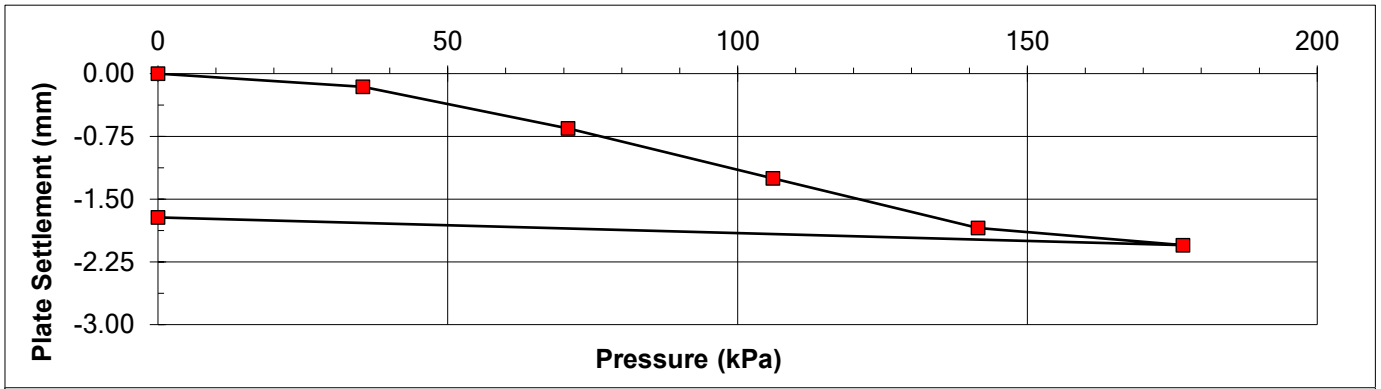
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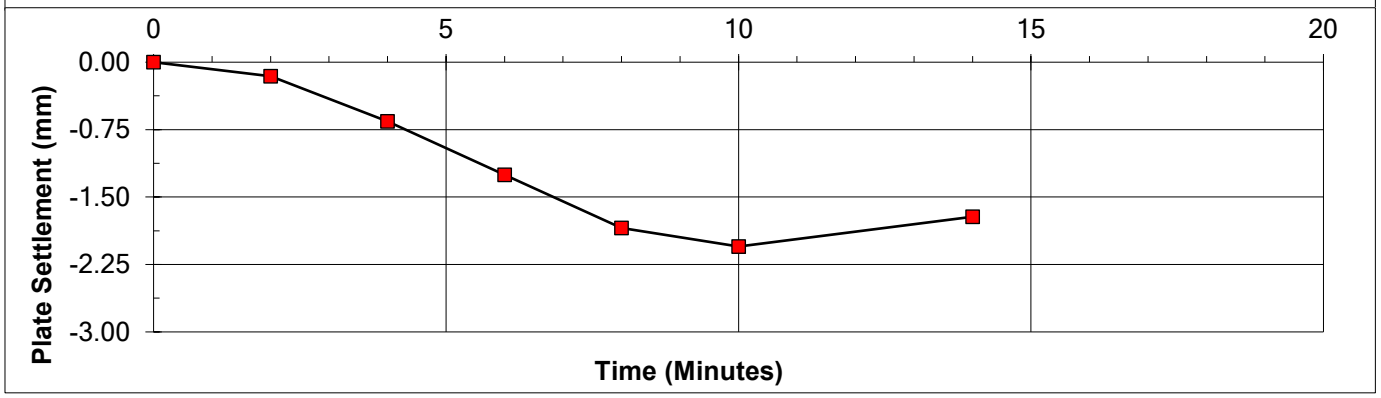
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	27	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4693	4705	4750	4716	0.00	0.00	0.0
4667	4691	4743	4700	-0.16	10.00	35.4
4606	4638	4707	4650	-0.66	20.00	70.7
4544	4573	4655	4591	-1.25	30.00	106.1
4472	4532	4591	4532	-1.84	40.00	141.5
4436	4554	4543	4511	-2.05	50.00	176.8
4553	4474	4605	4544	-1.72	0.00	0.0





Pressure at 1.25 mm deflexion =	106	kPa
Modulus of subgrade reaction (k) =	85	MPa/m
Equivalent 762 mm plate reaction =	68	MPa/m
Equivalent CBR =	14.5	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

MURRAY RIX

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UKAS TESTING 1580

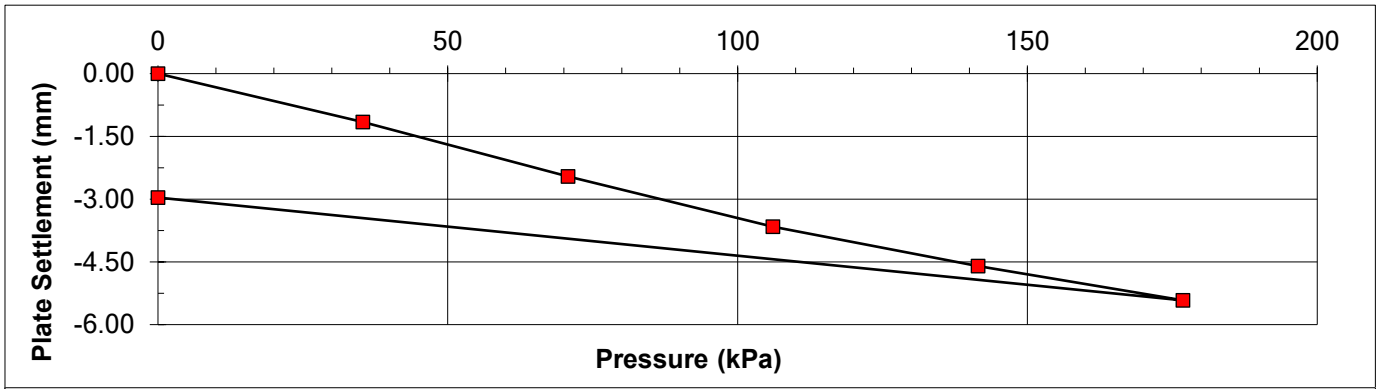
TEST CERTIFICATE

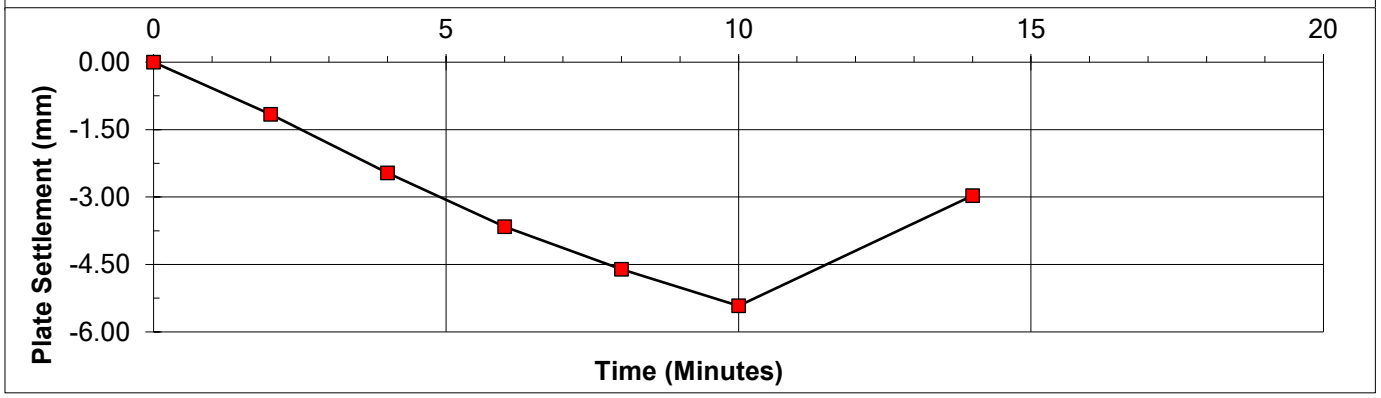
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	28	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4556	4360	4222	4379	0.00	0.00	0.0
4509	4239	4042	4263	-1.16	10.00	35.4
4452	4000	3948	4133	-2.46	20.00	70.7
4386	3911	3744	4014	-3.66	30.00	106.1
4302	3814	3641	3919	-4.60	40.00	141.5
4249	3754	3509	3837	-5.42	50.00	176.8
4496	4004	3748	4083	-2.97	0.00	0.0





Pressure at 1.25 mm deflexion =	38	kPa
Modulus of subgrade reaction (k) =	30	MPa/m
Equivalent 762 mm plate reaction =	24	MPa/m
Equivalent CBR =	2.4	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

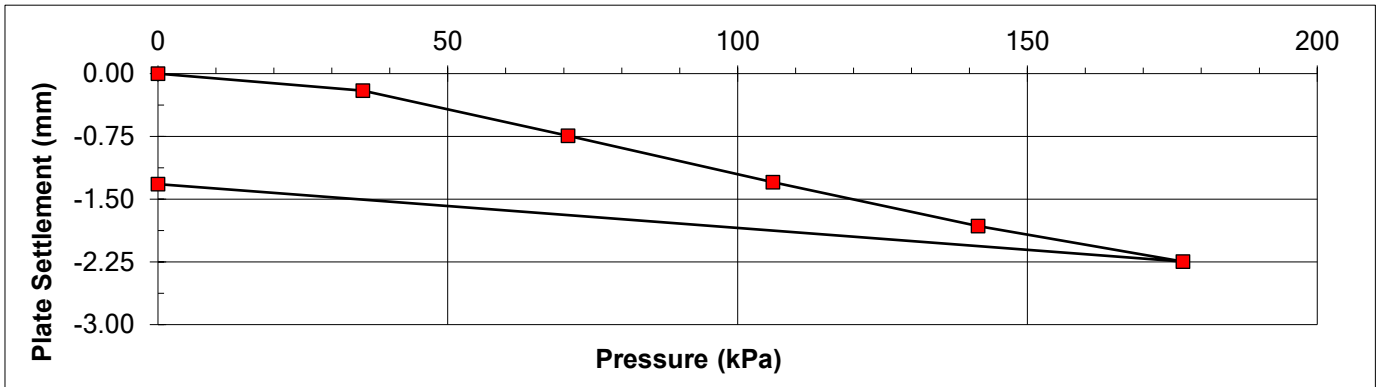
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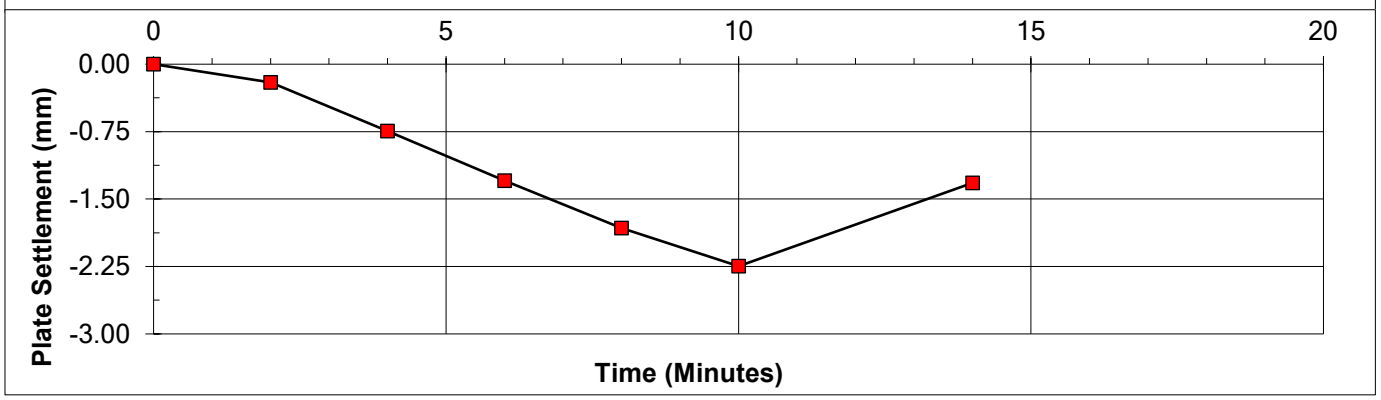
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	29	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4689	4725	4660	4691	0.00	0.00	0.0
4667	4712	4634	4671	-0.20	10.00	35.4
4608	4654	4589	4617	-0.74	20.00	70.7
4554	4597	4534	4562	-1.30	30.00	106.1
4497	4546	4484	4509	-1.82	40.00	141.5
4441	4509	4450	4467	-2.25	50.00	176.8
4558	4609	4511	4559	-1.32	0.00	0.0





Pressure at 1.25 mm deflexion =	103	kPa
Modulus of subgrade reaction (k) =	82	MPa/m
Equivalent 762 mm plate reaction =	66	MPa/m
Equivalent CBR =	13.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

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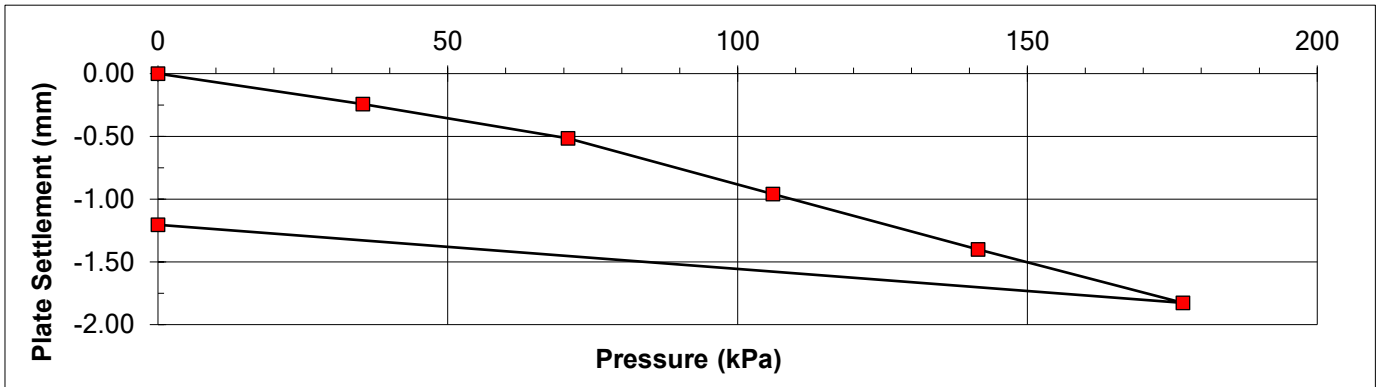
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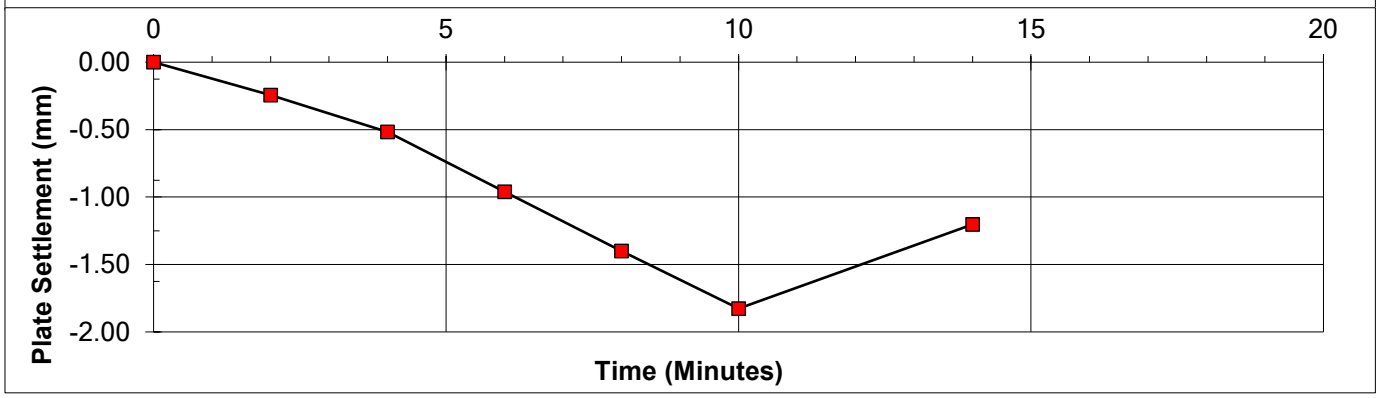
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	30	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4721	4701	4708	4710	0.00	0.00	0.0
4695	4672	4690	4686	-0.24	10.00	35.4
4661	4636	4678	4658	-0.52	20.00	70.7
4621	4586	4635	4614	-0.96	30.00	106.1
4568	4544	4598	4570	-1.40	40.00	141.5
4527	4502	4553	4527	-1.83	50.00	176.8
4579	4544	4646	4590	-1.20	0.00	0.0





Pressure at 1.25 mm deflexion =	129	kPa
Modulus of subgrade reaction (k) =	104	MPa/m
Equivalent 762 mm plate reaction =	83	MPa/m
Equivalent CBR =	20.5	%

REMARKS

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(Laboratory Manager)

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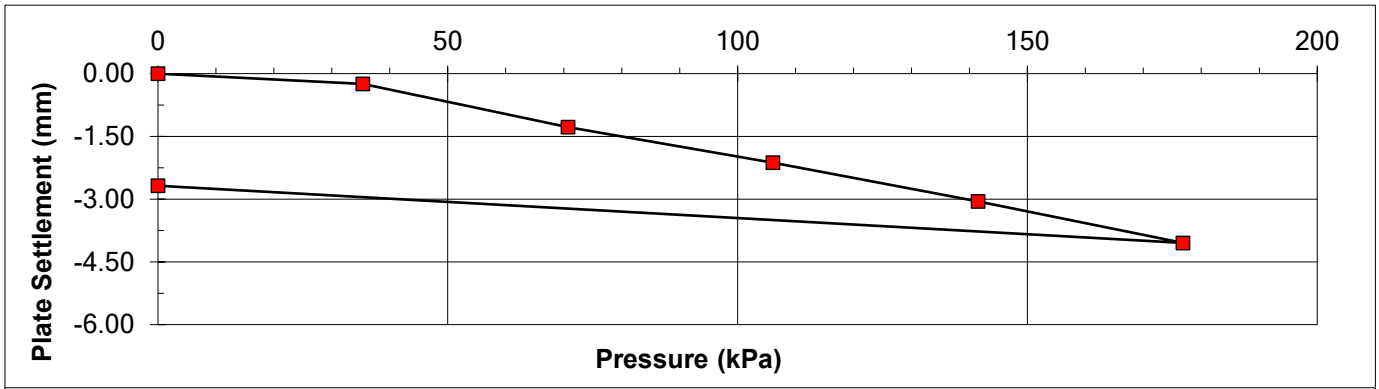
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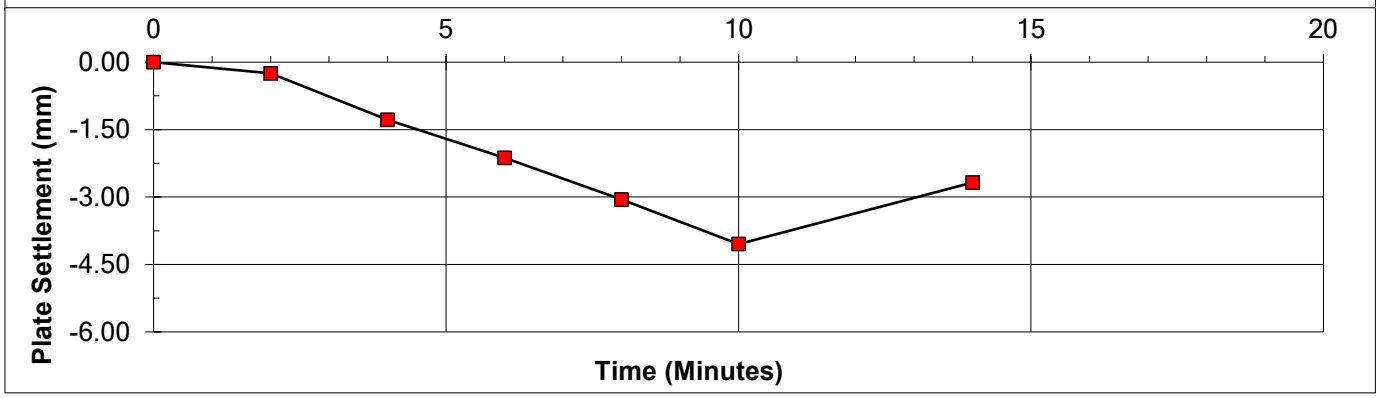
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	31	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4619	4701	4685	4668	0.00	0.00	0.0
4577	4678	4675	4643	-0.25	10.00	35.4
4451	4579	4590	4540	-1.28	20.00	70.7
4364	4502	4500	4455	-2.13	30.00	106.1
4248	4419	4422	4363	-3.05	40.00	141.5
4115	4332	4344	4264	-4.05	50.00	176.8
4365	4432	4405	4401	-2.68	0.00	0.0





Pressure at 1.25 mm deflexion =	70	kPa
Modulus of subgrade reaction (k) =	56	MPa/m
Equivalent 762 mm plate reaction =	45	MPa/m
Equivalent CBR =	7.0	%

REMARKS

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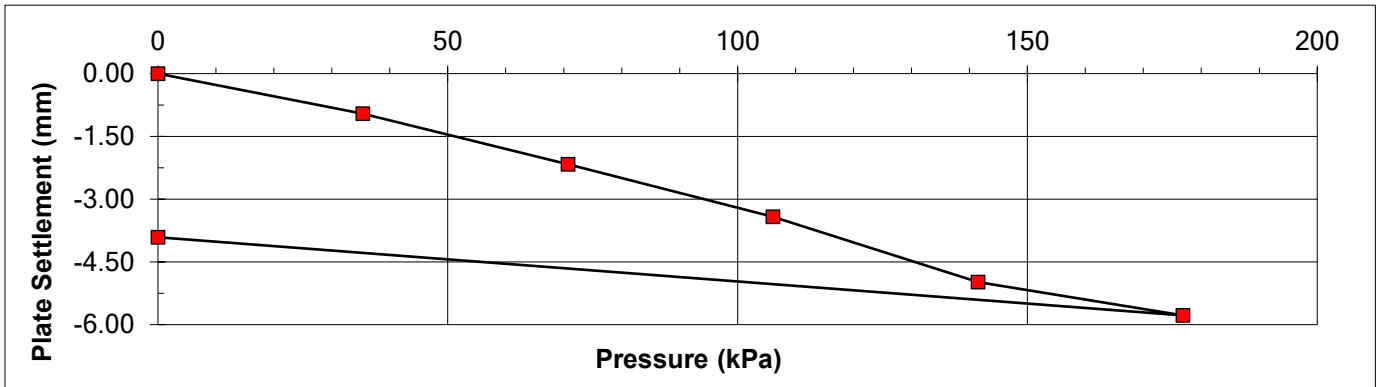
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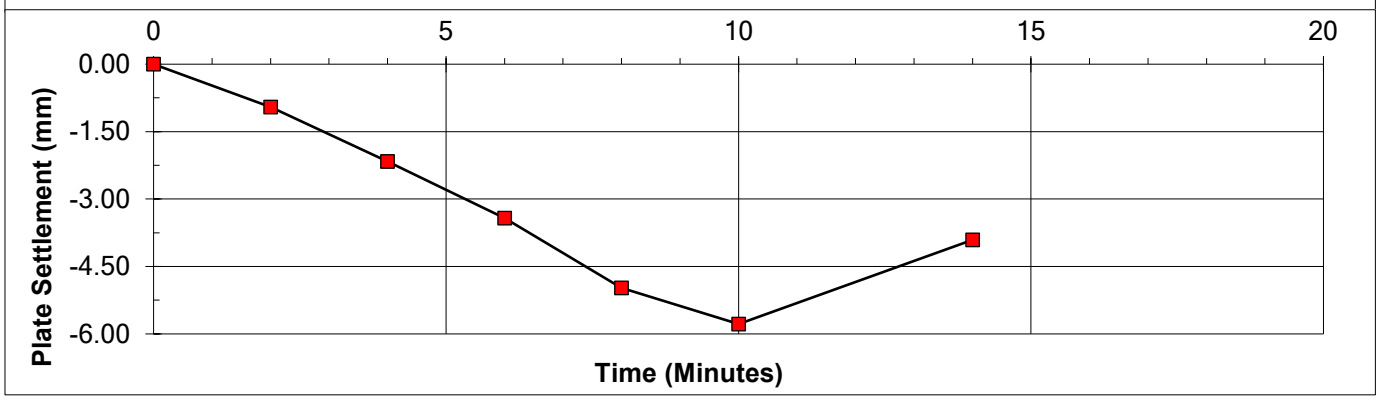
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	32	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4682	4610	4463	4585	0.00	0.00	0.0
4614	4528	4326	4489	-0.96	10.00	35.4
4498	4412	4195	4368	-2.17	20.00	70.7
4370	4283	4075	4243	-3.42	30.00	106.1
4241	4160	3860	4087	-4.98	40.00	141.5
4163	4082	3776	4007	-5.78	50.00	176.8
4360	4220	4002	4194	-3.91	0.00	0.0





Pressure at 1.25 mm deflexion =	44	kPa
Modulus of subgrade reaction (k) =	35	MPa/m
Equivalent 762 mm plate reaction =	28	MPa/m
Equivalent CBR =	3.2	%

REMARKS

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NAME O.P. Davies BA (Hons)
(Laboratory Manager)

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UKAS TESTING 1580

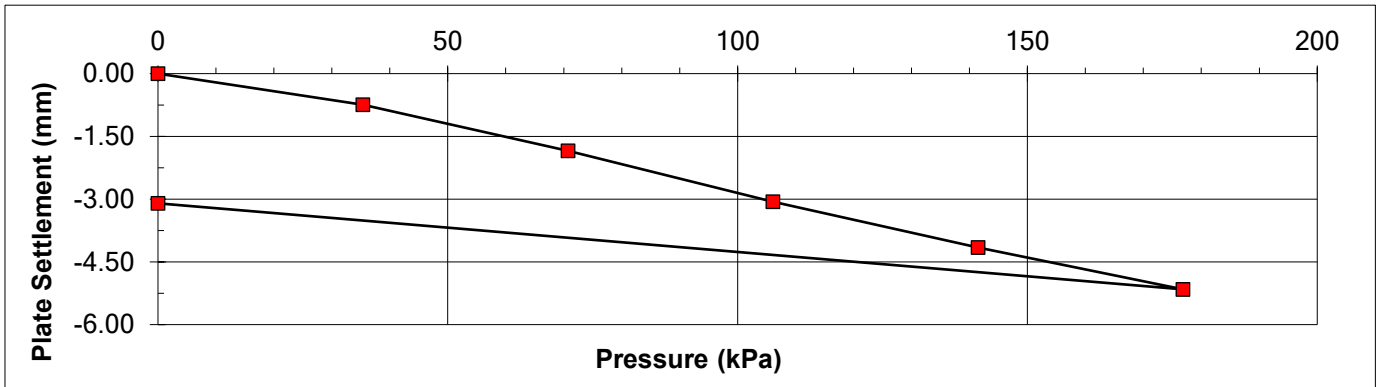
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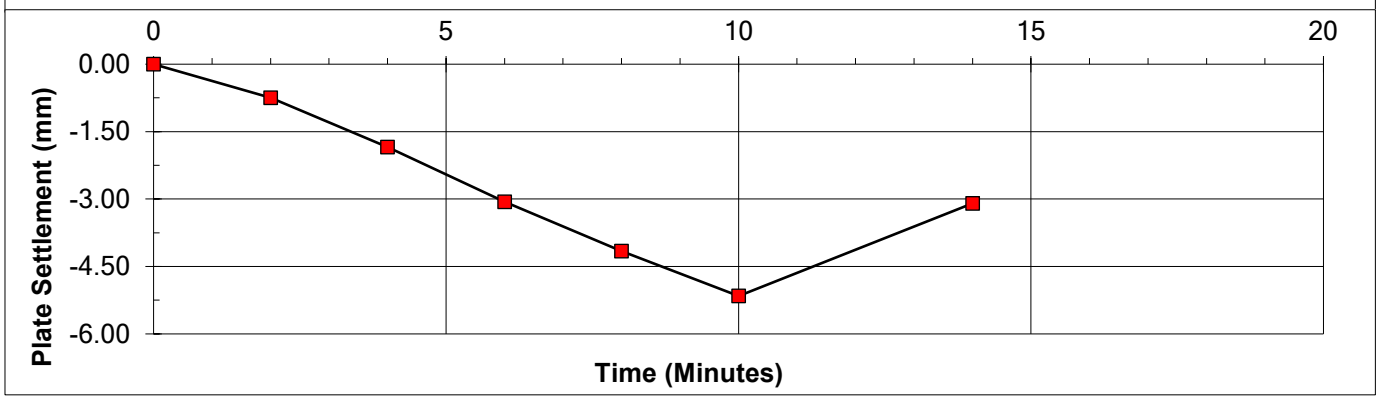
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	33	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4424	4522	4520	4489	0.00	0.00	0.0
4337	4446	4459	4414	-0.75	10.00	35.4
4248	4364	4300	4304	-1.85	20.00	70.7
4039	4279	4230	4183	-3.06	30.00	106.1
3930	4163	4126	4073	-4.16	40.00	141.5
3797	4073	4049	3973	-5.16	50.00	176.8
4002	4281	4253	4179	-3.10	0.00	0.0





Pressure at 1.25 mm deflexion =	52	kPa
Modulus of subgrade reaction (k) =	41	MPa/m
Equivalent 762 mm plate reaction =	33	MPa/m
Equivalent CBR =	4.2	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

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TEL 0161 475 0870

UKAS TESTING 1580

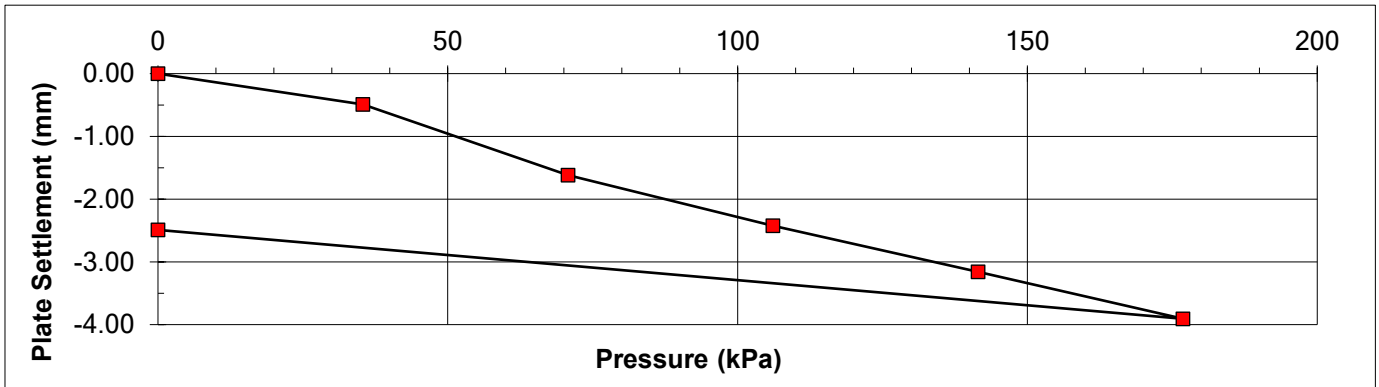
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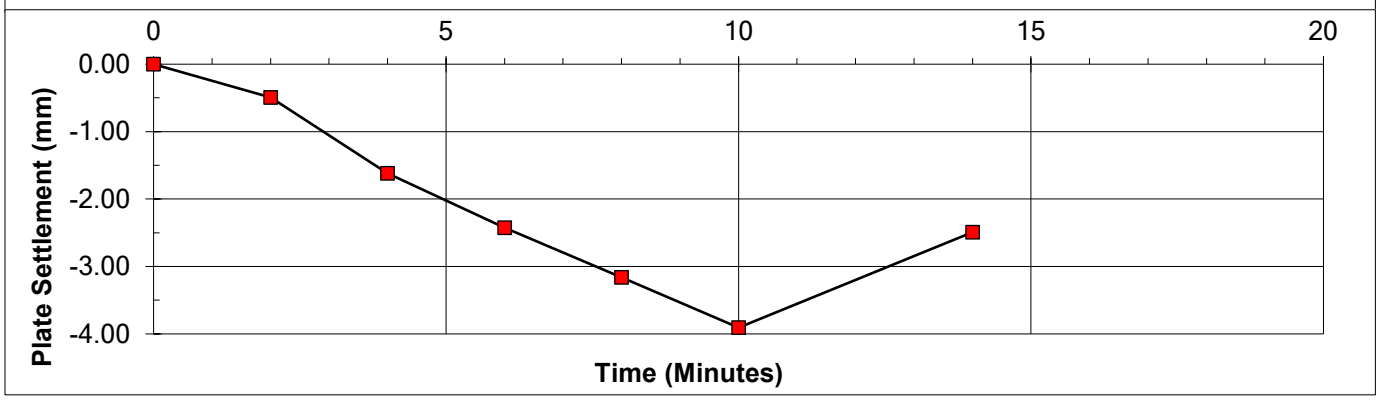
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	34	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4640	4654	4591	4628	0.00	0.00	0.0
4578	4604	4555	4579	-0.49	10.00	35.4
4428	4530	4441	4466	-1.62	20.00	70.7
4386	4458	4314	4386	-2.42	30.00	106.1
4212	4439	4286	4312	-3.16	40.00	141.5
4153	4360	4200	4238	-3.91	50.00	176.8
4335	4486	4317	4379	-2.49	0.00	0.0





Pressure at 1.25 mm deflexion =	59	kPa
Modulus of subgrade reaction (k) =	47	MPa/m
Equivalent 762 mm plate reaction =	38	MPa/m
Equivalent CBR =	5.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

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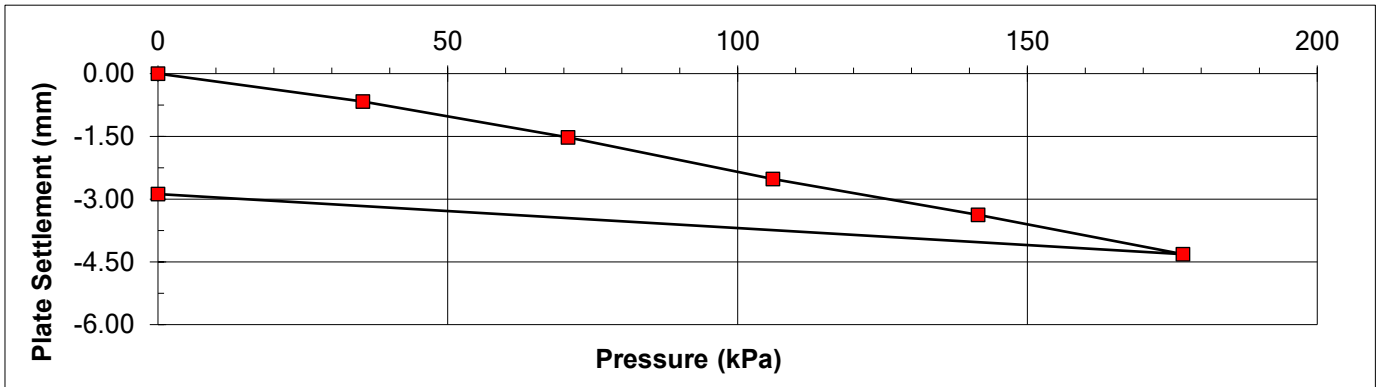
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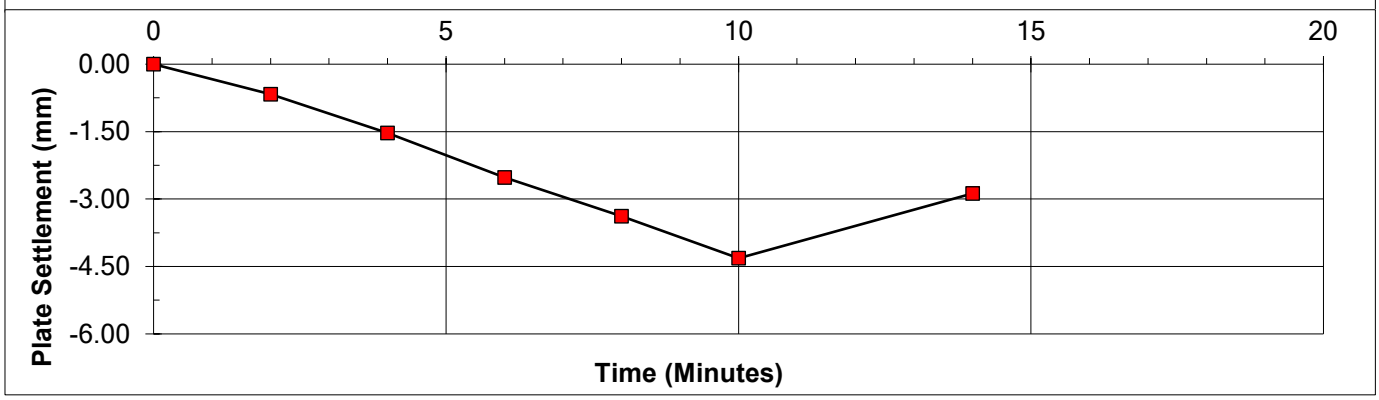
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	35	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4778	4556	4574	4636	0.00	0.00	0.0
4697	4486	4524	4569	-0.67	10.00	35.4
4628	4381	4441	4483	-1.53	20.00	70.7
4526	4278	4348	4384	-2.52	30.00	106.1
4432	4209	4253	4298	-3.38	40.00	141.5
4364	4100	4149	4204	-4.32	50.00	176.8
4431	4291	4323	4348	-2.88	0.00	0.0





Pressure at 1.25 mm deflexion =	59	kPa
Modulus of subgrade reaction (k) =	47	MPa/m
Equivalent 762 mm plate reaction =	38	MPa/m
Equivalent CBR =	5.3	%

REMARKS

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NAME O.P. Davies BA (Hons)
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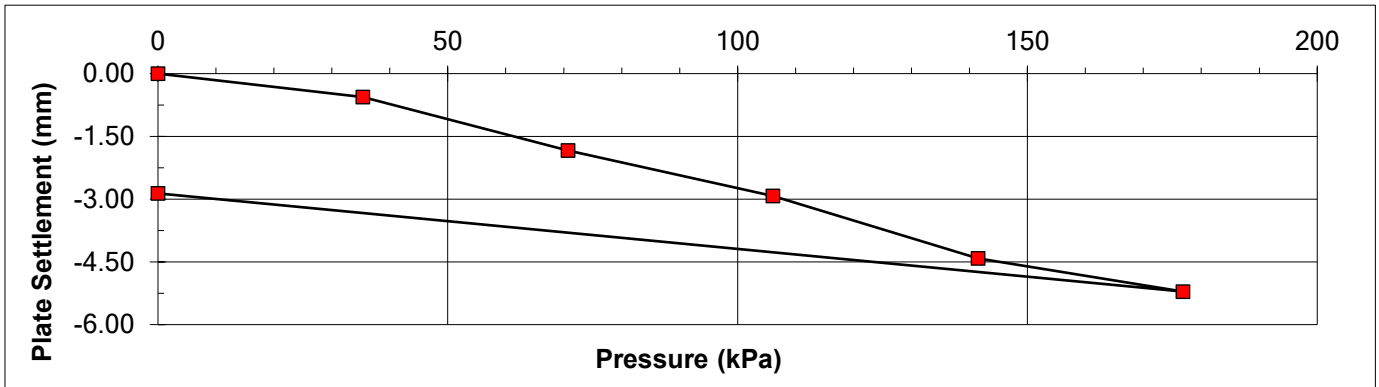
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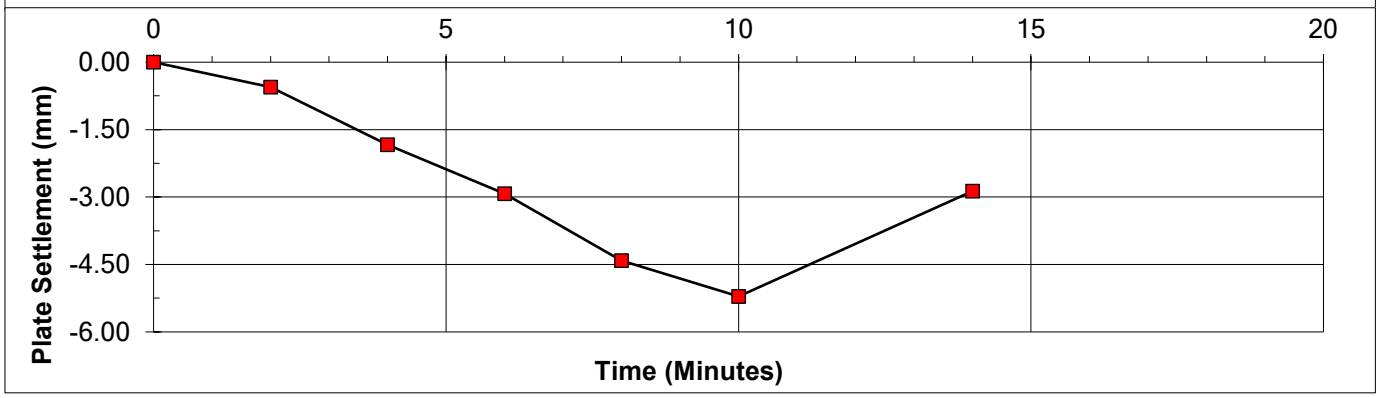
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	36	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4455	4475	4650	4527	0.00	0.00	0.0
4372	4415	4626	4471	-0.56	10.00	35.4
4212	4288	4529	4343	-1.84	20.00	70.7
4133	4110	4459	4234	-2.93	30.00	106.1
3991	3960	4304	4085	-4.42	40.00	141.5
3900	3883	4234	4006	-5.21	50.00	176.8
4199	4068	4453	4240	-2.87	0.00	0.0





Pressure at 1.25 mm deflexion =	55	kPa
Modulus of subgrade reaction (k) =	44	MPa/m
Equivalent 762 mm plate reaction =	35	MPa/m
Equivalent CBR =	4.6	%

REMARKS

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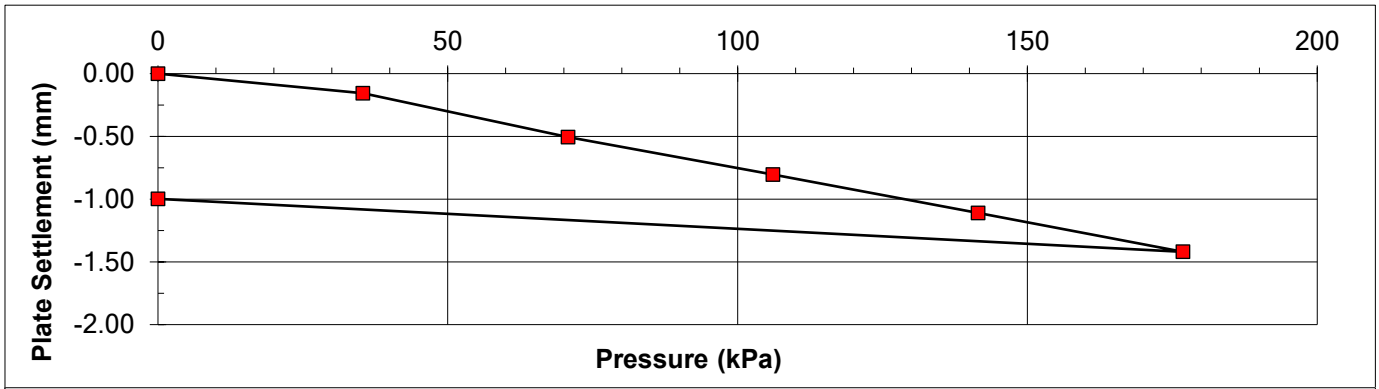
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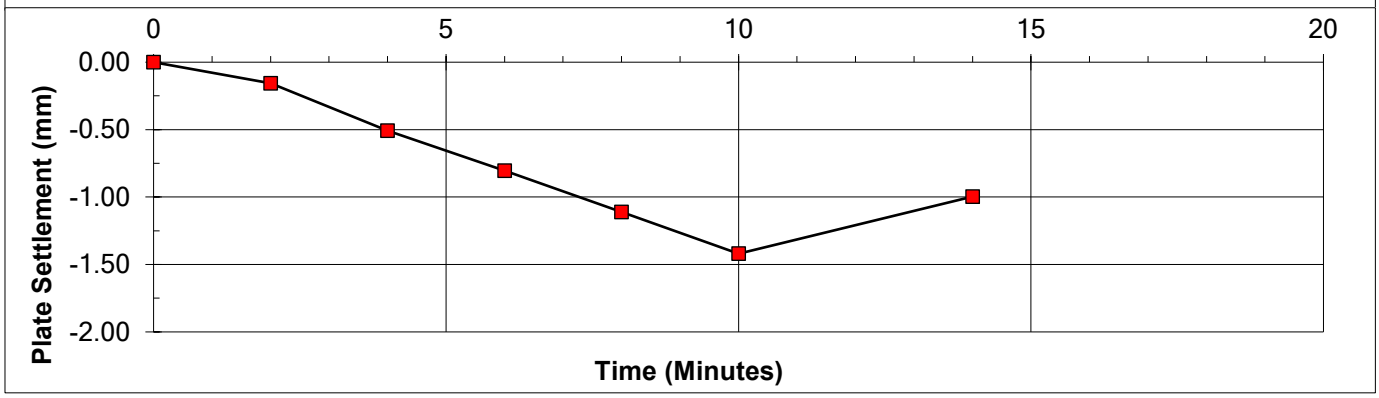
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/6		
TEST LOCATION	37	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4720	4670	4583	4658	0.00	0.00	0.0
4702	4657	4567	4642	-0.16	10.00	35.4
4668	4633	4520	4607	-0.51	20.00	70.7
4645	4614	4473	4577	-0.80	30.00	106.1
4612	4587	4441	4547	-1.11	40.00	141.5
4580	4554	4413	4516	-1.42	50.00	176.8
4640	4598	4436	4558	-1.00	0.00	0.0





Pressure at 1.25 mm deflexion =	157	kPa
Modulus of subgrade reaction (k) =	126	MPa/m
Equivalent 762 mm plate reaction =	101	MPa/m
Equivalent CBR =	28.9	%

REMARKS

SIGNED

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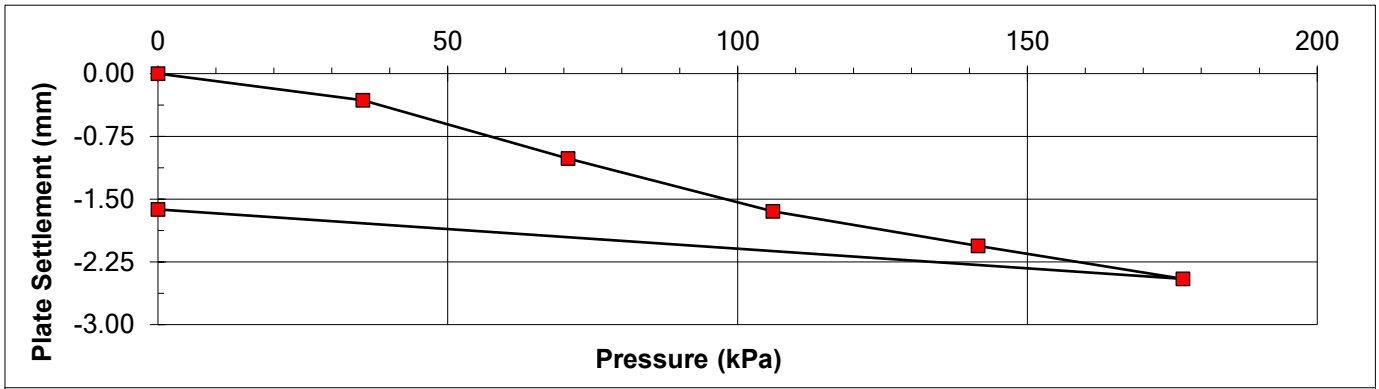
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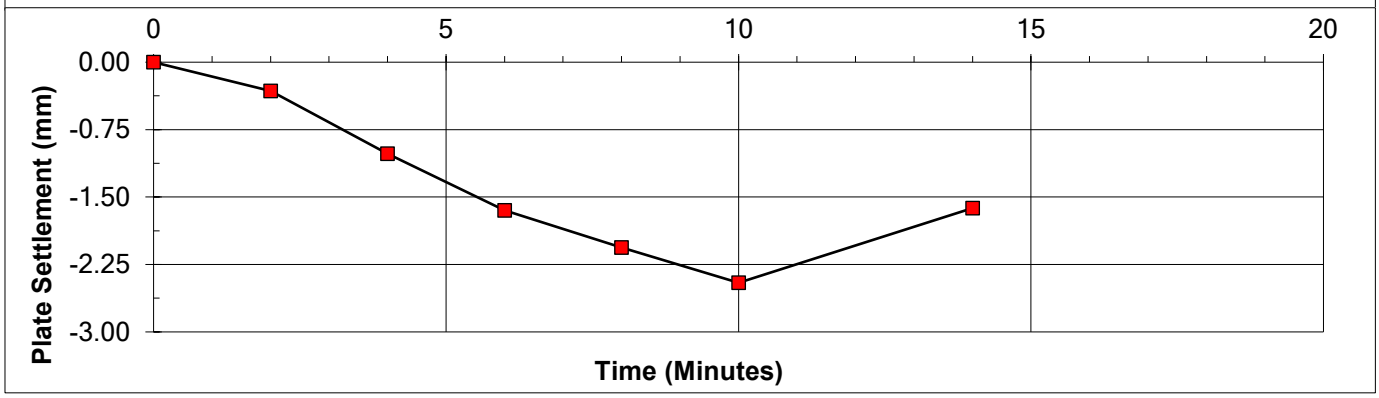
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/6				
TEST LOCATION	28 (Retest)	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	24-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4635	4684	4655	4658	0.00	0.00	0.0
4609	4653	4616	4626	-0.32	10.00	35.4
4527	4553	4589	4556	-1.02	20.00	70.7
4478	4491	4511	4493	-1.65	30.00	106.1
4447	4452	4457	4452	-2.06	40.00	141.5
4414	4406	4418	4413	-2.45	50.00	176.8
4501	4522	4464	4496	-1.62	0.00	0.0





Pressure at 1.25 mm deflexion =	84	kPa
Modulus of subgrade reaction (k) =	67	MPa/m
Equivalent 762 mm plate reaction =	54	MPa/m
Equivalent CBR =	9.7	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 25-Mar-22

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client LK Remediate Ltd

Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKR 20 1044 -
Collyhurst

Job Number MRN 4297/7
Date of Issue 31 March 2022
Pages 1 of 8

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

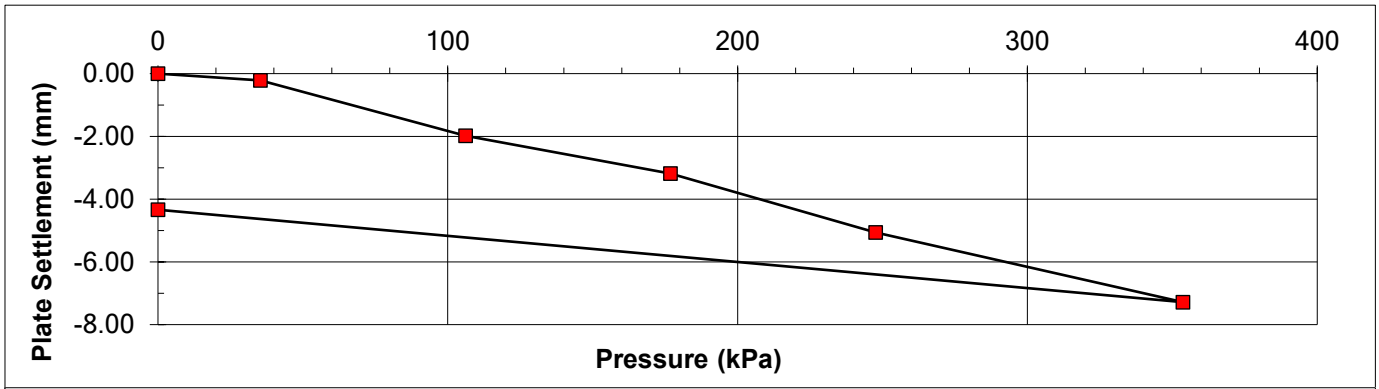
TEST CERTIFICATE

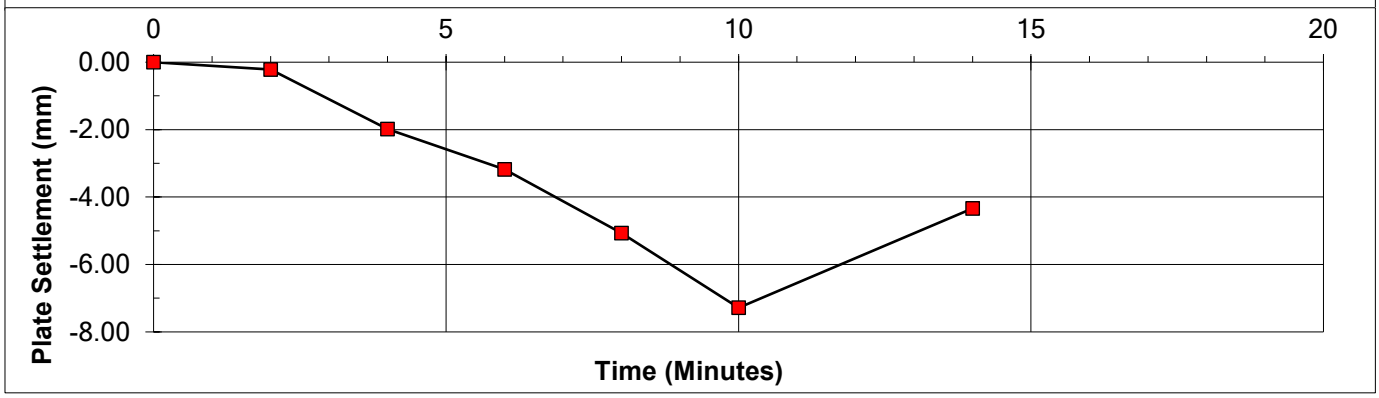
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/7		
TEST LOCATION	38	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4789	4804	4773	4789	0.00	0.00	0.0
4765	4770	4765	4767	-0.22	10.00	35.4
4533	4637	4602	4591	-1.98	30.00	106.1
4443	4452	4516	4470	-3.18	50.00	176.8
4255	4270	4321	4282	-5.07	70.00	247.6
4041	4042	4098	4060	-7.28	100.00	353.7
4370	4361	4334	4355	-4.34	0.00	0.0





Pressure at 1.25 mm deflexion =	77	kPa
Modulus of subgrade reaction (k) =	61	MPa/m
Equivalent 762 mm plate reaction =	49	MPa/m
Equivalent CBR =	8.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 31-Mar-22

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

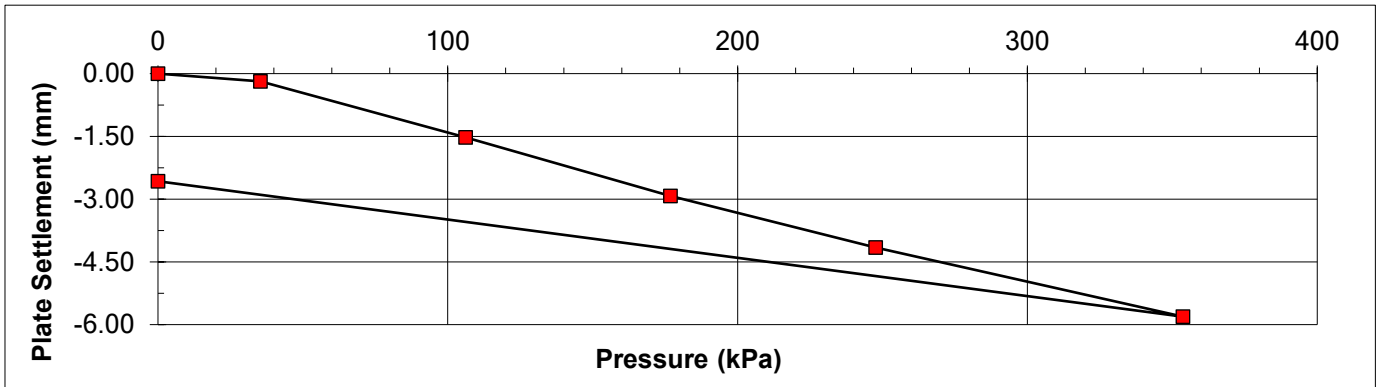
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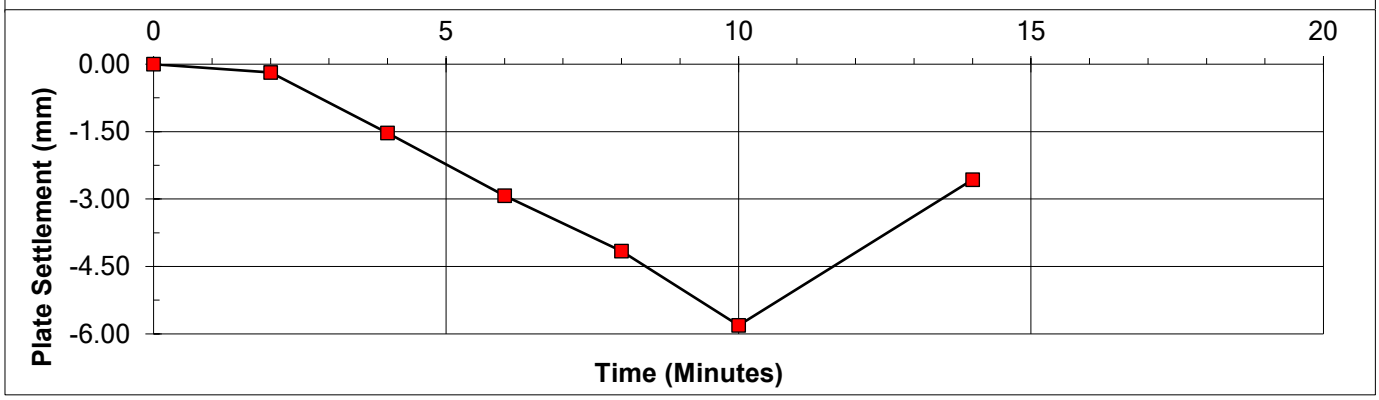
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/7				
TEST LOCATION	39	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4844	4917	4783	4848	0.00	0.00	0.0
4821	4893	4775	4830	-0.18	10.00	35.4
4713	4763	4610	4695	-1.53	30.00	106.1
4501	4647	4518	4555	-2.93	50.00	176.8
4378	4525	4393	4432	-4.16	70.00	247.6
4213	4343	4245	4267	-5.81	100.00	353.7
4550	4644	4579	4591	-2.57	0.00	0.0





Pressure at 1.25 mm deflexion =	92	kPa
Modulus of subgrade reaction (k) =	73	MPa/m
Equivalent 762 mm plate reaction =	59	MPa/m
Equivalent CBR =	11.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 31-Mar-22

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

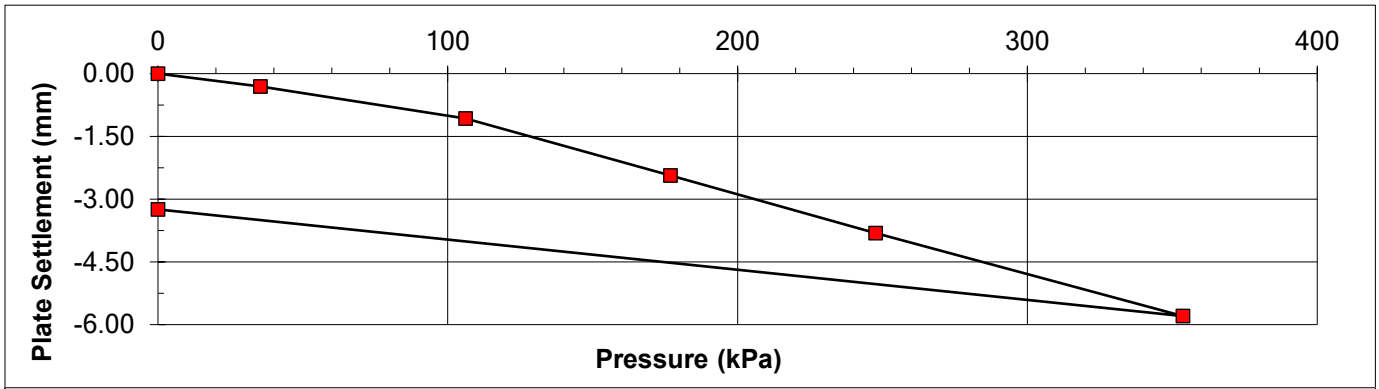
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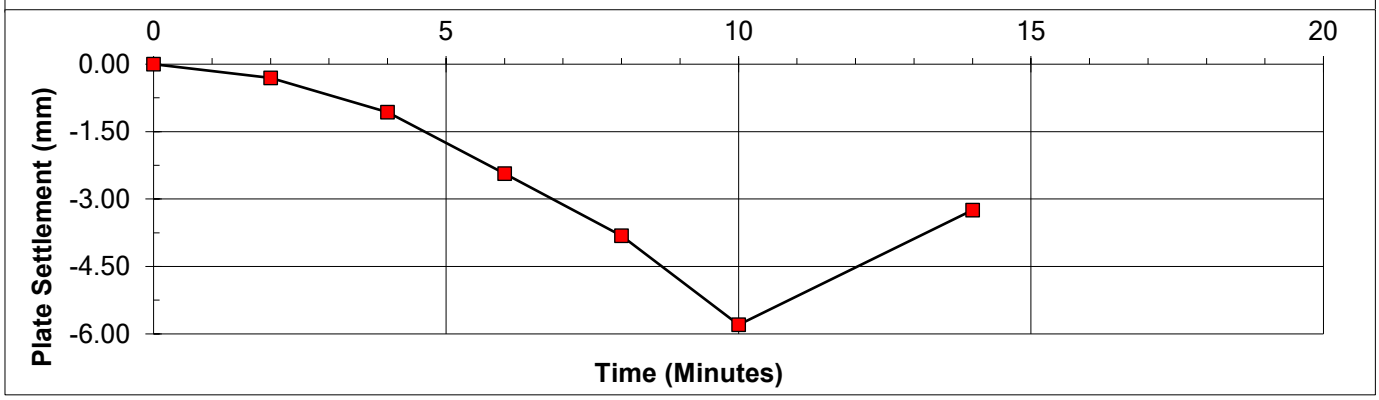
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/7				
TEST LOCATION	40	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4905	4803	4880	4863	0.00	0.00	0.0
4877	4762	4857	4832	-0.31	10.00	35.4
4809	4674	4784	4756	-1.07	30.00	106.1
4680	4528	4650	4619	-2.43	50.00	176.8
4544	4369	4531	4481	-3.81	70.00	247.6
4347	4137	4365	4283	-5.80	100.00	353.7
4591	4433	4590	4538	-3.25	0.00	0.0





Pressure at 1.25 mm deflexion =	115	kPa
Modulus of subgrade reaction (k) =	92	MPa/m
Equivalent 762 mm plate reaction =	74	MPa/m
Equivalent CBR =	16.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 31-Mar-22

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

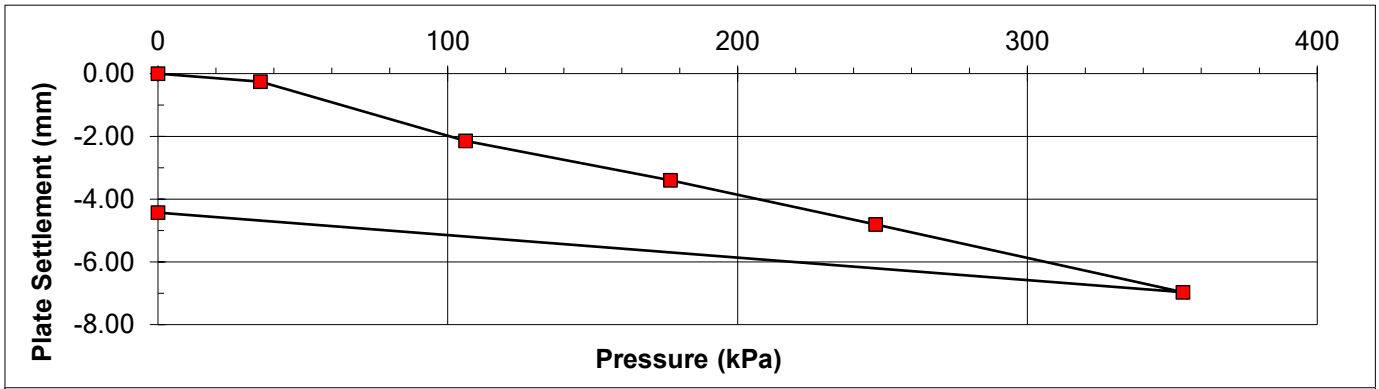
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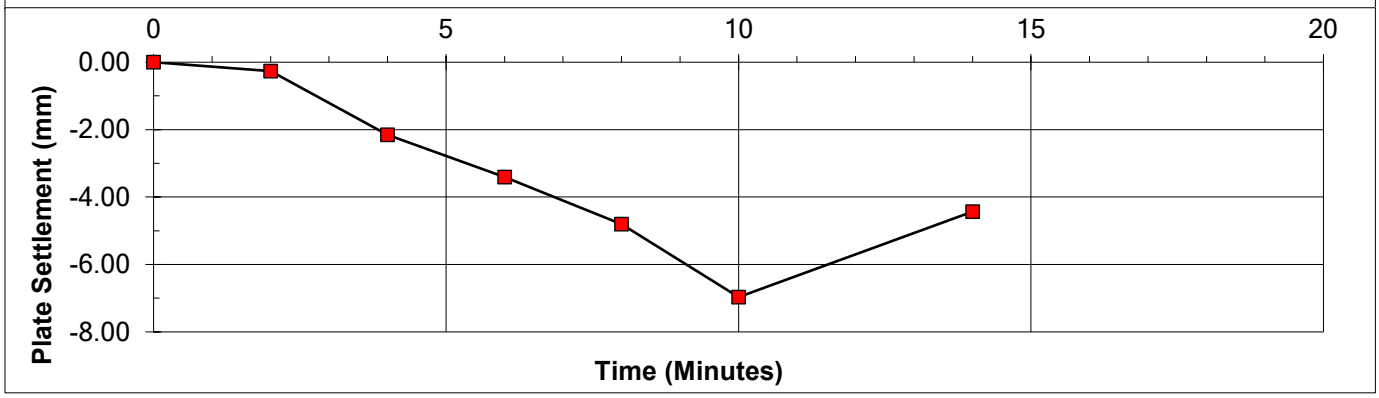
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/7		
TEST LOCATION	41	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4894	4618	4749	4754	0.00	0.00	0.0
4877	4568	4738	4728	-0.26	10.00	35.4
4653	4352	4611	4539	-2.15	30.00	106.1
4536	4202	4502	4413	-3.40	50.00	176.8
4417	4028	4375	4273	-4.80	70.00	247.6
4205	3736	4230	4057	-6.97	100.00	353.7
4481	4024	4426	4310	-4.43	0.00	0.0





Pressure at 1.25 mm deflexion =	72	kPa
Modulus of subgrade reaction (k) =	58	MPa/m
Equivalent 762 mm plate reaction =	47	MPa/m
Equivalent CBR =	7.5	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 31-Mar-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

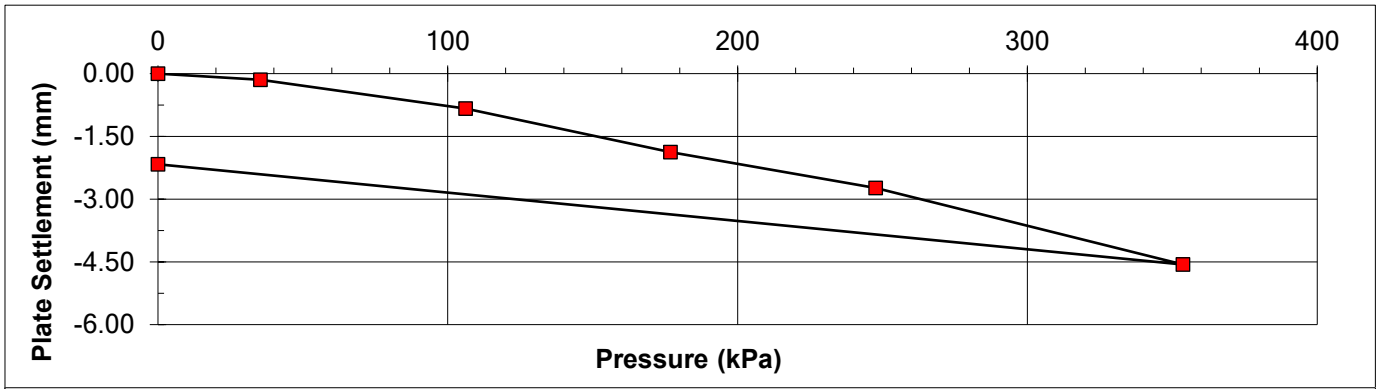
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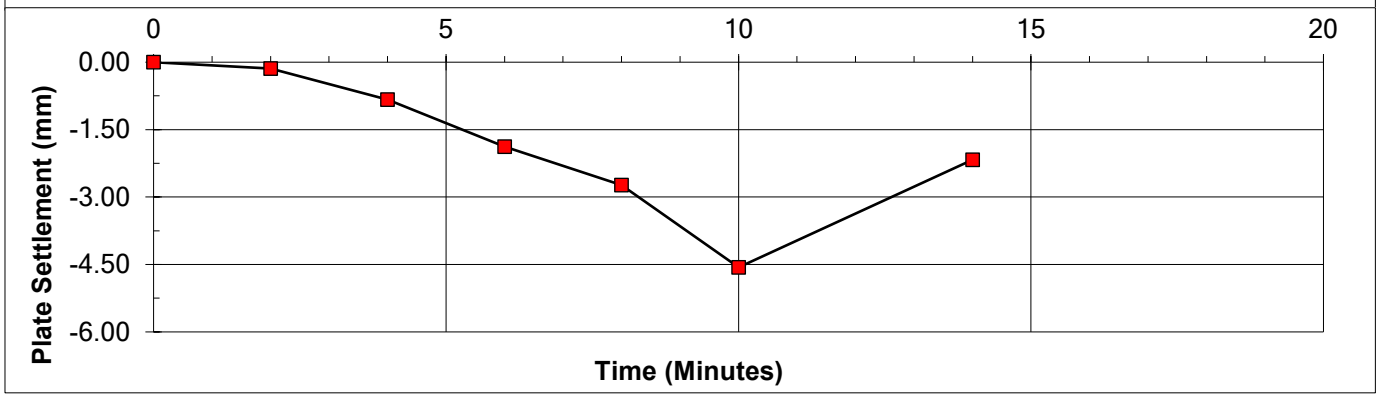
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/7				
TEST LOCATION	42	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4663	4587	4873	4708	0.00	0.00	0.0
4654	4560	4866	4693	-0.14	10.00	35.4
4605	4453	4815	4624	-0.83	30.00	106.1
4529	4312	4718	4520	-1.88	50.00	176.8
4464	4196	4642	4434	-2.74	70.00	247.6
4315	3954	4485	4251	-4.56	100.00	353.7
4552	4291	4629	4491	-2.17	0.00	0.0





Pressure at 1.25 mm deflexion =	134	kPa
Modulus of subgrade reaction (k) =	107	MPa/m
Equivalent 762 mm plate reaction =	86	MPa/m
Equivalent CBR =	21.9	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 31-Mar-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

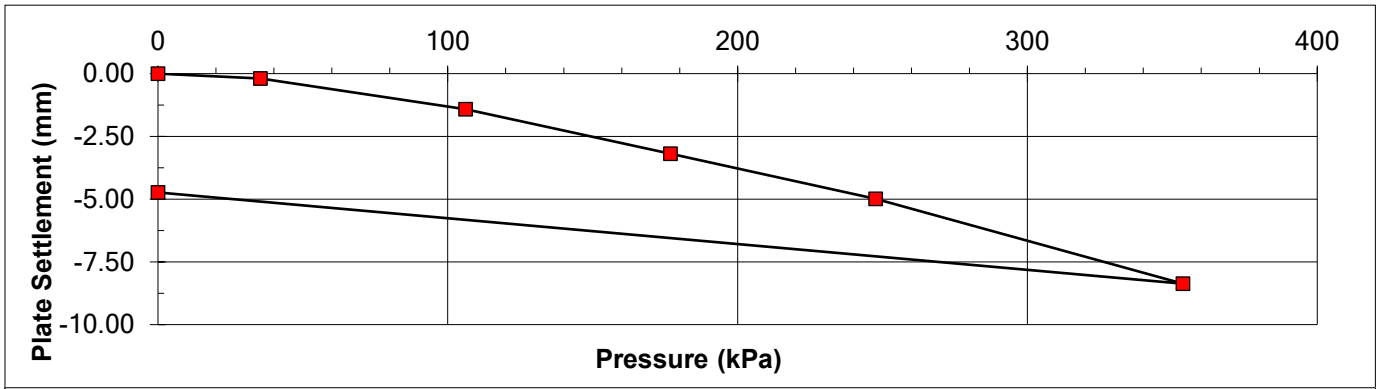
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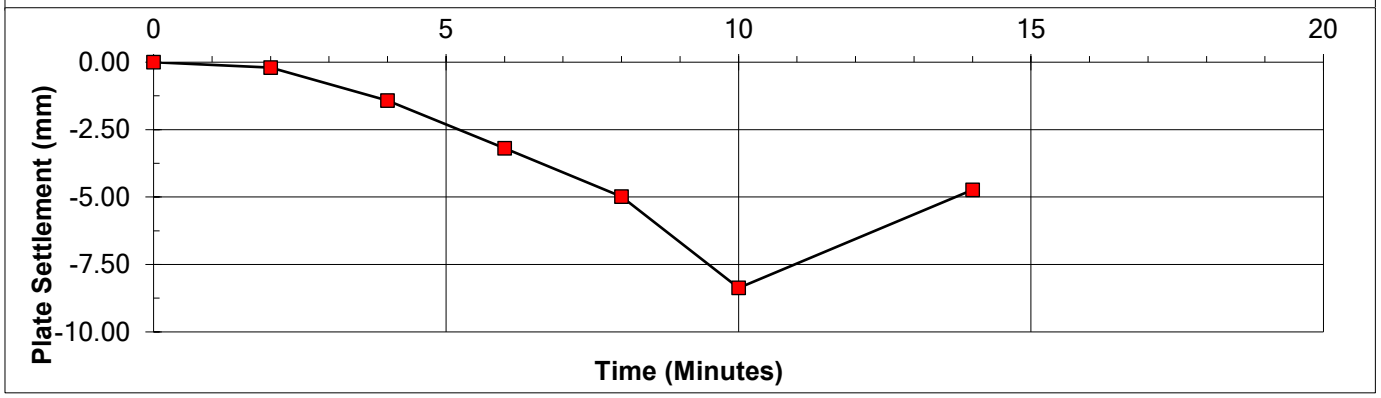
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd				
SITE	LKR 20 1044 - Collyhurst				
JOB NUMBER	MRN 4297/7				
TEST LOCATION	43	LOADING DEVICE	20 Tonne Enerpac Jack		
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter		
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant		
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required		

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4959	4851	4927	4912	0.00	0.00	0.0
4933	4836	4908	4892	-0.20	10.00	35.4
4829	4710	4772	4770	-1.42	30.00	106.1
4669	4528	4584	4594	-3.19	50.00	176.8
4487	4344	4410	4414	-4.99	70.00	247.6
4138	4002	4086	4075	-8.37	100.00	353.7
4462	4457	4399	4439	-4.73	0.00	0.0





Pressure at 1.25 mm deflexion =	96	kPa
Modulus of subgrade reaction (k) =	77	MPa/m
Equivalent 762 mm plate reaction =	62	MPa/m
Equivalent CBR =	12.3	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 31-Mar-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

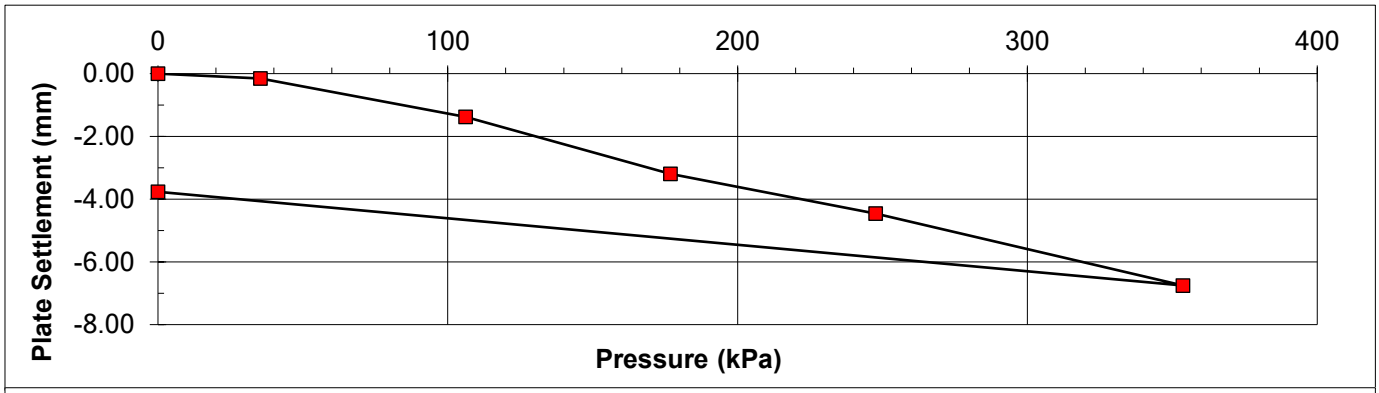
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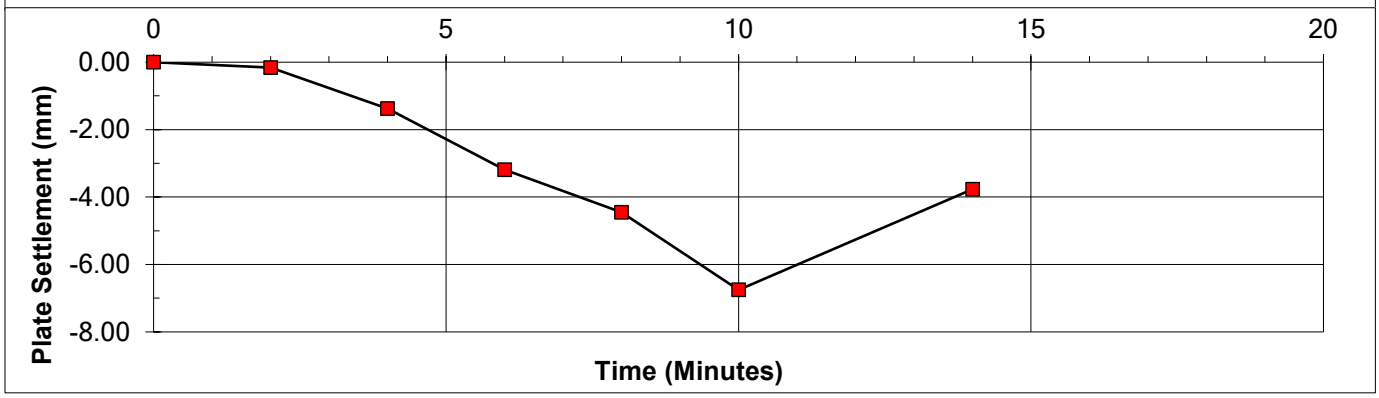
PLATE INCREMENTAL LOAD TEST

BS 1377 : PART 9 : CL 4.1 and IAN 73/06 Rev 1 (2009)

CLIENT	LK Remediate Ltd		
SITE	LKR 20 1044 - Collyhurst		
JOB NUMBER	MRN 4297/7		
TEST LOCATION	44	LOADING DEVICE	20 Tonne Enerpac Jack
TEST DATE	30-Mar-22	PLATE SIZE (mm)	600 diameter
TEST DEPTH	Surface	REACTION LOAD USED	Site Plant
MATERIAL UNDER TEST	Crush	MOISTURE CONTENT	Not Required

Dial Gauge 1 (mmx100)	Dial Gauge 2 (mmx100)	Dial Gauge 3 (mmx100)	Mean Gauge (mmx100)	Mean Deflection (mm)	Load (kN)	Pressure (kPa)
4662	4822	4787	4757	0.00	0.00	0.0
4647	4798	4779	4741	-0.16	10.00	35.4
4589	4652	4616	4619	-1.38	30.00	106.1
4408	4463	4442	4438	-3.19	50.00	176.8
4259	4393	4282	4311	-4.46	70.00	247.6
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4332	4489	4319	4380	-3.77	0.00	0.0





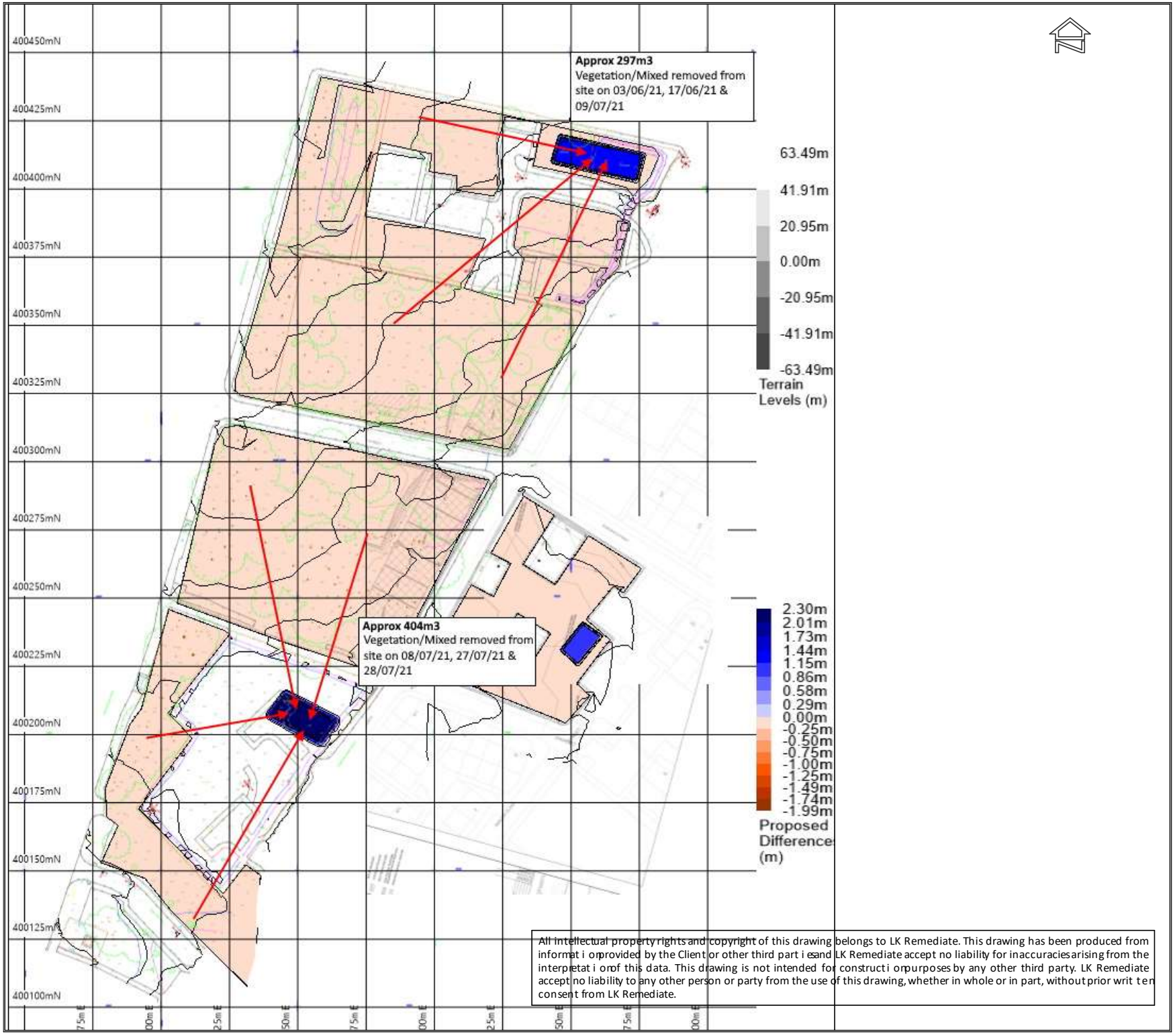
Pressure at 1.25 mm deflexion =	99	kPa
Modulus of subgrade reaction (k) =	79	MPa/m
Equivalent 762 mm plate reaction =	63	MPa/m
Equivalent CBR =	12.8	%

REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 31-Mar-22

Appendix 10 : Material Tracking Sheets



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HANDOVER DETAILS

This As-Built Survey represents a Phased Site Handover Document. It relinquishes (to the client) an area or areas of the site where LKR Remediate Limited's works have been completed in accordance with the contract. The survey information must be checked by the client to confirm they are in agreement that areas have been placed to level within agreed tolerances. For clarity, the area/s being relinquished is/are bounded by a thick green line.

As per LKR Remediate Limited terms and conditions of the contract, acceptance (by the client) of the areas shown is required by either a returned signed copy of this document (preferred) or an email confirming that checks have been made and that the client is in agreement that all necessary work has been carried out to a satisfactory standard. A lack of response by the client within two working days will be taken as agreement that all necessary work has been carried out to a satisfactory standard.

Acceptance of this Phased Site Handover Document, by the client, is confirmation that LKR Remediate Limited are not liable for any further remedial works caused by degradation by adverse weather/ground conditions or any third party activities in these areas.

LK Remediate
Eton Hill Road
Radcliffe
M26 2ZS

T: 0161 7367200
www.thelkgroup.com

CLIENT

FEC

JOB TITLE

LKR201044
COLLYHURST

DRAWING TITLE

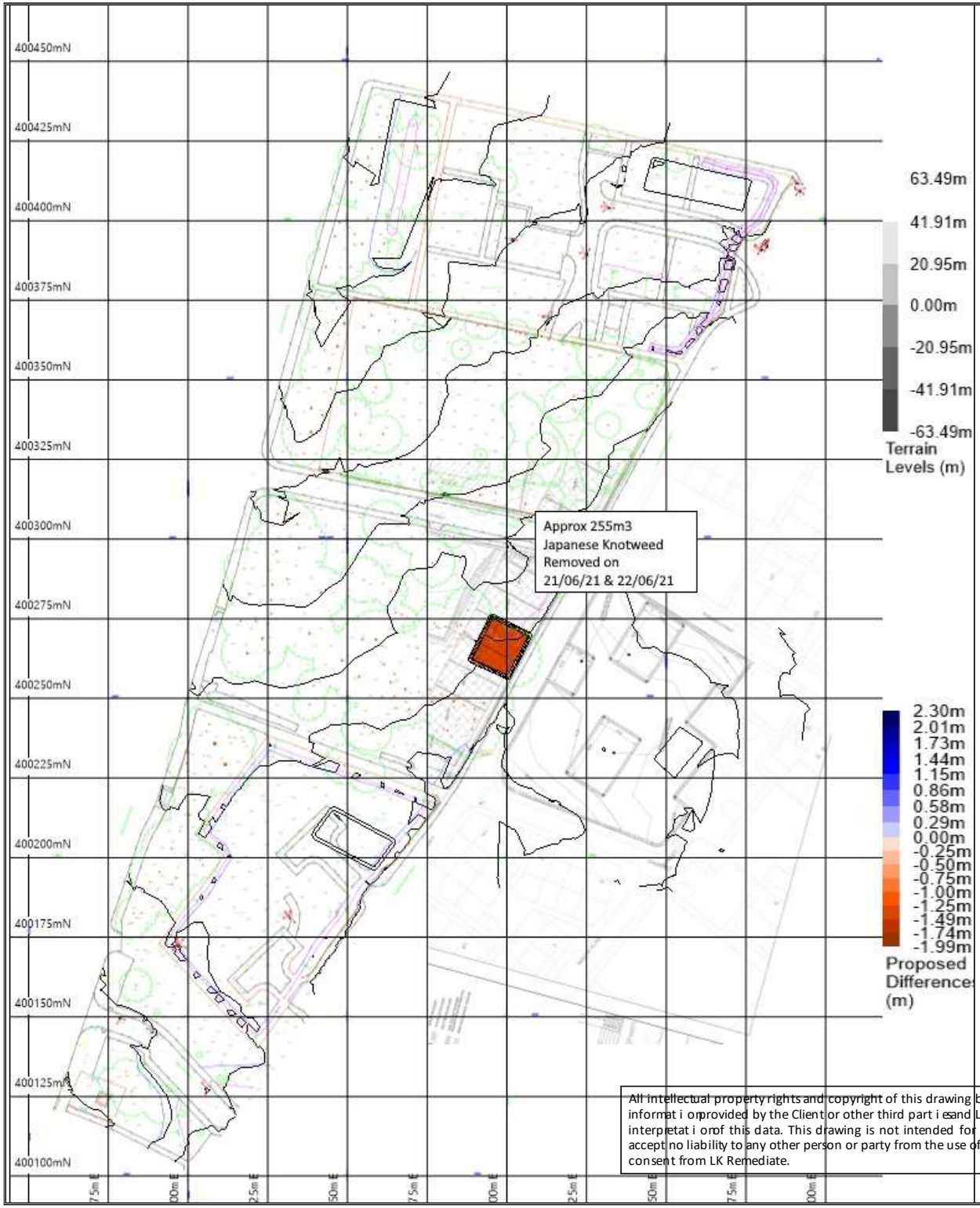
MMP Vegetation Removal

STATUS

R0

DRAWN BY	SIGNATURE	DATE
DM		13/04/22
APPROVED	SIGNATURE	DATE
RC		13/04/22

SCALE	DRG No.
NTS	201044_MMP_01



HANDOVER DETAILS

This As-Built Survey represents a Phased Site Handover Document. It relinquishes (to the client) an area or areas of the site where LKR Remediate Limited's works have been completed in accordance with the contract. The survey information must be checked by the client to confirm they are in agreement that areas have been placed to level within agreed tolerances. For clarity, the area/s being relinquished is/are bounded by a thick green line.

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LK Remediate
Eton Hill Road
Radcliffe
M26 2ZS

T: 0161 7367200
www.thelkgroup.com

CLIENT

FEC

JOB TITLE

LKR201044
COLLYHURST

DRAWING TITLE

MMP Japanese Knotweed Removal

STATUS

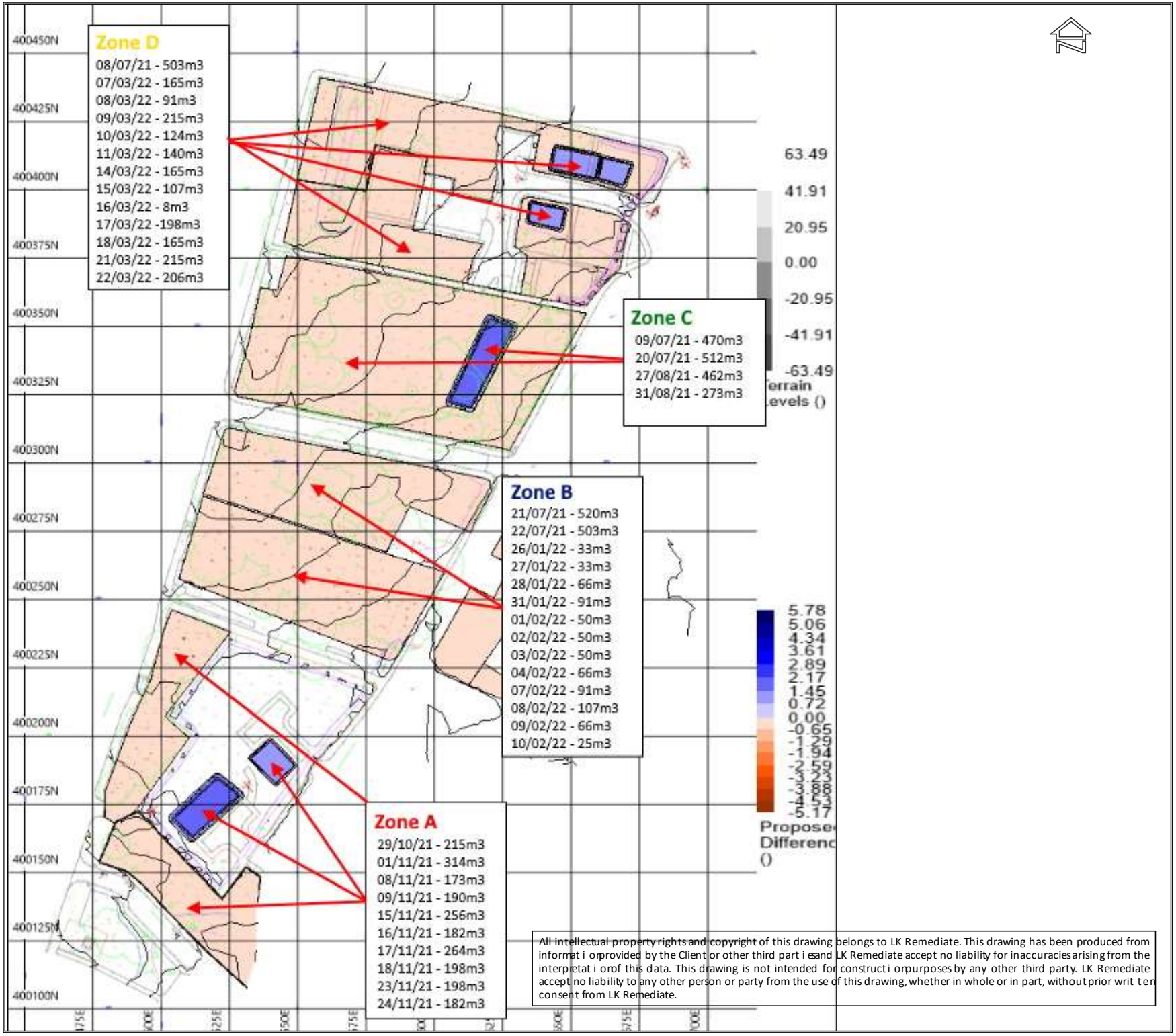
R0

DRAWN BY	SIGNATURE	DATE
DM		13/04/22
APPROVED	SIGNATURE	DATE
RC		13/04/22

SCALE: NTS

DRG No.: 201044_MMP_02

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As per LKR Remediate Limited terms and conditions of the contract, acceptance (by the client) of the areas shown is required by either a returned signed copy of this document (preferred) or an email confirming that checks have been made and that the client is in agreement that all necessary work has been carried out to a satisfactory standard. A lack of response by the client within two working days will be taken as agreement that all necessary work has been carried out to a satisfactory standard.

Acceptance of this Phased Site Handover Document, by the client, is confirmation that LKR Remediate Limited are not liable for any further remedial works caused by degradation by adverse weather/ground conditions or any third party activities in these areas.

LK Remediate
Eton Hill Road
Radcliffe
M26 2ZS

T: 0161 7367200
www.thelkgroup.com

CLIENT

FEC

JOB TITLE

LKR201044
COLLYHURST

DRAWING TITLE

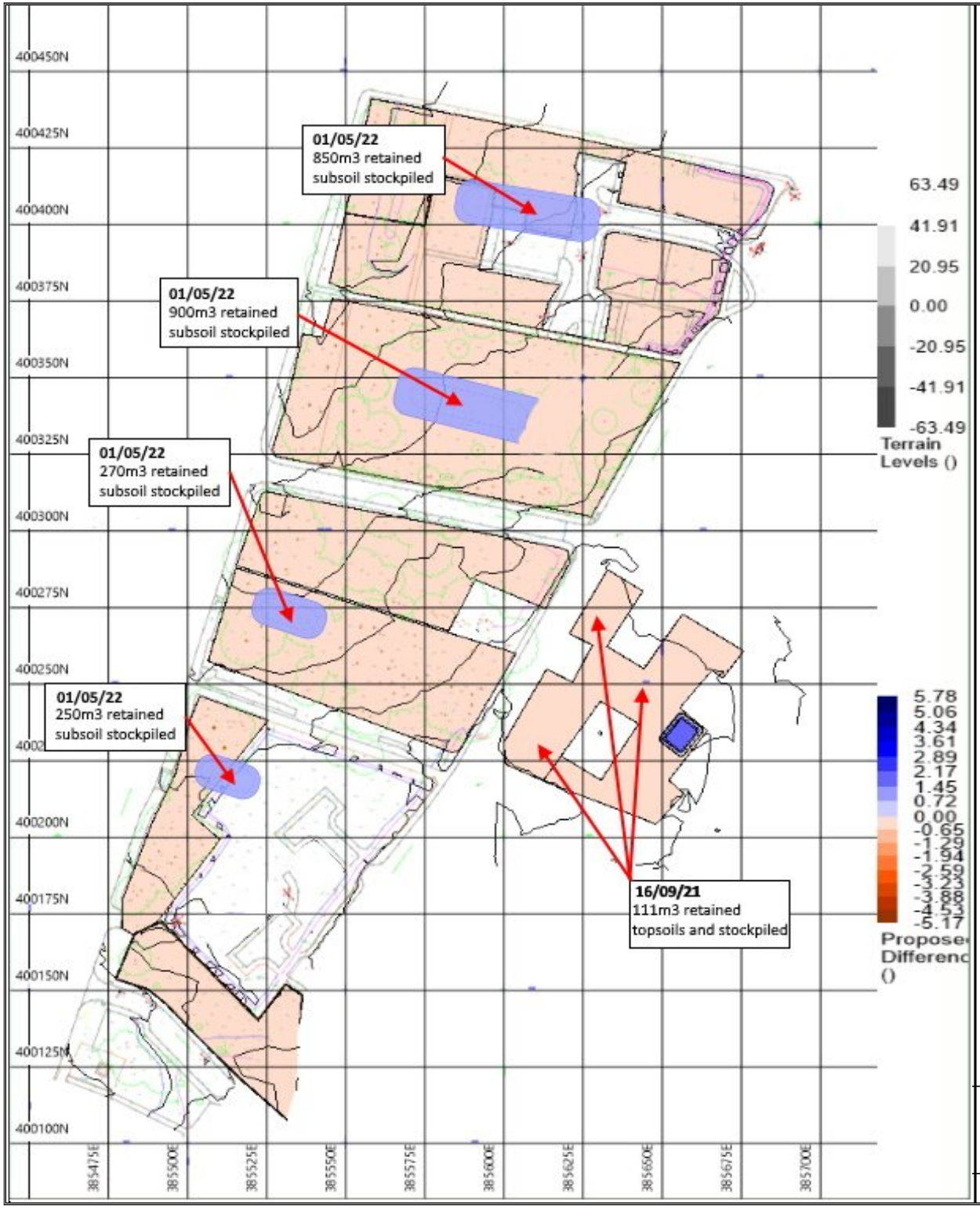
MMP Surplus Material Export

STATUS

R0

DRAWN BY: DM	SIGNATURE:	DATE: 13/04/22
APPROVED: RC	SIGNATURE:	DATE: 13/04/22

SCALE: NTS	DRG No.: 201044_MMP_03



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CLIENT

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JOB TITLE

LKR201044
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DRAWING TITLE

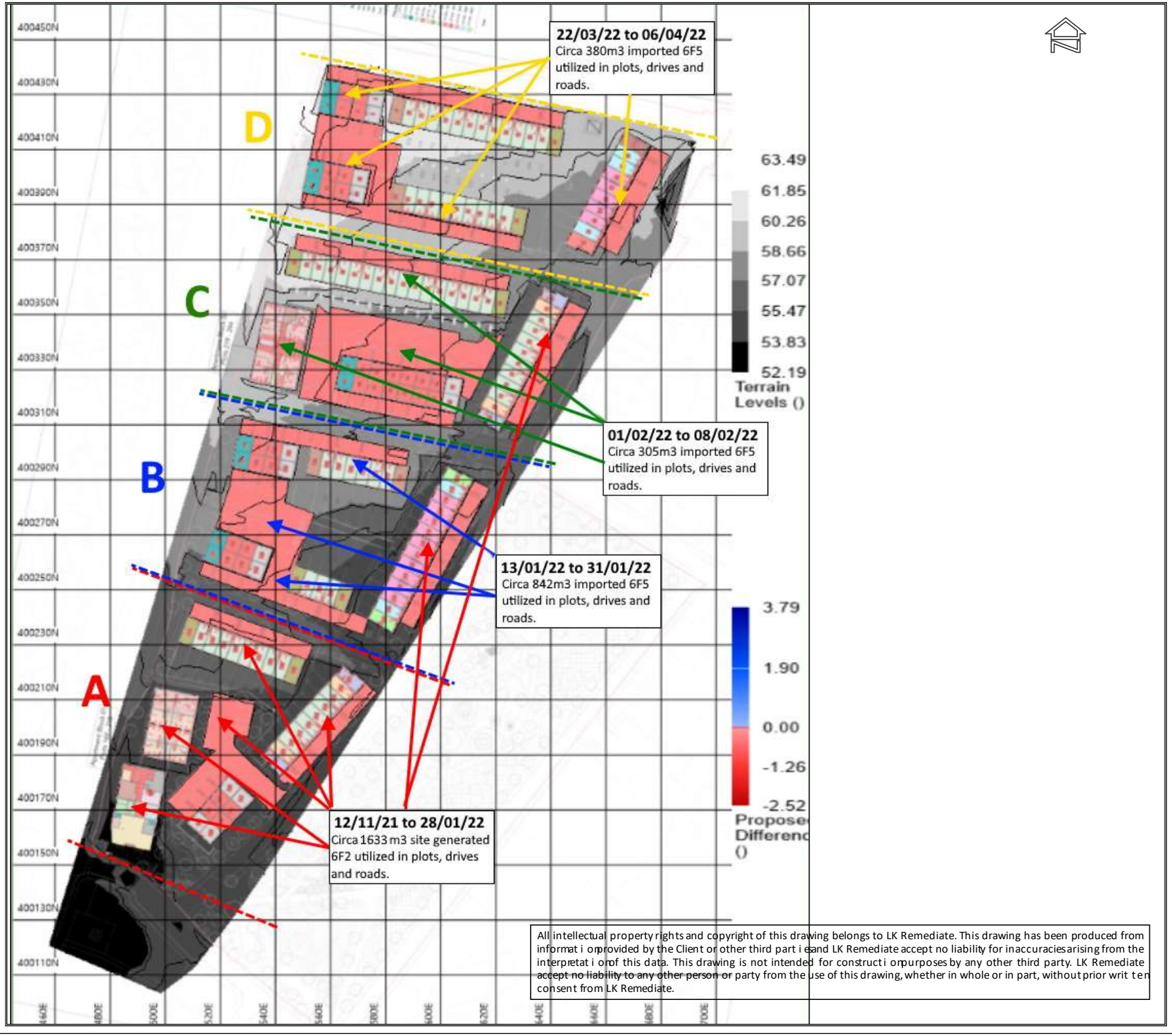
MMP Retained Soils

STATUS

R0

DRAWN BY	SIGNATURE	DATE
DM		13/04/22
APPROVED	SIGNATURE	DATE
RC		13/04/22

SCALE	DRG No.
NTS	201044_MMP_04



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CLIENT

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JOB TITLE

LKR201044
COLLYHURST

DRAWING TITLE

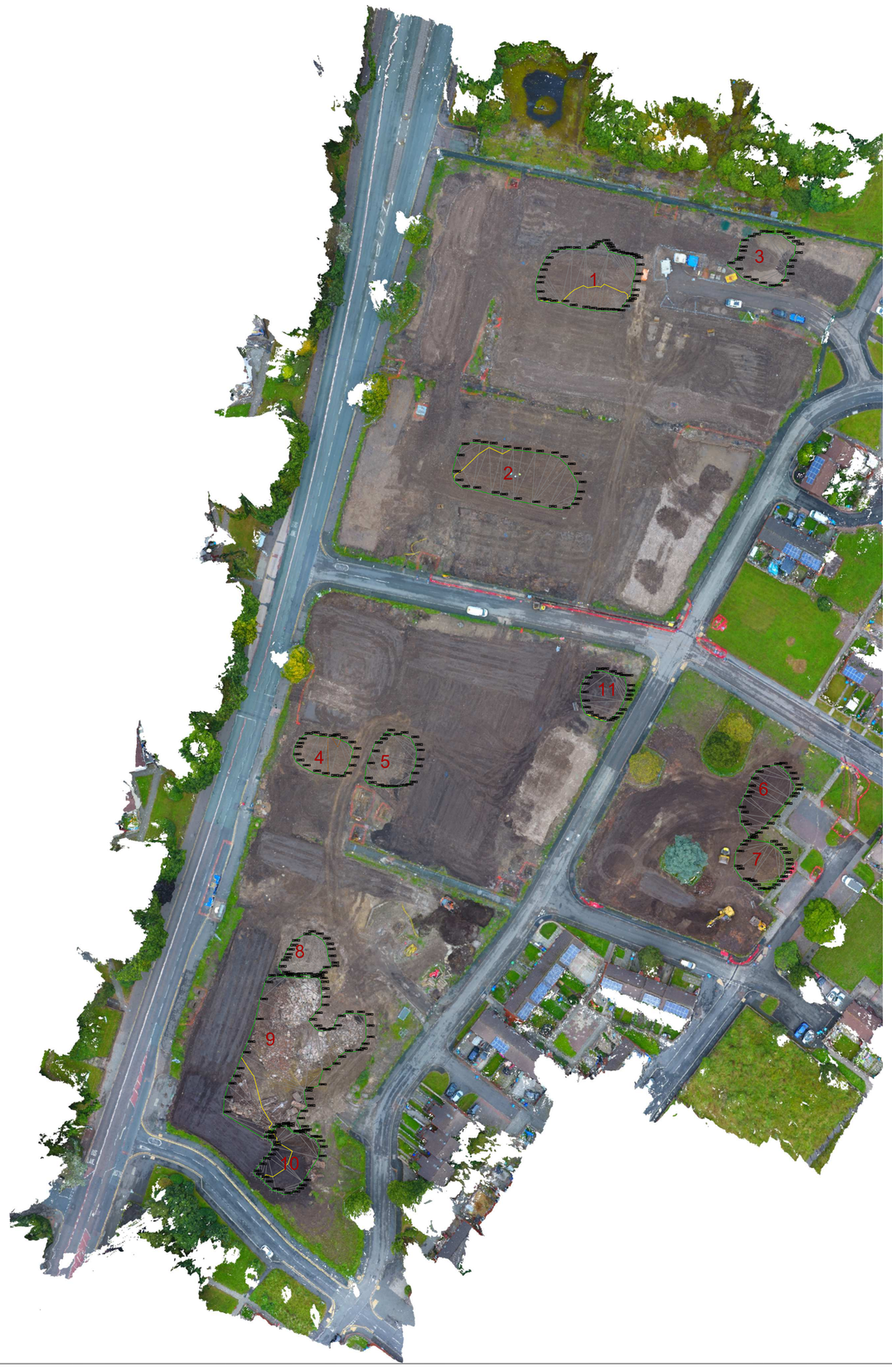
MMP 6F Material Placement

STATUS

R0

DRAWN BY	SIGNATURE	DATE
DM		13/04/22
APPROVED	SIGNATURE	DATE
RC		13/04/22

SCALE	DRG No.
NTS	201044_MMP_05



STOCKPILE VOLUMES 13-09-2021			
String	Volumes		
	Cut/Material	Fill/Void	Balance
1 tested subsoil	0.18	528.92	-528.73
2 tested subsoil	0.22	526.06	-525.85
3 subsoil	0.20	225.26	-225.06
4 subsoil	0.01	188.71	-188.70
5 subsoil	0.21	164.24	-164.03
6 subsoil	0.66	150.42	-149.76
7 topsoil	0.01	172.27	-172.25
8 6F2	0.30	99.83	-99.53
9 to be crushed	8.39	957.38	-948.99
10 subsoil	0.15	243.57	-243.42
11	0.26	129.66	-129.40

Banks Engineering And Management Ltd

Revisions:

Rev.	Date	Description	By

Project:
Collyhurst

Drawing Title:
Aerial Survey 13-09-21

Drawing Ref No:
COL001

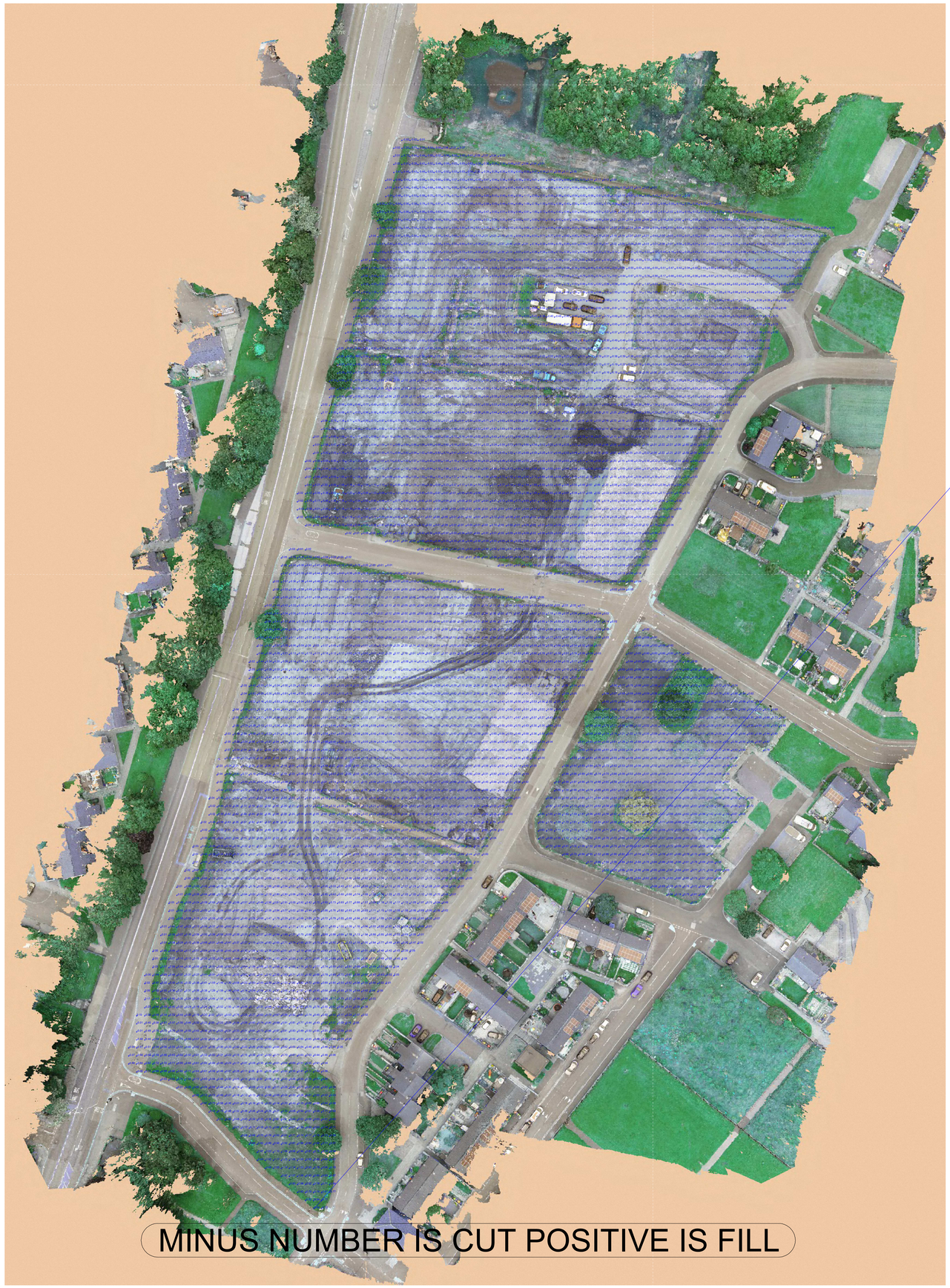
Drawn/Surveyed By:
AB

Date:17-09-21

Scale at A1:
1:750

Notes:

FOR INFORMATION ONLY



Model producted from design FFL DWG supplied by LK Group and Drone Topo Survey conducted by Dronesurve Ltd 11/08/2021.

LK GROUP

DRONESURVE
3D MAPPING SOLUTION - STOCKPILE ANALYSIS – VOLUMETRICS - INSPECTIONS

Drawing Title	LEVEL PROJECTION FROM SURVEY 11/08/2021 TO FORMATION
Additional Comments	FOR COMMENT
Drawing Number	COLLYHURST-DSV-00-00-MODEL-A-001
Drawn By: BH	Checked By: JR
Date : 16/08/2021	Revision : A

SP24 : 333m³

SP29 : 439m³

SP30 : 133m³

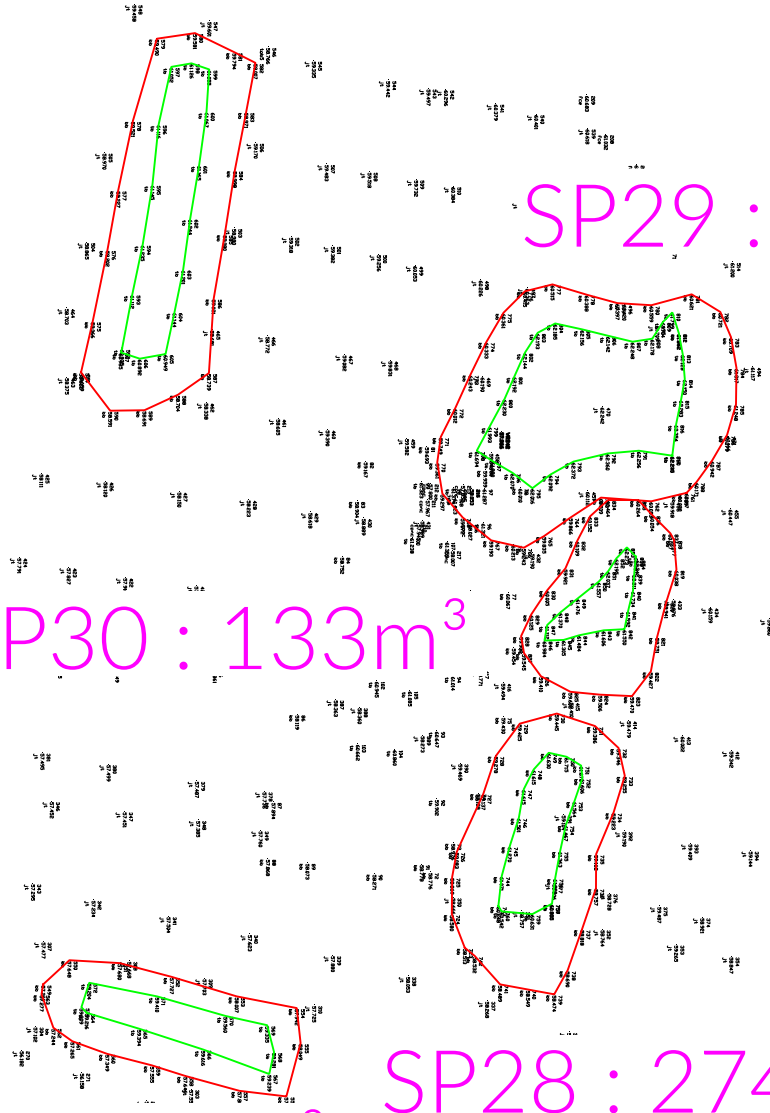
SP25 : 403m³

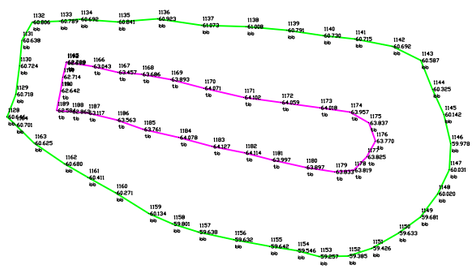
SP28 : 274m³

SP23 : 150m³

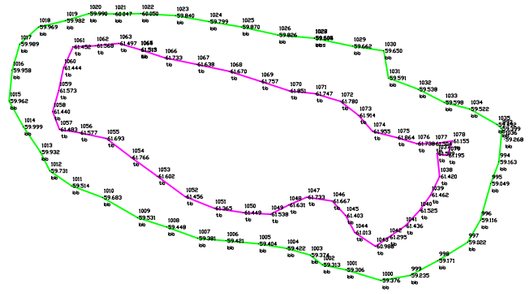
SP26 : 420m³

SP27 : 347m³

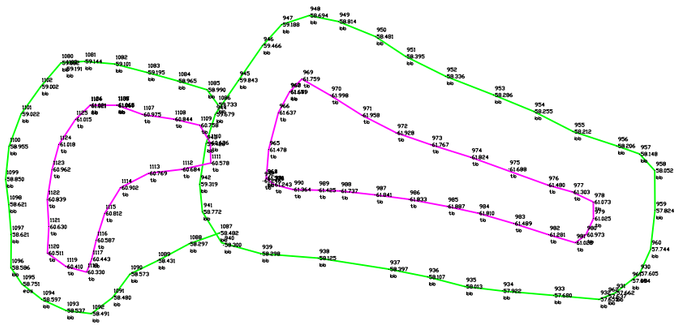




SP34 : 840m3

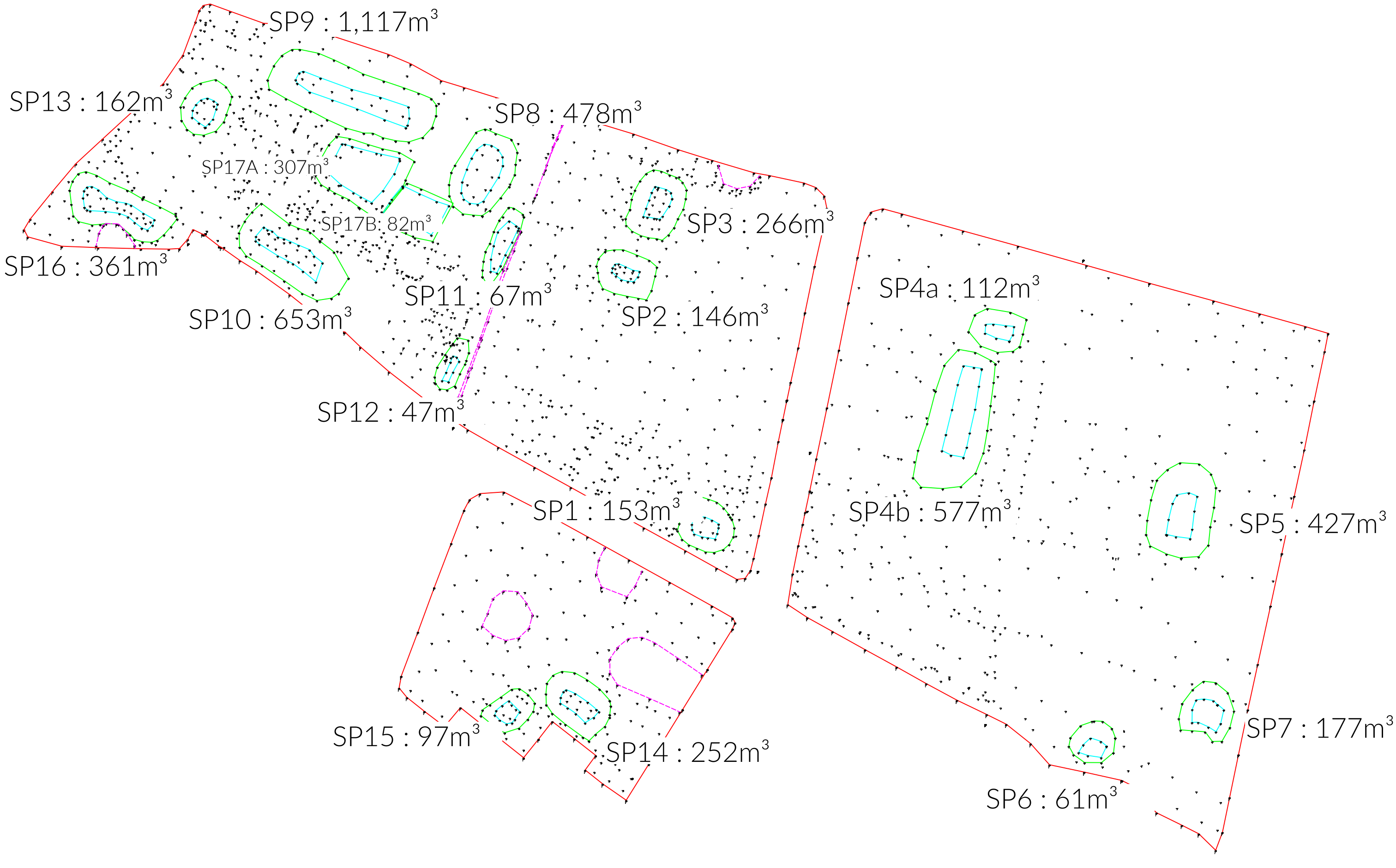


SP32 : 707m3



SP33 : 293m3

SP31 : 894m3


SP9 : 1,117m³
SP13 : 162m³
SP8 : 478m³
SP17A : 307m³
SP17B: 82m³
SP3 : 266m³
SP16 : 361m³
SP11 : 67m³
SP10 : 653m³
SP2 : 146m³
SP4a : 112m³
SP12 : 47m³
SP1 : 153m³
SP4b : 577m³
SP5 : 427m³
SP15 : 97m³
SP14 : 252m³
SP7 : 177m³
SP6 : 61m³

Appendix 11 : Material Export Summary

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
03/06/2021	Maher	MT21 TVO	202557	1			
	Maher	MT21 TVO	202559	1			
	Maher	MT21 TVO	202561	1			
	Maher	MK21 BXP	206926	1			
	Maher	MT21 TVO	202556	1			
	Maher	MT21 TVO	202558	1			
	Maher	MT21 TVO	202560	1			
	Maher	MT21 TVO	202562	1			
	Maher	MK21 BXP	206928	1			
	Maher	MK21 BXP	206930	1			
	Maher	MK21 BXP	206932	1			
	Maher	MK21 BXL	209637	1			
	Maher	MK21 BXP	206927	1			
	Maher	MK21 BXP	206929	1			
	Maher	MK21 BXP	206931	1			
	Maher	MK21 BXL	209636	1			
	Maher	MK21 BXL	206639	1			
	Maher	MK21 BXU	212051	1			
	Maher	MK21 BXU	212196	1			
	Maher	MK21 BXU	212197	1			
	Maher	MK21 BXL	209638	1			
	Maher	MK21 BXL	209640	1			
	Maher	MK21 BXU	212195	1			
	Maher	MK21 BXU	212198	1			
	Maher	MK21 BXU	212200	1			
	Maher	MK21 BXO	206393	1			
	Maher	MK21 BXU	212199	1			
	Maher	MV20 RKA	205758	1			
17/06/2021	Maher	MK21 CHF	225281	1			
21/06/2021	Maher	MK21 CHF	228157			1	
	Maher	MK21 CHF	228153			1	
	Maher	MK21 BXW	228147			1	
	Maher	MK21 BXW	206952			1	
	Maher	MK21 CHF	228155			1	
	Maher	MK21 CHF	228159			1	
	Maher	MK21 CHF	228151			1	
	Maher	MK21 BXW	228149			1	
	Maher	MK21 BXW	206956			1	
	Maher	MT21 TVZ	227352			1	
	Maher	MT21 TVZ	227498			1	
	Maher	MT21 TVX	227106			1	
	Maher	MK21 BXW	206954			1	
	Maher	MT21 TVZ	227354			1	
	Maher	MT21 TVZ	227500			1	
	Maher	MT21 TVZ	227496			1	
	Maher	MT21 TVU	213624			1	
	Maher	MT21 TVU	213628			1	
	Maher	MT21 TVU	213632			1	
	Maher	MT21 TVX	227108			1	
	Maher	MT21 TVU	213626			1	
	Maher	MT21 TVU	213630			1	
	Maher	MT21 TVU	213634			1	
22/06/2021	Maher	MK21 BXW	206962			1	
	Maher	MK21 CHF	228164			1	
	Maher	MT21 TVZ	227358			1	
	Maher	MT21 TVX	227119			1	
	Maher	MK21 BXW	206960			1	
	Maher	MK21 CHF	228166			1	
	Maher	MK21 TVZ	227356			1	
08/07/2021	Maher	MV20 RKF	210090		1		
	Maher	MV20 RKF	210091		1		
	Maher	MV20 RKF	210092		1		
	Maher	MV20 RKF	210093		1		

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RKF	210096		1		
	Maher	MV20 RKF	210097		1		
	Maher	MV20 RKF	210098		1		
08/07/2021	Maher	MV20 RFJ	52073				1
	Maher	MV20 RFJ	52074				1
	Maher	MV20 RFJ	52075				1
	Maher	MV20 RFJ	52076				1
	Maher	MV20 RFJ	52077				1
	Maher	MV20 RFJ	52078				1
	Maher	MV20 RFJ	52079				1
	Maher	MK21 CHG	208059				1
	Maher	MK21 CHG	208060				1
	Maher	MK21 CHG	208061				1
	Maher	MK21 CHG	208062				1
	Maher	MT21 TVW	208845				1
	Maher	MT21 TVW	208846				1
	Maher	MT21 TVW	208847				1
	Maher	MT21 TVW	208848				1
	Maher	MT21 TVW	208849				1
	Maher	MT21 TVW	208850				1
	Maher	MK21 BXN	210139				1
	Maher	MK21 BXN	210140				1
	Maher	MK21 BXN	210141				1
	Maher	MK21 BXN	210142				1
	Maher	MK21 BXN	210143				1
	Maher	MK21 BXN	210144				1
	Maher	MK21 BXN	210145				1
	Maher	MT21 TVU	211102				1
	Maher	MK21 BXX	214551				1
	Maher	MK21 BXX	214552				1
	Maher	MK21 BXX	214553				1
	Maher	MK21 BXX	214554				1
	Maher	MT21 TVU	226288				1
	Maher	MT21 TVU	226289				1
	Maher	MT21 TVU	226290				1
	Maher	MT21 TVU	226291				1
	Maher	MT21 TVU	226292				1
	Maher	MT21 TVU	226293				1
	Maher	MT21 TVU	226294				1
	Maher	MV20 RKK	227823				1
	Maher	MV20 RKK	227824				1
	Maher	MV20 RKK	227825				1
	Maher	MV20 RKK	227826				1
	Maher	MV20 RKK	227827				1
	Maher	MV20 RKK	227828				1
	Maher	MV20 RKK	227829				1
	Maher	MT21 TVX	228423				1
	Maher	MT21 TVX	228424				1
	Maher	MT21 TVX	228428				1
	Maher	MK21 BXO	228594				1
	Maher	MK21 BXO	228595				1
	Maher	MK21 BXO	228596				1
	Maher	MK21 BXO	228597				1
	Maher	MK21 BXO	228598				1
	Maher	MK21 BXO	228599				1
	Maher	MK21 BXO	228600				1
	Maher	MK21 BXX	230648				1
	Maher	MK21 BXX	230649				1
	Maher	MK21 BXX	230650				1
	Maher	MV20 RLY	232319				1
	Maher	MV20 RLY	232320				1
	Maher	MV20 RLY	232321				1
	Maher	MV20 RLY	232322				1
	Maher	MV20 RLY	232323				1
09/07/2021	Maher	MV20 RKF	210099		1		
	Maher	MV20 RKF	210100		1		
	Maher	MV20 RKF	232352		1		

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RKF	232353		1		
	Maher	MV20 RKF	232354		1		
	Maher	MV20 RKF	232355		1		
	Maher	MV20 RKF	232356		1		

09/07/2021	Maher	MK21 BXO	122559				1
	Maher	MK21 BXO	122560				1
	Maher	MK21 BXO	122561				1
	Maher	MK21 BXO	122562				1
	Maher	MK21 BXO	122563				1
	Maher	MK21 BXO	122564				1
	Maher	MK21 BXO	122565				1
	Maher	MK21 CHG	208063				1
	Maher	MK21 CHG	208064				1
	Maher	MK21 CHG	208065				1
	Maher	MK21 CHG	208066				1
	Maher	MK21 CHG	208067				1
	Maher	MK21 CHG	208068				1
	Maher	MK21 CHG	208069				1
	Maher	MV20 RKN	208305				1
	Maher	MV20 RKN	208306				1
	Maher	MV20 RKN	208307				1
	Maher	MV20 RKN	208308				1
	Maher	MV20 RKN	208309				1
	Maher	MV20 RKN	208310				1
	Maher	MV20 RKN	208311				1
	Maher	MK21 BXN	210147				1
	Maher	MK21 BXN	210148				1
	Maher	MK21 BXN	210149				1
	Maher	MK21 BXN	210150				1
	Maher	MK21 BXX	214555				1
	Maher	MK21 BXX	214556				1
	Maher	MK21 BXX	214557				1
	Maher	MK21 BXX	214558				1
	Maher	MK21 BXX	214559				1
	Maher	MK21 BXX	214560				1
	Maher	MK21 BXX	214561				1
	Maher	MV20 RKK	227830				1
	Maher	MV20 RKK	227831				1
	Maher	MV20 RKK	227832				1
	Maher	MV20 RKK	227833				1
	Maher	MV20 RKK	227834				1
	Maher	MV20 RKK	227835				1
	Maher	MV20 RKK	227836				1
	Maher	MT21 TVX	227837				1
	Maher	MT21 TVX	227839				1
	Maher	MK21 BXN	230801				1
	Maher	MK21 BXN	230802				1
	Maher	MV20 RLY	232324				1
	Maher	MV20 RLY	232325				1
	Maher	MV20 RLY	232326				1
	Maher	MV20 RLY	232327				1
	Maher	MV20 RLY	232328				1
	Maher	MV20 RLY	232329				1
	Maher	MV20 RLY	232330				1
	Maher	MK21 BXL	232451				1
	Maher	MK21 BXL	232452				1
	Maher	MK21 BXL	232453				1
	Maher	MK21 BXL	232454				1
	Maher	MK21 BXL	232455				1
	Maher	MK21 BXL	232456				1
	Maher	MK21 BXL	232457				1

20/07/2021	Maher	MT21 TVU	202258				1
	Maher	MT21 TVU	202259				1
	Maher	MT21 TVU	202260				1
	Maher	MT21 TVU	202261				1
	Maher	MT21 TVU	202262				1
	Maher	MT21 TVU	202263				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MT21 TVU	202264				1
	Maher	MT21 TVU	202265				1
	Maher	MV20 RKN	208332				1
	Maher	MV20 RKN	208333				1
	Maher	MV20 RKN	208334				1
	Maher	MV20 RKN	208335				1
	Maher	MV20 RKN	208336				1
	Maher	MV20 RKN	208337				1
	Maher	MV20 RKN	208338				1
	Maher	MV20 RKN	208339				1
	Maher	MT21 TVO	227445				1
	Maher	MK21 BXV	228025				1
	Maher	MK21 BXV	228026				1
	Maher	MK21 BXV	228027				1
	Maher	MK21 BXV	228028				1
	Maher	MK21 BXV	228029				1
	Maher	MK21 BXV	228030				1
	Maher	MK21 BXV	228031				1
	Maher	MK21 BXV	228032				1
	Maher	MT21 TVV	229018				1
	Maher	MT21 TVV	229019				1
	Maher	MT21 TVV	229020				1
	Maher	MT21 TVV	229021				1
	Maher	MT21 TVV	229022				1
	Maher	MT21 TVV	229023				1
	Maher	MT21 TVV	229024				1
	Maher	MV20 RKK	229269				1
	Maher	MT21 TVV	229025				1
	Maher	MV20 RKK	229263				1
	Maher	MV20 RKK	229264				1
	Maher	MV20 RKK	229265				1
	Maher	MV20 RKK	229266				1
	Maher	MV20 RKK	229267				1
	Maher	MV20 RKK	229268				1
	Maher	MK21 BXO	230357				1
	Maher	MK21 BXO	230358				1
	Maher	MK21 BXO	230359				1
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	Maher	MK21 BXO	230361				1
	Maher	MK21 BXO	230362				1
	Maher	MK21 BXO	230363				1
	Maher	MK21 BXO	230364				1
	Maher	MV20 RKF	232384				1
	Maher	MV20 RKF	232385				1
	Maher	MV20 RKF	232386				1
	Maher	MV20 RKF	232387				1
	Maher	MV20 RKF	232388				1
	Maher	MV20 RKF	232389				1
	Maher	MV20 RKF	232390				1
	Maher	MV20 RLY	232860				1
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	Maher	MV20 RLY	232862				1
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21/07/2021	Maher	MT21 TVU	202266				1
	Maher	MT21 TVU	202267				1
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	Maher	MT21 TVU	202270				1
	Maher	MT21 TVU	202271				1
	Maher	MT21 TVU	202272				1
	Maher	MT21 TVU	202273				1
	Maher	MT21 TVO	215074				1
	Maher	MK21 BXV	228040				1
	Maher	MK21 BXV	228041				1
	Maher	MK21 BXV	228034				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MK21 BXV	228035				1
	Maher	MK21 BXV	228036				1
	Maher	MK21 BXV	228037				1
	Maher	MK21 BXV	228038				1
	Maher	MK21 BXV	228039				1
	Maher	MK21 CHF	228241				1
	Maher	MK21 CHF	228242				1
	Maher	MK21 CHF	228243				1
	Maher	MK21 CHF	228244				1
	Maher	MK21 CHF	228245				1
	Maher	MV20 RKK	229270				1
	Maher	MV20 RKK	229271				1
	Maher	MV20 RKK	229272				1
	Maher	MV20 RKK	229273				1
	Maher	MV20 RKK	229274				1
	Maher	MV20 RKK	229275				1
	Maher	MV20 RKK	229276				1
	Maher	MV20 RKK	229277				1
	Maher	MK21 BXO	230365				1
	Maher	MK21 BXO	230366				1
	Maher	MK21 BXO	230367				1
	Maher	MK21 BXO	230368				1
	Maher	MK21 BXO	230369				1
	Maher	MK21 BXO	230370				1
	Maher	MK21 BXO	230371				1
	Maher	MK21 BXO	230372				1
	Maher	MT21 TVZ	231191				1
	Maher	MT21 TVZ	231192				1
	Maher	MT21 TVZ	231193				1
	Maher	MT21 TVZ	231194				1
	Maher	MT21 TVZ	231195				1
	Maher	MT21 TVZ	231196				1
	Maher	MV20 RKJ	231844				1
	Maher	MK21 BXP	231908				1
	Maher	MV20 RKF	232391				1
	Maher	MV20 RKF	232392				1
	Maher	MV20 RKF	232393				1
	Maher	MV20 RKF	232394				1
	Maher	MV20 RKF	232395				1
	Maher	MV20 RKF	232396				1
	Maher	MV20 RKF	232397				1
	Maher	MT21 TVX	232672				1
	Maher	MT21 TVX	232673				1
	Maher	MT21 TVX	232674				1
	Maher	MV20 RLY	232867				1
	Maher	MV20 RLY	232868				1
	Maher	MV20 RLY	232869				1
	Maher	MV20 RLY	232870				1
	Maher	MV20 RLY	232871				1
	Maher	MV20 RLY	232872				1
	Maher	MV20 RLY	232873				1
22/07/2021	Maher	MK21 CHF	121809				1
	Maher	MK21 CHF	121810				1
	Maher	MK21 CHF	121811				1
	Maher	MK21 CHF	121812				1
	Maher	MK21 CHF	121813				1
	Maher	MK21 CHF	121814				1
	Maher	MK21 CHF	121815				1
	Maher	MV20 RKK	229278				1
	Maher	MV20 RKK	229279				1
	Maher	MV20 RKK	229280				1
	Maher	MV20 RKK	229281				1
	Maher	MV20 RKK	229282				1
	Maher	MV20 RKK	229283				1
	Maher	MV20 RKK	229284				1
	Maher	MV20 RKK	229285				1
	Maher	MV20 RKF	229401				1
	Maher	MV20 RKF	229402				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RKF	229403				1
	Maher	MV20 RKF	229404				1
	Maher	MV20 RKF	229405				1
	Maher	MV20 RKF	229406				1
	Maher	MV20 RKF	229407				1
	Maher	MV20 RKF	229408				1
	Maher	MK21 BXL	230109				1
	Maher	MK21 BXL	230110				1
	Maher	MK21 BXL	230111				1
	Maher	MK21 BXL	230112				1
	Maher	MK21 BXO	230378				1
	Maher	MK21 BXO	230379				1
	Maher	MK21 CHG	230504				1
	Maher	MK21 CHG	230505				1
	Maher	MK21 CHG	230506				1
	Maher	MK21 CHG	230507				1
	Maher	MK21 CHG	230508				1
	Maher	MK21 CHG	230509				1
	Maher	MK21 CHG	230510				1
	Maher	MK21 CHG	230511				1
	Maher	MK21 BXX	230688				1
	Maher	MK21 BXX	230689				1
	Maher	MK21 BXN	230756				1
	Maher	MK21 BXN	230757				1
	Maher	MK21 BXN	230758				1
	Maher	MK21 BXN	230759				1
	Maher	MK21 BXN	230760				1
	Maher	MK21 BXN	230761				1
	Maher	MK21 BXN	230762				1
	Maher	MK21 BXU	232418				1
	Maher	MT21 TVX	232677				1
	Maher	MT21 TVX	232678				1
	Maher	MT21 TVX	232679				1
	Maher	MT21 TVX	232680				1
	Maher	MT21 TVX	232681				1
	Maher	MT21 TVX	232682				1
	Maher	MT21 TVX	232683				1
	Maher	MV20 RLY	232874				1
	Maher	MV20 RLY	232875				1
	Maher	MV20 RLY	232876				1
	Maher	MV20 RLY	232877				1
	Maher	MV20 RLY	232878				1
	Maher	MV20 RLY	232879				1
	Maher	MV20 RLY	232880				1
27/07/2021	Maher	MK21 CHF	121846	1			
	Maher	MK21 CHF	121847	1			
	Maher	MK21 CHF	121848	1			
	Maher	MK21 CHF	121849	1			
	Maher	MK21 CHF	121850	1			
	Maher	MV20 RKF	217395	1			
	Maher	MV20 RKF	217396	1			
	Maher	MV20 RKF	217397	1			
	Maher	MV20 RKF	217398	1			
	Maher	MV20 RKF	217399	1			
	Maher	MV20 RKF	217400	1			
	Maher	MK21 BXX	229943	1			
	Maher	MK21 BXX	229944	1			
	Maher	MK21 BXX	229945	1			
	Maher	MK21 BXX	229946	1			
	Maher	MK21 BXX	229947	1			
	Maher	MK21 BXX	229948	1			
	Maher	MK21 BXX	229949	1			
	Maher	MK21 BXW	229951	1			
	Maher	MK21 BXW	229952	1			
	Maher	MK21 BXW	229956	1			
	Maher	MK21 BXN	230796	1			
	Maher	MK21 BXN	230797	1			
	Maher	MK21 BXN	230798	1			

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MK21 BXN	230799	1			
	Maher	MK21 BXN	230800	1			
	Maher	MT21 TVX	231644	1			
	Maher	MV20 RKF	234151	1			
	Maher	MV20 RKF	234152	1			
	Maher	MK21 CHF	234454	1			
	Maher	MK21 CHF	234455	1			
	Maher	MK21 CHF	234456	1			
	Maher	MK21 BXN	236301	1			
	Maher	MK21 BXN	236302	1			
28/07/2021	Maher	MT21 TVZ	220831	1			
	Maher	MK21 BXX	229950	1			
	Maher	MK21 BXX	230401	1			
	Maher	MT21 TVX	231648	1			
	Maher	MV20 RKF	234153	1			
	Maher	MV20 RKF	234154	1			
	Maher	MK21 CHF	234457	1			
	Maher	MK21 CHF	234458	1			
27/08/2021	Maher	MV20 RKJ	212415				1
	Maher	MV20 RKJ	212417				1
	Maher	MV20 RKJ	212419				1
	Maher	MV20 RKJ	212420				1
	Maher	MV20 RKJ	212421				1
	Maher	MV20 RKJ	212422				1
	Maher	MK21 BXN	230992				1
	Maher	MK21 BXN	230993				1
	Maher	MK21 BXN	230994				1
	Maher	MK21 BXN	230995				1
	Maher	MK21 BXN	230996				1
	Maher	MK21 BXN	230997				1
	Maher	MK21 BXO	233758				1
	Maher	MK21 BXO	233760				1
	Maher	MK21 BXO	233763				1
	Maher	MK21 BXO	233764				1
	Maher	MK21 BXO	233765				1
	Maher	MK21 BXO	233766				1
	Maher	MV20 RKF	234218				1
	Maher	MV20 RKF	234220				1
	Maher	MV20 RKF	234222				1
	Maher	MV20 RKF	234223				1
	Maher	MV20 RKF	234224				1
	Maher	MT21 BXW	234811				1
	Maher	MT21 BXW	234813				1
	Maher	MT21 BXW	234815				1
	Maher	MT21 BXW	234816				1
	Maher	MT21 BXW	234817				1
	Maher	MT21 BXW	234818				1
	Maher	MT21 BXW	234819				1
	Maher	MT21 TVO	234969				1
	Maher	MT21 TVO	234972				1
	Maher	MT21 TVO	234974				1
	Maher	MT21 TVO	234975				1
	Maher	MT21 TVO	234976				1
	Maher	MT21 TVO	234977				1
	Maher	MK21 BXZ	235644				1
	Maher	MK21 BXZ	235645				1
	Maher	MK21 BXZ	235646				1
	Maher	MK21 BXP	235840				1
	Maher	MK21 BXP	235842				1
	Maher	MK21 BXP	235844				1
	Maher	MK21 BXP	235845				1
	Maher	MK21 BXP	235846				1
	Maher	MK21 BXP	235847				1
	Maher	MT21 TVW	235936				1
	Maher	MT21 TVW	235937				1
	Maher	MT21 TVW	235940				1
	Maher	MT21 TVW	235941				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MT21 TVW	235942				1
	Maher	MT21 TVW	235943				1
	Maher	MV20 RLY	236859				1
	Maher	MV20 RLY	236862				1
	Maher	MV20 RLY	236864				1
	Maher	MV20 RLY	236865				1
	Maher	MV20 RLY	236866				1
31/08/2021	Maher	MV20 RKJ	212423				1
	Maher	MV20 RKJ	212424				1
	Maher	MV20 RKJ	212425				1
	Maher	MV20 RKJ	212426				1
	Maher	MV20 RKJ	212427				1
	Maher	MV20 RKJ	212428				1
	Maher	MV20 RKJ	212429				1
	Maher	MV20 RKJ	212430				1
	Maher	MT21 TVW	231550				1
	Maher	MK21 BXO	233767				1
	Maher	MK21 BXO	233768				1
	Maher	MK21 BXO	233769				1
	Maher	MK21 BXO	233770				1
	Maher	MK21 BXO	233771				1
	Maher	MK21 BXO	233772				1
	Maher	MK21 BXO	233773				1
	Maher	MK21 BXO	233774				1
	Maher	MV20 RKF	234225				1
	Maher	MV20 RKF	234226				1
	Maher	MV20 RKF	234227				1
	Maher	MV20 RKF	234228				1
	Maher	MV20 RKF	234229				1
	Maher	MV20 RKF	234230				1
	Maher	MV20 RKF	234231				1
	Maher	MK21 BXP	235848				1
	Maher	MK21 BXP	235849				1
	Maher	MT21 TVW	235944				1
	Maher	MT21 TVW	235945				1
	Maher	MT21 TVW	235946				1
	Maher	MT21 TVW	235947				1
	Maher	MT21 TVW	235948				1
	Maher	MT21 TVW	235949				1
	Maher	MT21 TVW	235950				1
29/10/2021	Maher	MT21 TVO	194975				1
	Maher	MT21 TVO	194976				1
	Maher	MT21 TVO	194978				1
	Maher	MT21 TVO	194979				1
	Maher	MT21 TVO	194980				1
	Maher	MK21 BXV	227233				1
	Maher	MK21 BXV	227235				1
	Maher	MK21 BXV	227236				1
	Maher	MK21 BXV	227237				1
	Maher	MK21 BXV	227238				1
	Maher	MK21 BXV	227239				1
	Maher	MK21 CHF	238779				1
	Maher	MK21 CHF	238781				1
	Maher	MK21 CHF	238782				1
	Maher	MK21 CHF	238783				1
	Maher	MK21 CHF	238784				1
	Maher	MK21 CHF	238785				1
	Maher	MV20 RKK	241073				1
	Maher	MV20 RKK	241074				1
	Maher	MV20 RKK	241075				1
	Maher	MV20 RKK	241076				1
	Maher	MV20 RKK	241077				1
	Maher	MV20 RKK	241078				1
	Maher	MK21 BXX	247621				1
	Maher	MK21 CHG	247464				1
	Maher	MT21 TVZ	248178				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
01/11/2021	Maher	MV20 RKJ	238787				1
	Maher	MV20 RKJ	238788				1
	Maher	MV20 RKJ	238789				1
	Maher	MV20 RKJ	238790				1
	Maher	MV20 RKJ	238791				1
	Maher	MV20 RKJ	238792				1
	Maher	MV20 RKK	241080				1
	Maher	MV20 RKK	241081				1
	Maher	MV20 RKK	241082				1
	Maher	MV20 RKK	241083				1
	Maher	MV20 RKK	241084				1
	Maher	MV20 RKK	241085				1
	Maher	MK21 BXU	242611				1
	Maher	MK21 BXU	242612				1
	Maher	MK21 BXW	245002				1
	Maher	MK21 BXW	245003				1
	Maher	MK21 BXW	245004				1
	Maher	MK21 BXW	245005				1
	Maher	MK21 BXW	245006				1
	Maher	MK21 BXW	245007				1
	Maher	MK21 BXX	247623				1
	Maher	MK21 BXX	247624				1
	Maher	MK21 BXX	247625				1
	Maher	MK21 BXX	247626				1
	Maher	MK21 BXX	247627				1
	Maher	MK21 BXX	247628				1
	Maher	MT21 TVZ	248180				1
	Maher	MT21 TVZ	248181				1
	Maher	MT21 TVZ	248182				1
	Maher	MT21 TVZ	248183				1
	Maher	MT21 TVZ	248184				1
	Maher	MT21 TVZ	248185				1
	Maher	MT21 TVX	248817				1
	Maher	MT21 TVX	248818				1
	Maher	MT21 TVX	248819				1
	Maher	MT21 TVX	248820				1
	Maher	MT21 TVX	248821				1
	Maher	MT21 TVX	248822				1
08/11/2021	Maher	MT21 TVW	235995				1
	Maher	MT21 TVW	235996				1
	Maher	MT21 TVW	235997				1
	Maher	MT21 TVW	235998				1
	Maher	MT21 TVW	235999				1
	Maher	MT21 TVW	236000				1
	Maher	MK21 CHG	236992				1
	Maher	MT21 TVO	241278				1
	Maher	MT21 TVO	241279				1
	Maher	MT21 TVO	241280				1
	Maher	MT21 TVO	241281				1
	Maher	MT21 TVO	241282				1
	Maher	MT21 TVO	241283				1
	Maher	MT21 TVW	243301				1
	Maher	MK21 BXX	245715				1
	Maher	MK21 BXX	245716				1
	Maher	MK21 BXX	245717				1
	Maher	MK21 BXX	245718				1
	Maher	MK21 BXX	245719				1
	Maher	MK21 BXX	245720				1
	Maher	MK21 BXU	247962				1
09/11/2021	Maher	MV20 RKJ	238678				1
	Maher	MV20 RKJ	238679				1
	Maher	MV20 RKJ	238680				1
	Maher	MV20 RKJ	238681				1
	Maher	MV20 RKJ	238682				1
	Maher	MV20 RKJ	238683				1
	Maher	MV20 RLY	240003				1
	Maher	MV20 RLY	240004				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RLY	240005				1
	Maher	MV20 RLY	240006				1
	Maher	MV20 RLY	240007				1
	Maher	MV20 RLY	240008				1
	Maher	MV20 RLY	240010				1
	Maher	MT21 TVW	243303				1
	Maher	MT21 TVW	243304				1
	Maher	MT21 TVW	243305				1
	Maher	MT21 TVW	243306				1
	Maher	MV20 RKN	246764				1
	Maher	MV20 RKN	246765				1
	Maher	MV20 RKN	246766				1
	Maher	MV20 RKN	246767				1
	Maher	MV20 RKN	246768				1
	Maher	MV20 RKN	246769				1
15/11/2021	Maher	MV20 RLY	240031				1
	Maher	MV20 RLY	240032				1
	Maher	MV20 RLY	240033				1
	Maher	MV20 RLY	240034				1
	Maher	MV20 RLY	240035				1
	Maher	MV20 RLY	240036				1
	Maher	MV20 RLY	240037				1
	Maher	MK21 BXO	241517				1
	Maher	MK21 BXO	241518				1
	Maher	MK21 BXO	241519				1
	Maher	MK21 BXO	241520				1
	Maher	MK21 BXO	241521				1
	Maher	MK21 BXO	241522				1
	Maher	MK21 BXO	241523				1
	Maher	MK21 BXN	242589				1
	Maher	MK21 BXN	242590				1
	Maher	MK21 BXN	242591				1
	Maher	MK21 BXN	242592				1
	Maher	MK21 BXN	242593				1
	Maher	MK21 BXN	242594				1
	Maher	MK21 BXN	242595				1
	Maher	MT21 TVX	247707				1
	Maher	MT21 TVX	247708				1
	Maher	MT21 TVX	247709				1
	Maher	MT21 TVX	247710				1
	Maher	MV20 RKJ	249452				1
	Maher	MV20 RKJ	249453				1
	Maher	MV20 RKJ	249454				1
	Maher	MV20 RKJ	249455				1
	Maher	MV20 RKJ	249456				1
	Maher	MV20 RKJ	249457				1
16/11/2021	Maher	MV20 RLY	240039				1
	Maher	MV20 RLY	240040				1
	Maher	MV20 RLY	240041				1
	Maher	MV20 RLY	240042				1
	Maher	MV20 RLY	240043				1
	Maher	MV20 RLY	240044				1
	Maher	MV20 RKK	240247				1
	Maher	MV20 RKK	240248				1
	Maher	MV20 RKK	240249				1
	Maher	MV20 RKK	240250				1
	Maher	MV20 RKF	240537				1
	Maher	MV20 RKF	240538				1
	Maher	MV20 RKF	240539				1
	Maher	MV20 RKF	240540				1
	Maher	MV20 RKF	240541				1
	Maher	MV20 RKF	240542				1
	Maher	MK21 BXW	246045				1
	Maher	MK21 BXW	246046				1
	Maher	MV20 RKJ	249460				1
	Maher	MV20 RKJ	249463				1
	Maher	MV20 RKK	249860				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RKK	249861				1
17/11/2021	Maher	MK21 BXO	241524				1
	Maher	MK21 BXO	241525				1
	Maher	MK21 BXO	241526				1
	Maher	MK21 BXO	241527				1
	Maher	MK21 BXO	241528				1
	Maher	MK21 BXO	241529				1
	Maher	MK21 BXO	241530				1
	Maher	MK21 BXO	241531				1
	Maher	MV20 RKN	248880				1
	Maher	MV20 RKN	248881				1
	Maher	MV20 RKN	248882				1
	Maher	MV20 RKN	248883				1
	Maher	MV20 RKN	248884				1
	Maher	MV20 RKN	248885				1
	Maher	MV20 RKN	248886				1
	Maher	MV20 RKN	248887				1
	Maher	MT21 TVZ	249267				1
	Maher	MT21 TVZ	249268				1
	Maher	MT21 TVZ	249269				1
	Maher	MT21 TVZ	249270				1
	Maher	MT21 TVZ	249271				1
	Maher	MT21 TVZ	249272				1
	Maher	MT21 TVZ	249273				1
	Maher	MV20 RKK	249862				1
	Maher	MV20 RKK	249863				1
	Maher	MV20 RKK	249864				1
	Maher	MV20 RKK	249865				1
	Maher	MV20 RKK	249866				1
	Maher	MV20 RKK	249867				1
	Maher	MV20 RKK	249868				1
	Maher	MV20 RKK	249869				1
	Maher	MT21 TVV	250055				1
18/11/2021	Maher	MK21 BXO	241532				1
	Maher	MK21 BXO	241533				1
	Maher	MK21 BXO	241534				1
	Maher	MK21 BXO	241535				1
	Maher	MK21 BXO	241536				1
	Maher	MK21 BXO	241537				1
	Maher	MK21 BXO	241538				1
	Maher	MK21 BXO	241539				1
	Maher	MK21 BXW	246047				1
	Maher	MK21 BXW	246048				1
	Maher	MK21 BXW	246049				1
	Maher	MK21 BXW	246050				1
	Maher	MK21 BXW	248901				1
	Maher	MK21 BXW	248902				1
	Maher	MK21 BXW	248903				1
	Maher	MK21 BXW	248904				1
	Maher	MV20 RKK	249870				1
	Maher	MV20 RKK	249871				1
	Maher	MV20 RKK	249872				1
	Maher	MV20 RKK	249873				1
	Maher	MV20 RKK	249875				1
	Maher	MV20 RKK	249876				1
	Maher	MV20 RKK	249877				1
	Maher	MV20 RKK	249878				1
23/11/2021	Maher	MT21 TVU	247828				1
	Maher	MT21 TVU	247829				1
	Maher	MT21 TVU	247830				1
	Maher	MT21 TVU	247831				1
	Maher	MT21 TVU	247832				1
	Maher	MT21 TVU	247833				1
	Maher	MT21 TVU	247834				1
	Maher	MT21 TVU	247835				1
	Maher	MV20 RKK	249893				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RKK	249894				1
	Maher	MV20 RKK	249895				1
	Maher	MV20 RKK	249896				1
	Maher	MV20 RKK	249897				1
	Maher	MV20 RKK	249898				1
	Maher	MV20 RKK	249899				1
	Maher	MV20 RKK	249900				1
	Maher	MV20 RKN	250031				1
	Maher	MV20 RKN	250032				1
	Maher	MV20 RKN	250033				1
	Maher	MV20 RKN	250034				1
	Maher	MV20 RKN	250035				1
	Maher	MV20 RKN	250036				1
	Maher	MV20 RKN	250037				1
	Maher	MV20 RKN	250038				1
24/11/2021	Maher	MK21 BXL	237425				1
	Maher	MK21 BXV	248917				1
	Maher	MK21 BXV	248918				1
	Maher	MK21 BXV	248919				1
	Maher	MK21 BXV	248920				1
	Maher	MK21 BXV	248921				1
	Maher	MK21 BXV	248922				1
	Maher	MK21 BXV	248923				1
	Maher	MK21 BXP	249751				1
	Maher	MK21 BXP	249752				1
	Maher	MK21 BXP	249753				1
	Maher	MK21 BXP	249997				1
	Maher	MK21 BXP	249998				1
	Maher	MK21 BXP	249999				1
	Maher	MK21 BXP	250000				1
	Maher	MV20 RKK	257104				1
	Maher	MV20 RKK	257105				1
	Maher	MV20 RKK	257106				1
	Maher	MV20 RKK	257107				1
	Maher	MV20 RKK	257108				1
	Maher	MV20 RKK	257109				1
	Maher	MV20 RKK	257110				1
26/01/2022	Fox Bros	PN70 EFA	74445				1
	Fox Bros	PN70 EFH	28085				1
	Fox Bros	PN70 EFA	74448				1
	Fox Bros	PN70 EFH	28089				1
27/01/2022	Fox Bros	PN70 EFH	28090				1
	Fox Bros	PN70 EFA	90551				1
	Fox Bros	PN70 EFH	28093				1
	Fox Bros	PN70 EFA	90553				1
28/01/2022	Fox Bros	PN70 EFH	28100				1
	Fox Bros	PN70 EFB	64566				1
	Fox Bros	PN70 EFJ	69308				1
	Fox Bros	PN70 EFH	28097				1
	Fox Bros	PN70 EFJ	69311				1
	Fox Bros	PN70 EFB	64564				1
	Fox Bros	PN70 EFA	90557				1
	Fox Bros	PN70 EFA	90560				1
31/01/2022	Fox Bros	PN70 EFE	76185				1
	Fox Bros	PN70 EFJ	76744				1
	Fox Bros	PN70 EFE	76188				1
	Fox Bros	PN70 EFH	90757				1
	Fox Bros	PN70 EFA	90567				1
	Fox Bros	PN70 EFJ	76741				1
	Fox Bros	PN70 EFG	90210				1
	Fox Bros	PN70 EFG	90213				1
	Fox Bros	PN70 EFA	90564				1
	Fox Bros	PN70 EFH	90754				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Fox Bros	PN70 EFH	90753				1
01/02/2022	Fox Bros	PN70 EFG	90217				1
	Fox Bros	PN70 EFA	90569				1
	Fox Bros	PN70 EFE	76190				1
	Fox Bros	PN70 EFG	90215				1
	Fox Bros	PN70 EFA	90571				1
	Fox Bros	PN70 EFE	76193				1
02/02/2022	Fox Bros	PN70 EFE	76198				1
	Fox Bros	PN70 EFE	76196				1
	Fox Bros	PN70 EFA	90577				1
	Fox Bros	PN70 EFG	90220				1
	Fox Bros	PN70 EFA	90574				1
	Fox Bros	PN70 EFG	90222				1
03/02/2022	Fox Bros	PN70 EFG	90227				1
	Fox Bros	PN70 EFG	90224				1
	Fox Bros	PN70 EFA	90582				1
	Fox Bros	PN70 EFE	76853				1
	Fox Bros	PN70 EFA	90579				1
	Fox Bros	PN70 EFE	76200				1
	Fox Bros	PN70 EFE	76853				1
04/02/2022	Fox Bros	PN70 EFE	76855				1
	Fox Bros	PN70 EFG	90229				1
	Fox Bros	PN70 EFH	90776				1
	Fox Bros	PN70 EFA	87701				1
	Fox Bros	PN70EFH	90779				1
	Fox Bros	PN70 EFA	87704				1
	Fox Bros	PN70 EFE	76857				1
	Fox Bros	PN70 EFG	90231				1
07/02/2022	Fox Bros	PN20 EFE	91153				1
	Fox Bros	PN20 EFE	91155				1
	Fox Bros	PN70 EFH	90786				1
	Fox Bros	PN70 EFA	87455				1
	Fox Bros	PN70 EFE	76864				1
	Fox Bros	PN70 EFE	76861				1
	Fox Bros	PN70 EFA	87452				1
	Fox Bros	PN70 EFH	90782				1
	Fox Bros	PN70 EFA	87456				1
	Fox Bros	PN70 EFE	76865				1
	Fox Bros	PN70 EFH	90786				1
08/02/2022	Fox Bros	PN70 EFJ	41409				1
	Fox Bros	PN70 EFJ	41410				1
	Fox Bros	PN70 EFJ	41408				1
	Fox Bros	PN70 EFH	90792				1
	Fox Bros	PN70 EFH	90790				1
	Fox Bros	PN70 EFA	87460				1
	Fox Bros	PN70 EFA	87458				1
	Fox Bros	PN70 EFH	90788				1
	Fox Bros	PN70 EFE	76868				1
	Fox Bros	PN70 EFG	90240				1
	Fox Bros	PN70 EFE	76872				1
	Fox Bros	PN70 EFE	76867				1
	Fox Bros	PN70 EFG	90238				1
09/02/2022	Fox Bros	PN70 EFG	90243				1
	Fox Bros	PN70 EFE	76873				1
	Fox Bros	PN70 EFA	87462				1
	Fox Bros	PN70 EFA	87464				1
	Fox Bros	PN70 EFH	90793				1
	Fox Bros	PN70 EFG	90242				1
	Fox Bros	PN70 EFH	90795				1
	Fox Bros	PN70 EFE	76875				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
10/02/2022	Fox Bros	PN70 EFH	87151				1
	Fox Bros	PN70 EFH	90799				1
	Fox Bros	PN70 EFH	90797				1
07/03/2022	Maher	MK21 BXN	272404				1
	Maher	MV20 RKF	270529				1
	Maher	MK21 BXU	251038				1
	Maher	MK21 BXN	272403				1
	Maher	MK21 BXU	251037				1
	Maher	MT21 TVX	270566				1
	Maher	MK21 BXU	251033				1
	Maher	MK21 BXU	251034				1
	Maher	MV20 RKF	270525				1
	Maher	MT21 TVX	270567				1
	Maher	MV20 RKF	270526				1
	Maher	MK21 BXN	272401				1
	Maher	MV20 RKF	270527				1
	Maher	MK21 BXU	251035				1
	Maher	MK21 BXU	251032				1
	Maher	MK21 BXN	260900				1
	Maher	MK21 BXN	260899				1
	Maher	MK21 BXN	272402				1
	Maher	MV20 RKF	270528				1
	Maher	MK21 BXU	251036				1
08/03/2022	Maher	MT21 TVX	270575				1
	Maher	MK21 CHF	261811				1
	Maher	MK21 BXN	272406				1
	Maher	MT21 TVO	260095				1
	Maher	MK21 CHF	261812				1
	Maher	MT21 TVO	260097				1
	Maher	MT21 TVX	270578				1
	Maher	MK21 CHF	261815				1
	Maher	MT21 TVO	260099				1
	Maher	MT21 TVX	270580				1
	Maher	MT21 TVX	270581				1
09/03/2022	Maher	MT21 TVW	208726				1
	Maher	MK21 BXN	272411				1
	Maher	MK21 BXP	260715				1
	Maher	MV20 RLY	272563				1
	Maher	MV20 RLY	272564				1
	Maher	MK21 BXN	272412				1
	Maher	MV20 RLY	272561				1
	Maher	MV20 RLY	272560				1
	Maher	MK21 CHF	261818				1
	Maher	MK21 BXP	260713				1
	Maher	MK21 BXN	272409				1
	Maher	MK21 CHF	261820				1
	Maher	MT21 TVW	208722				1
	Maher	MT21 TVW	208724				1
	Maher	MV20 RLY	272562				1
	Maher	MK21 BXN	272410				1
	Maher	MK21 CHF	261823				1
	Maher	MK21 TVW	208727				1
	Maher	MK21 BXP	260714				1
	Maher	MK21 BXP	260716				1
	Maher	MK21 BXN	272413				1
	Maher	MV20 RLY	272565				1
	Maher	MK21 BXP	260717				1
	Maher	MT21 TVW	208728				1
	Maher	MK21 CHF	261825				1
	Maher	MK21 BXN	272414				1
10/03/2022	Maher	MV20 RLY	272567				1
	Maher	MV20 RLY	272568				1
	Maher	MV20 RLY	272569				1
	Maher	MV20 RLY	272570				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MV20 RLY	272571				1
	Maher	MV20 RLY	272572				1
	Maher	MK21 CHF	261827				1
	Maher	MK21 CHF	261828				1
	Maher	MK21 CHF	261829				1
	Maher	MT21 TVO	233140				1
	Maher	MT21 TVO	233141				1
	Maher	MT21 TVO	233142				1
	Maher	MT21 TVO	233143				1
	Maher	MT21 TVO	233144				1
	Maher	MV20 RKK	259210				1
11/03/2022	Maher	MK21 CHF	261834				1
	Maher	MK21 BXV	252676				1
	Maher	MT21 TVO	233148				1
	Maher	MV20 RLY	272574				1
	Maher	MK21 CHF	261835				1
	Maher	MK21 BXV	252677				1
	Maher	MT21 TVO	233149				1
	Maher	MV20 RLY	272575				1
	Maher	MK21 CHF	261836				1
	Maher	MK21 BXV	252678				1
	Maher	MV20 RLY	272577				1
	Maher	MK21 CHF	261837				1
	Maher	MK21 BXV	252680				1
	Maher	MT21 TVO	248451				1
	Maher	MK21 CHF	261838				1
	Maher	MK21 BXV	252681				1
	Maher	MV20 RLY	272579				1
14/03/2022	Maher	MK21 BXW	270937				1
	Maher	MK21 CHF	261848				1
	Maher	MV20 RKK	259225				1
	Maher	MK21 CHF	261849				1
	Maher	MV20 RLY	272586				1
	Maher	MT21 TVW	271655				1
	Maher	MV20 RKK	259226				1
	Maher	MK21 CHF	261850				1
	Maher	MV20 RLY	272588				1
	Maher	MT21 TVW	271658				1
	Maher	MV20 RKK	259229				1
	Maher	MK21 CHP	261754				1
	Maher	MV20 RLY	272590				1
	Maher	MT21 TVW	271660				1
	Maher	MT21 TVX	270642				1
	Maher	MV20 RKK	259232				1
	Maher	MK21 CHF	261756				1
	Maher	MV20 RLY	272592				1
	Maher	MT21 TVW	271662				1
	Maher	MT21 TVX	270643				1
15/03/2022	Maher	MK21 CHF	261758				1
	Maher	MV20 RKK	259233				1
	Maher	MV20 RKK	259235				1
	Maher	MT21 TVO	261614				1
	Maher	MV20 RLY	272853				1
	Maher	MK21 CHF	261762				1
	Maher	MT21 TVO	261616				1
	Maher	MV20 RLY	272855				1
	Maher	MV20 RKK	259239				1
	Maher	MK21 CHF	261764				1
	Maher	MT21 TVO	261620				1
	Maher	MT21 TVO	261622				1
	Maher	MV20 RLY	272861				1
16/03/2022	Maher	MK21 TVW	271676				1
17/03/2022	Maher	MK21 CHG	257019				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MK21 TVW	271689				1
	Maher	MK21 CHF	261786				1
	Maher	MT21 TVV	261443				1
	Maher	MK21 TVW	271690				1
	Maher	MK21 CHG	257021				1
	Maher	MK21 CHF	261785				1
	Maher	MT21 TVV	261444				1
	Maher	MK21 TVW	271691				1
	Maher	MK21 CHG	257022				1
	Maher	MK21 CHF	261787				1
	Maher	MT21 TVV	261445				1
	Maher	MK21TVW	271692				1
	Maher	MK21 CHG	257023				1
	Maher	MK21 CHF	261788				1
	Maher	MK21 CHG	257024				1
	Maher	MK21 TVW	271693				1
	Maher	MK21 CHF	261789				1
	Maher	MT21 TVX	271523				1
	Maher	MT21 TVV	261442				1
	Maher	MK21 CHF	261783				1
	Maher	MT21 TVX	272182				1
	Maher	MK21 CHG	257017				1
	Maher	MK21 TVW	271687				1
18/03/2022	Maher	MK21 BXX	270137				1
	Maher	MK21 BXZ	250677				1
	Maher	MK21 CHF	261793				1
	Maher	MK21 BXX	270133				1
	Maher	MK21 CHF	261792				1
	Maher	MK21 BXZ	250676				1
	Maher	MK21 BXU	274076				1
	Maher	MK21 BXZ	250675				1
	Maher	MK21 BXU	274075				1
	Maher	MK21 CHF	261791				1
	Maher	MK21 BXX	270134				1
	Maher	MT21 TVX	271534				1
	Maher	MK21 BXU	274077				1
	Maher	MK21 BXX	270135				1
	Maher	MK21 CHF	261794				1
	Maher	MK21 BXZ	250678				1
	Maher	MK21 BXY	274078				1
	Maher	MK21 BXY	270136				1
	Maher	MK21 BXZ	250679				1
	Maher	MU22 UWR	271056				1
21/03/2022	Maher	MK21 BXP	270976				1
	Maher	MK21 BXP	270975				1
	Maher	MT21 TVX	272202				1
	Maher	MK21 BXP	270974				1
	Maher	MK21 BXX	270145				1
	Maher	MT21 TVX	271546				1
	Maher	MK21 BXU	274086				1
	Maher	MT21 TVX	271545				1
	Maher	MK21 BXX	270144				1
	Maher	MK21 BXP	270971				1
	Maher	MK21 BXX	270140				1
	Maher	MK21 BXU	274082				1
	Maher	MT21 TVX	271541				1
	Maher	MK21 BXP	270972				1
	Maher	MK21 BXP	270973				1
	Maher	MK21 BXX	270141				1
	Maher	MK21 BXU	274083				1
	Maher	MK21 BXU	274085				1
	Maher	MK21 BXU	274084				1
	Maher	MK21 BXX	270142				1
	Maher	MK21 BXX	270143				1
	Maher	MT21 TVX	271543				1
	Maher	MK21 CHF	234367				1
	Maher	MK21 BXX	270146				1

DATE	HAULIER	REG #	TICKET #	VEGETATION	MIXED	JKN	SURPLUS FILL
	Maher	MT21 TVX	271547				1
	Maher	MK21 BXP	270977				1
	Maher	MK21 BXU	274087				1
22/03/2022	Maher	MV22 UWT	271922				1
	Maher	MK21 BXW	259819				1
	Maher	MV22 UWT	271937				1
	Maher	MT21 TVW	270666				1
	Maher	MT21 TVW	270662				1
	Maher	MT21 TVX	271549				1
	Maher	MV22 UWT	271920				1
	Maher	MV22 UWT	271924				1
	Maher	MK21 BXP	270981				1
	Maher	MV22 UWT	271926				1
	Maher	MT21 TVW	270665				1
	Maher	MK21 BXW	259821				1
	Maher	MK21 BXW	259823				1
	Maher	MT21 TVW	270664				1
	Maher	MT21 TVW	270663				1
	Maher	MK21 BXW	259825				1
	Maher	MK21 BXW	259827				1
	Maher	MK21 BXW	259829				1
	Maher	MV22 UWT	271930				1
	Maher	MK21 BXP	270987				1
	Maher	MV22 UWT	271928				1
	Maher	MK21 BXW	259817				1
	Maher	MK21 BXP	270985				1
	Maher	MK21 BXP	270983				1
	Maher	MK21 BXW	259831				1
	Maher	MK21 BXW	259837				1

LOADS	71	14	30	965
m^3 per LOAD	14	10	14	8.25
VOLUME	994	140	420	7962
	VEGETATION	MIXED	JKN	SURPLUS FILL

Appendix 12 : Material Import Summary

DATE	HAULIER	REG #	TICKET #	6F5
13/01/2022	Maher	MK21 BXL	256115	1
	Maher	MK21 BXM	255395	1
	Maher	MV20 RLY	258058	1
26/01/2022	Fox Bros	PN70 EFA	74447	1
	Fox Bros	PN70 EFH	28088	1
	Maher	MK21 BXX	251766	1
	Maher	MT21 TVX	254527	1
	Maher	MK21 BXX	251756	1
	Maher	MK21 CHG	251370	1
	Maher	MT21 TVX	254529	1
	Maher	MK21 CHG	251374	1
	Maher	MT21 TVX	254533	1
	Maher	MK21 BXX	251760	1
	Maher	MK21 BXX	251758	1
	Maher	MT21 TVX	254523	1
	Maher	MK21 BXX	251752	1
	Maher	MK21 CHG	251366	1
	Maher	MT21 TVX	254525	1
	Maher	MK21 CHG	251368	1
	Maher	MK21 BXX	251754	1
	Maher	MK21 CHG	251376	1
	Maher	MK21 CHG	251378	1
	Maher	MK21 BXX	251764	1
	Maher	MT21 TVX	254537	1
	Maher	MK21 CHG	251380	1
	Maher	MT21 TVX	254539	1
	Maher	MT21 TVX	254531	1
	Maher	MK21 CHG	251382	1
	Maher	MK21 BXX	251768	1
	Maher	MT21 TVX	254541	1
	Maher	MK21 BXX	251762	1
	Maher	MT21 TVX	254535	1
	Maher	MK21 CHG	251372	1
27/01/2022	Fox Bros	PN70 EFA	90552	1
	Fox Bros	PN70 EFH	28092	1
	Fox Bros	PN70 EFH	28095	1
	Maher	MK21 CHG	251401	1
	Maher	MK21 BXX	251779	1
	Maher	MK21 CHG	251384	1
	Maher	MT21 TVX	254545	1
	Maher	MK21 BXO	254356	1
	Maher	MK21 BXX	251771	1
	Maher	MK21 CHG	251387	1
	Maher	MK21 BXO	254358	1
	Maher	MK21 BXX	251773	1
	Maher	MK21 CHG	251389	1
	Maher	MK21 BXO	254360	1

DATE	HAULIER	REG #	TICKET #	6F5
	Maher	MK21 BXX	251775	1
	Maher	MK21 CHG	251391	1
	Maher	MK21 BXO	254362	1
	Maher	MK21 BXX	251777	1
	Maher	MT21 TVX	254548	1
	Maher	MK21 CHG	251393	1
	Maher	MK21 BXO	254364	1
	Maher	MT21 TVX	254550	1
	Maher	MK21 CHG	251395	1
	Maher	MK21 BXO	254366	1
	Maher	MK21 BXX	251781	1
	Maher	MK21 CHG	251397	1
	Maher	MK21 BXO	254368	1
	Maher	MK21 BXX	251783	1
	Maher	MK21 BXX	251788	1
	Maher	MK21 BXO	254373	1
	Maher	MK21 BXO	254371	1
	Maher	MK21 CHG	251399	1
	Maher	MK21 BXX	251786	1
	Maher	MT21 TVX	250754	1
28/01/2022	Fox Bros	PN70 EFJ	69307	1
	Fox Bros	PN70 EFA	90556	1
	Fox Bros	PN70 EFB	64563	1
	Fox Bros	PN70 EFH	28096	1
	Fox Bros	PN70 EFA	90559	1
	Fox Bros	PN70 EFH	28099	1
	Fox Bros	PN70 EFJ	69310	1
	Fox Bros	PN70 EFB	64565	1
	Maher	MK21 BXX	251790	1
	Maher	MT21 TVX	250759	1
	Maher	MK21 BXX	251792	1
	Maher	MK21 BXO	254379	1
	Maher	MK21 BXO	254377	1
	Maher	MK21 BXX	251794	1
	Maher	MK21 BXO	254381	1
	Maher	MK21 BXX	251798	1
	Maher	MT21 TVX	250763	1
	Maher	MK21 BXX	251796	1
	Maher	MK21 BXO	254383	1
	Maher	MT21 TVX	250765	1
	Maher	MK21 BXO	254385	1
	Maher	MT21 TVX	250767	1
	Maher	MK21 BXX	251800	1
	Maher	MT21 TVX	255852	1
	Maher	MK21 BXO	254387	1
	Maher	MT21 TVX	250761	1
	Maher	MT21 TVX	250757	1
31/01/2022	Fox Bros	PN70 EFA	90563	1

DATE	HAULIER	REG #	TICKET #	6F5
	Fox Bros	PN70 EFG	90212	1
	Fox Bros	PN70 EFG	90209	1
	Fox Bros	PN70 EFJ	76740	1
	Fox Bros	PN70 EFA	90566	1
	Fox Bros	PN70 EFH	90756	1
	Fox Bros	PN70 EFJ	76743	1
	Fox Bros	PN70 EFE	76187	1
	Fox Bros	PN70 EFE	76184	1
01/02/2022	Fox Bros	PN70 EFG	90216	1
	Fox Bros	PN70 EFA	90568	1
	Fox Bros	PN70 EFE	76189	1
	Fox Bros	PN70 EFG	90214	1
	Fox Bros	PN70 EFA	90570	1
	Fox Bros	PN70 EFE	76192	1
02/02/2022	Fox Bros	PN70 EFE	76197	1
	Fox Bros	PN70 EFE	76195	1
	Fox Bros	PN70 EFA	90576	1
	Fox Bros	PN70 EFG	90219	1
	Fox Bros	PN70 EFA	90573	1
	Fox Bros	PN70 EFG	90221	1
03/02/2022	Fox Bros	PN70 EFG	90226	1
	Fox Bros	PN70 EFA	90581	1
	Fox Bros	PN70 EFE	76852	1
04/02/2022	Fox Bros	PN70 EFG	90230	1
	Fox Bros	PN70 EFA	87703	1
	Fox Bros	PN70 EFH	90778	1
07/02/2022	Fox Bros	PN70 EFH	90784	1
	Fox Bros	PN70 EFA	87454	1
	Fox Bros	PN70 EFE	76863	1
	Fox Bros	PN70 EFA	87451	1
	Fox Bros	PN70 EFH	90781	1
	Fox Bros	PN70 EFE	76860	1
08/02/2022	Fox Bros	PN70 EFE	76866	1
	Fox Bros	PN70 EFA	87461	1
	Fox Bros	PN70 EFG	90241	1
	Fox Bros	PN70 EFE	76870	1
	Fox Bros	PN70 EFH	90791	1
	Fox Bros	PN70 EFA	87459	1
	Fox Bros	PN70 EFG	90239	1
	Fox Bros	PN70 EFH	90789	1
	Fox Bros	PN70 EFH	90787	1
	Fox Bros	PN70 EFE	76869	1
	Fox Bros	PN70 EFG	90237	1

DATE	HAULIER	REG #	TICKET #	6F5
	Fox Bros	PN70 EFA	87457	1

22/03/2022	Maher	MV22 UWT	271934	1
	Maher	MK21 BXW	259835	1
	Maher	MV22 UWT	271936	1
	Maher	MV22 UWT	271931	1
	Maher	MK21 BXP	270982	1
	Maher	MV22 UWT	271925	1
	Maher	MK21 BXP	270984	1
	Maher	MV22 UWT	271927	1
	Maher	MK21 BXW	259816	1
	Maher	MK21 BXP	270986	1
	Maher	MV22 UWT	271929	1
	Maher	MK21 BXP	270980	1
	Maher	MV22 UWT	271921	1
	Maher	MV22 UWT	271923	1
	Maher	MK21 BXW	259818	1
	Maher	MK21 BXW	259820	1
	Maher	MK21 BXW	259822	1
	Maher	MK21 BXW	259824	1
	Maher	MK21 BXW	259826	1
	Maher	MK21 BXW	259828	1
	Maher	MK21 BXW	259830	1
	Maher	MK21 BXW	259832	1
	Maher	MU22 UWP	271393	1
	Maher	MK21 BXP	270978	1
	Maher	MV22 UWT	271919	1
	Maher	MV22 UWT	271917	1

DATE	HAULIER	REG #	TICKET #	6F5
23/03/2022	Maher	MV22 UWT	271852	1
	Maher	MV22 UWT	271854	1
	Maher	MK21 BXV	291422	1
	Maher	MK21 BXV	291420	1
	Maher	MK21 BXV	291414	1
	Maher	MV22 UWT	271945	1
	Maher	MV22 UWT	271947	1
	Maher	MK21 BXV	291416	1
	Maher	MV22 UWT	271948	1
	Maher	MV22 UWT	271950	1
	Maher	MK21 BXV	291418	1
	Maher	MK21 BXV	291412	1
	Maher	MV22 UWT	271943	1
	Maher	MK21 BXV	291410	1
	Maher	MV22 UWT	271941	1
	Maher	MV22 UWT	271938	1

LOADS	181
m^3 per LOAD	8.25
VOLUME	1494
	6F5

Appendix 13 : Generic Assessment Criteria

Category 4 Screening Levels (C4SL)

Substance	Residential (with home-grown produce)	Residential (without home-grown produce)	Allotments	Commercial	Public Open Space 1	Public Open Space 2
Arsenic	37 mg/kg	40 mg/kg	49 mg/kg	640 mg/kg	79 mg/kg	168 mg/kg
Benzene	0.87 mg/kg	3.3 mg/kg	0.18 mg/kg	98 mg/kg	140 mg/kg	230 mg/kg
Benzo(a)pyrene	5 mg/kg	5.3 mg/kg	5.7 mg/kg	76 mg/kg	10 mg/kg	21 mg/kg
Cadmium	26 mg/kg	149 mg/kg	4.9 mg/kg	410 mg/kg	220 mg/kg	880 mg/kg
Chromium VI	21 mg/kg	21 mg/kg	170 mg/kg	49 mg/kg	23 mg/kg	250 mg/kg
Lead	200 mg/kg	310 mg/kg	80 mg/kg	2330 mg/kg	630 mg/kg	1300 mg/kg

Summary Table for the Generic Assessment Criteria for Human Health Risk Assessment Land Quality Management (LQM) S4ULs.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Metals	Inorganic Arsenic	6%	37	40	43	640	79	170
	Beryllium	6%	1.7	1.7	35	12	2.2	63
	Boron	6%	290	11,000	45	240,000	21,000	46,000
	Cadmium	6%	11	85	1.9	190	120	532
	Chromium (III)	6%	910	910	18,000	8,600	1,500	33,000
	Chromium (VI)	6%	6.0	6.0	1.8	33	7.7	220
	Copper	6%	2,400	7,100	520	68,000	12,000	44,000
	Elemental Mercury	6%	1.2	1.2	21	58 (25.8) ^{vap}	16	30 (25.8) ^{vap}
	Inorganic Mercury	6%	40	56	19	1,100	120	240
	Methylmercury	6%	11	15	6.0	320	40	68
	Nickel	6%	180	180	230	980	230	3,400
	Selenium	6%	250	430	88	12,000	1,100	1,800
	Vanadium	6%	410	1,200	91	9,000	2,000	5,000
	Zinc	6%	3,700	40,000	620	730,000	81,000	170,000
BTEX Compounds	Benzene	1%	0.087	0.38	0.017	27	72	90
		2.5%	0.17	0.70	0.034	47	72	100
		6%	0.37	1.4	0.075	90	73	110
	Toluene	1%	130	880 (869) ^{vap}	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}
		2.5%	290	1,900	51	110,000 (1,920) ^{vap}	56,000	95,000 (1,920) ^{vap}
		6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360) ^{vap}
	Ethylbenzene	1%	47	83	16	5,700 (518) ^{vap}	24,000	17,000 (518) ^{vap}
		2.5%	110	190	39	13,000 (1,220) ^{vap}	24,000	22,000 (1,220) ^{vap}
		6%	260	440	91	27,000 (2,840) ^{vap}	25,000	27,000 (2,840) ^{vap}
	o-xylene	1%	60	88	28	6,600 (478) ^{sol}	41,000	17,000 (478) ^{sol}
		2.5%	140	210	67	15,000 (1,120) ^{sol}	42,000	24,000 (1,120) ^{sol}
		6%	330	480	160	33,000 (2,620) ^{sol}	43,000	33,000 (2,620) ^{sol}
	m-xylene	1%	59	82	31	6,200 (625) ^{vap}	41,000	17,000 (625) ^{vap}
		2.5%	140	190	74	14,000 (1,470) ^{vap}	42,000	24,000 (1,470) ^{vap}
		6%	320	450	170	31,000 (3,460) ^{vap}	43,000	32,000 (3,460) ^{vap}
	p-xylene	1%	56	79	29	5,900 (576) ^{sol}	41,000	17,000 (576) ^{sol}
		2.5%	130	180	69	14,000 (1,350) ^{sol}	42,000	23,000 (1,350) ^{sol}
		6%	310	430	160	30,000 (3,170) ^{sol}	43,000	31,000 (3,170) ^{sol}

NOTES

$^{Sol / vap}$ = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Polycyclic Aromatic Hydrocarbons (PAHs)	Acenaphthene	1%	210	3,000 (57.1) ^{sol}	34	84,000 (57.0) ^{sol}	15,000	29,000
		2.5%	510	4,700 (141) ^{sol}	85	97,000 (141) ^{sol}	15,000	30,000
		6%	1,100	6,000 (336) ^{sol}	200	100,000	15,000	30,000
	Acenaphthylene	1%	170	2,900 (86.1) ^{sol}	28	83,000 (86.1) ^{sol}	15,000	29,000
		2.5%	420	4,600 (212) ^{sol}	69	97,000 (212) ^{sol}	15,000	30,000
		6%	920	6,000 (506) ^{sol}	160	100,000	15,000	30,000
	Anthracene	1%	2,400	31,000 (1.17) ^{vap}	380	520,000	74,000	150,000
		2.5%	5,400	35,000	950	540,000	74,000	150,000
		6%	11,000	37,000	2,200	540,000	74,000	150,000
	Benz(a)anthracene	1%	7.2	11	2.9	170	29	49
		2.5%	11	14	6.5	170	29	56
		6%	13	15	13	180	29	62
	Benzo(a)pyrene (only)	1%	2.2	3.2	0.97	35	5.7	11
		2.5%	2.7	3.2	2.0	35	5.7	12
		6%	3.0	3.2	3.5	36	5.7	13
	Benzo(b)fluoranthene	1%	2.6	3.9	0.99	44	7.1	13
		2.5%	3.3	4.0	2.1	44	7.2	15
		6%	3.7	4.0	3.9	45	7.2	16
	Benzo(ghi)perylene	1%	320	360	290	3,900	640	1,400
		2.5%	340	360	470	4,000	640	1,500
		6%	350	360	640	4,000	640	1,600
	Benzo(k)fluoranthene	1%	77	110	37	1,200	190	370
		2.5%	93	110	75	1,200	190	410
		6%	100	110	130	1,200	190	440
	Chrysene	1%	15	30	4.1	350	57	93
		2.5%	22	31	9.4	350	57	110
		6%	27	32	19	350	57	120
	Dibenzo(ah)anthracene	1%	0.24	0.31	0.14	3.5	0.57	1.1
		2.5%	0.28	0.32	0.27	3.6	0.58	1.3
		6%	0.3	0.32	0.43	3.6	0.58	1.4
	Fluoranthene	1%	280	1,500	52	23,000	3,100	6,300
		2.5%	560	1,600	130	23,000	3,100	6,300
		6%	890	1,600	290	23,000	3,100	6,400
	Fluorene	1%	170	2,800 (36.0) ^{sol}	27	63,000 (30.9) ^{sol}	9,900	20,000
		2.5%	400	3,800 (76.5) ^{sol}	67	68,000	9,900	20,000
		6%	860	4,500 (183) ^{sol}	160	71,000	9,900	20,000
	Indeno(123-cd)pyrene	1%	27	45	9.5	500	82	150
		2.5%	36	46	21	510	82	170
		6%	41	46	39	510	82	180
	Naphthalene	1%	2.3 ^{f}	2.3 ^{f}	4.1 ^{f}	190 ^{f} (76.4) ^{sol}	4,900 ^{f}	1,200 ^{f} (76.4) ^{sol}
		2.5%	5.6 ^{f}	5.6 ^{f}	10 ^{f}	460 ^{f} (183) ^{sol}	4,900 ^{f}	1,900 ^{f} (183) ^{sol}
		6%	13 ^{f}	13 ^{f}	24 ^{f}	1,100 ^{f} (432) ^{sol}	4,900 ^{f}	3,000
	Phenanthrene	1%	95	1,300 (36.0) ^{sol}	15	22,000	3,100	6,200
		2.5%	220	1,500	38	22,000	3,100	6,200
		6%	440	1,500	90	22,000	3,100	6,300
	Pyrene	1%	620	3,700	110	54,000	7,400	15,000
		2.5%	1,200	3,800	270	54,000	7,400	15,000
		6%	2,000	3,800	620	54,000	7,400	15,000
	Coal Tar (B(a)P as surrogate marker)	1%	0.79	1.2	0.32	15	2.2	4.4
		2.5%	0.98	1.2	0.67	15	2.2	4.7
		6%	1.1	1.2	1.2	15	2.2	4.8

NOTES

$^{sol / vap}$ = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = naphthalene is based on comparison of inhalation exposure with TDI_{inhal} for localised effect.

All GAC are based on sandy loam soils with a pH 7.

LQM Generic Assessment Criteria (mg/kg) Dry weight soil

	Contaminant	SOM	Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Petroleum Hydrocarbons	**Aliphatic**							
	EC 5-6	1%	42	42	730	3,200 (304) sol	570,000(304) sol	95,000 (304) sol
	EC>6-8	1%	100	100	2,300	7,800 (144) sol	600,000	150,000 (144) sol
	EC>8-10	1%	27	27	320	2,000 (78) sol	13,000	14,000 (78) vap
	EC>10-12	1%	130 (48) vap	130 (48) vap	2,200	9,700 (48) sol	13,000	21,000 (48) vap
	EC>12-16	1%	1,100 (24) sol	1,100 (24) sol	11,000	59,000 (24) sol	13,000	25,000 (24) sol
	EC>16-35	1%	65,000 (8.48) f,sol	65,000 (8.48) f,sol	260,000 f	160,000 f	250,000 f	450,000 f
	EC>35-44	1%	65,000 (8.48) f,sol	65,000 (8.48) f,sol	260,000 f	160,000 f	250,000 f	450,000 f
	Aliphatic							
	EC 5-6	2.5%	78	78	1,700	5,900 (558) sol	590,000	130,000 (558) sol
	EC>6-8	2.5%	230	230	5,600	17,000 (322) sol	610,000	220,000 (322) sol
	EC>8-10	2.5%	65	65	770	4,800 (190) vap	13,000	18,000 (190) vap
	EC>10-12	2.5%	330 (118) vap	330 (118) vap	4,400	23,000 (118) vap	13,000	23,000 (118) vap
	EC>12-16	2.5%	2,400 (59) sol	2,400 (59) sol	13,000	82,000 (59) sol	13,000	25,000 (59) sol
	EC>16-35	2.5%	92,000 (21) f,sol	92,000 (21) f,sol	270,000 f	1,700,000 f	250,000 f	480,000 f
	EC>35-44	2.5%	92,000 (21) f,sol	92,000 (21) f,sol	270,000 f	1,700,000 f	250,000 f	480,000 f
	Aliphatic							
	EC 5-6	6%	160	160	3,900	12,000 (1,150) sol	600,000	180,000 (1,150) sol
	EC>6-8	6%	530	530	13,000	40,000 (736) sol	620,000	320,000 (736) sol
	EC>8-10	6%	150	150	1,700	11,000 (451) vap	13,000	21,000 (451) vap
	EC>10-12	6%	760 (283) vap	760 (283) vap	7,300	47,000 (283) vap	13,000	24,000 (283) vap
	EC>12-16	6%	4,300 (142) sol	4,400 (142) sol	13,000	90,000 (142) sol	13,000	26,000 (142) sol
	EC>16-35	6%	110,000 f	110,000 f	270,000 f	1,800,000 f	250,000 f	490,000 f
	EC>35-44	6%	110,000 f	110,000 f	270,000 f	1,800,000 f	250,000 f	490,000 f
	Aromatic							
	EC5-7(benzene as non-threshold)	1%	70	370	13	26,000 (1,220) sol	56,000	76,000 (1,220) sol
	EC>7-8(toluene)	1%	130	860	22	56,000 (869) vap	56,000	87,000 (869) vap
	EC>8-10	1%	34	47	8.6	3,500 (613) vap	5,000	7,200 (613) vap
	EC>10-12	1%	74	250	13	16,000 (364) sol	5,000	9,200 (364) sol
	EC>12-16	1%	140	1,800	23	36,000 (169) sol	5,100	10,000
	EC>16-21	1%	260 f	1,900 f	46 f	28,000 f	3,800 f	7,600 f
	EC>21-35	1%	1,100 f	1,900 f	370 f	28,000 f	3,800 f	7,800 f
	EC>35-44	1%	1,100 f	1,900 f	370 f	28,000 f	3,800 f	7,800 f
	Aromatic							
	EC5-7(benzene as non-threshold)	2.5%	140	690	27	46,000 (2,260) sol	56,000	84,000 (2,260) sol
	EC>7-8(toluene)	2.5%	290	1,800	51	110,000 (1,920) sol	56,000	95,000 (1,920) sol
	EC>8-10	2.5%	83	110	21	8,100 (1,500) vap	5,000	8,500 (1,500) vap
	EC>10-12	2.5%	180	590	31	28,000 (899) sol	5,000	9,700 (899) sol
	EC>12-16	2.5%	330	2,300 (419) sol	57	37,000	5,100	10,000
	EC>16-21	2.5%	540 f	1,900 f	110 f	28,000 f	3,800 f	7,700 f
	EC>21-35	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f
	EC>35-44	2.5%	1,500 f	1,900 f	820 f	28,000 f	3,800 f	7,800 f
	Aromatic							
	EC5-7(benzene as non-threshold)	6%	300	1,400	57	86,000 (4,710) sol	56,000	92,000 (4,710) sol
	EC>7-8(toluene)	6%	660	3,900	120	180,000 (4,360) vap	56,000	100,000 (4,360) vap
	EC>8-10	6%	190	270	51	17,000 (3,580) vap	5,000	9,300 (3,580) vap
	EC>10-12	6%	380	1,200	4	34,000 (2,150) sol	5,000	10,000
	EC>12-16	6%	660	2,500	130	38,000	5,100	10,000
	EC>16-21	6%	930 f	1,900 f	260 f	28,000 f	3,800 f	7,800 f
	EC>21-35	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f
	EC>35-44	6%	1,700 f	1,900 f	1,600 f	28,000 f	3,800 f	7,900 f
	Aliphatic +Aromatic >EC44	1%	1,600 f	1,900 f	1,200 f	28,000 f	3,800 f	7,800 f
		2.5%	1,800 f	1,900 f	2,100 f	28,000 f	3,800 f	7,800 f
		6%	1,900 f	1,900 f	3,000 f	28,000 f	3,800 f	7,900 f

NOTES

Sol / vap = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

	Contaminant	SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil: Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Chloalkanes and Alkenes & Explosives	1,2 Dichloroethane (DCA)	1%	7.1E-03	9.2E-03	4.6E-03	0.67	29	21
		2.5%	1.1E-02	1.3E-02	8.3E-03	0.97	29	24
		6%	1.9E-02	2.3E-02	1.6E-02	1.7	29	28
	1,1,1 Trichloroethane (TCA)	1%	8.8	9.0	48	660	140,000	57,000 (1,425) vap
		2.5%	18	18	110	1,300	140,000	76,000 (2,915) vap
		6%	39	40	240	3,000	140,000	100,000 (6,392) vap
	1,1,2,2-Tetrachloroethanes (PCA)	1%	1.6	3.9	0.41	270	1,400	1,800
		2.5%	3.4	8.0	0.89	550	1,400	2,100
		6%	7.5	17	2.0	1,100	1,400	2,300
	1,1,1,2-Tetrachloroethanes (PCA)	1%	1.2	1.5	0.79	110	1,400	1,500
		2.5%	2.8	3.5	1.9	250	1,400	1,800
		6%	6.4	8.2	4.4	560	1,400	2,100
	Tetrachloroethene (PCE)	1%	0.18	0.18	0.65	19	1,400	810 (424) sol
		2.5%	0.39	0.40	1.5	42	1,400	1,100 (951) sol
		6%	0.90	0.92	3.6	95	1,400	1,500
	Tetrachloromethane (carbon tetrachloride)	1%	2.6E-02	2.6E-02	0.45	2.9	890	190
		2.5%	5.6E-02	5.6E-02	1.0	6.3	920	270
		6%	0.13	0.13	2.4	14	950	400
	Trichloroethene (TCE)	1%	1.6E-02	1.7E-02	4.1E-02	1.2	120	70
		2.5%	3.4E-02	3.6E-02	9.1E-02	2.6	120	91
		6%	7.5E-02	8.0E-02	0.21	5.7	120	120
	Trichloromethane (chloroform)	1%	0.91	1.2	0.42	99	2,500	2,600
		2.5%	1.7	2.1	0.83	170	2,500	2,800
		6%	3.4	4.2	1.7	350	2,500	3,100
	Chloroethene (vinyl chloride)	1%	6.4E-04	7.7E-04	5.5E-04	5.9E-02	3.5	4.8
		2.5%	8.7E-04	1.0E-03	1.0E-03	7.7E-02	3.5	5.0
		6%	1.4E-03	1.5E-03	1.8E-03	0.12	3.5	5.4
	2,4,6-Trinitritoluene (TNT)	1%	1.6	65	0.24	1,000	130	260
		2.5%	3.7	66	0.58	1,000	130	270
		6%	8.1	66	1.4	1,000	130	270
	RDX	1%	120	13,000	17	210,000	26,000	49,000 (18.7) sol
		2.5%	250	13,000	38	210,000	26,000	51,000
		6%	540	13,000	85	210,000	27,000	53,000
	HMX	1%	5.7	6,700	0.86	110,000	13,000	23,000 (0.35) vap
		2.5%	13	6,700	1.9	110,000	13,000	23,000 (0.39) vap
		6%	26	6,700	3.9	110,000	13,000	24,000 (0.48) vap
Pesticides	Aldrin	1%	5.7	7.3	3.2	170	18	30
		2.5%	6.6	7.4	6.1	170	18	31
		6%	7.1	7.5	9.8	170	18	31
	Dieldrin	1%	0.97	7.0	0.17	170	18	30
		2.5%	2.0	7.3	0.41	170	18	30
		6%	3.5	7.4	0.96	170	18	31
	Atrazine	1%	3.3	610	0.5	9,300	1,200	2,300
		2.5%	7.8	620	1.2	9,400	1,200	2,400
		6%	17.4	620	2.7	9,400	1,200	2,400
	Dichlorvos	1%	3.2E-02	6.4	4.9E-03	140	16	26
		2.5%	6.6E-02	6.5	1.0E-02	140	16	26
		6%	0.14	6.6	2.2E-02	140	16	27
	Endosulfanns (2 isomers)	1%	7.4	160 (3.0E-03) vap	1.2	5,600 (3.0E-03) vap	1,200	2,300
		2.5%	18	280 (7.0E-03) vap	2.9	7,400 (7.0E-03) vap	1,200	2,400
		6%	41	410 (1.6E-02) vap	6.8	8,400 (1.6E-02) vap	1,200	2,500
	Hexachlorocyclohexane (3 isomers), inc Lindane	1%	8.5E-02	3.7	1.3E-02	65	8.1	15
		2.5%	0.2	3.8	3.2E-02	65	8.1	15
		6%	0.46	3.8	7.7E-02	65	8.1	16

NOTES

Sol / vap = solubility / vapour limit (potentially use if free product identified, although highly conservative).

All GAC are based on sandy loam soils with a pH 7.

Contaminant		SOM	LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
			Res +	Res -	Allot.	Comm.	POS_{resi}	POS_{park}
Chlorobenzenes	Chlorobenzene	1%	0.46	0.46	5.9	56	11,000	1,300 (675) [sol]
		2.5%	1.0	1.0	14	130	13,000	2,000 (1,520) [sol]
		6%	2.4	2.4	32	290	14,000	2,900
	Dichlorobenzenes (3 isomers)	1%	23	24	94	2,000 (571) [sol]	90,000	24,000 (571) [sol]
		2.5%	55	57	230	4,800 (1,370) [sol]	95,000	36,000 (1,370) [sol]
		6%	130	130	540	11,000 (3,240) [sol]	98,000	51,000 (3,270) [sol]
	Trichlorobenzenes (3 isomers)	1%	2.6	2.6	55	220	15,000	1,700 (318) [vap]
		2.5%	6.4	6.4	140	530	17,000	2,600 (786) [vap]
		6%	15	15	320	1,300	19,000	4,000 (1,880) [vap]
	Tetrachlorobenzenes (3 isomers)	1%	0.66	0.75	0.38	49 (39.4) [vap]	78	110 (39) [vap]
		2.5%	1.6	1.9	0.90	120 (98.1) [vap]	79	120
		6%	3.7	4.3	2.2	240 (235) [vap]	79	130
	Pentachlorobenzene	1%	5.8	19	1.2	640 (43.0) [sol]	100	190
		2.5%	12	30	3.1	770 (107) [sol]	100	190
		6%	22	38	7.0	830	100	190
	Hexachlorobenzene	1%	1.8 (0.20) [vap]	4.1 (0.20) [vap]	0.47	110 (0.20) [vap]	16	30
		2.5%	3.3 (0.50) [vap]	5.7 (0.50) [vap]	1.1	120	16	30
		6%	4.9	6.7 (1.2) [vap]	2.5	120	16	30
Chlorophenol	Chlorophenols (4 congeners)	1%	0.87 [g]	94	0.13 [g]	3,500	620	1,100
		2.5%	2.0	150	0.30	4,000	620	1,100
		6%	4.5	210	0.70	4,300	620	1,100
	Pentachlorophenol	1%	0.22	27 (16.4) [vap]	3.0E-02	400	60	110
		2.5%	0.52	29	8.0E-02	400	60	120
		6%	1.2	31	0.19	400	60	120
Others	Carbon Disulphide	1%	0.14	0.14	4.8	11	11,000	1,300
		2.5%	0.29	0.29	10	22	11,000	1,900
		6%	0.62	0.62	23	47	11,000	2,700
	Hexachlorobutadiene	1%	0.29	0.32	0.25	31	25	48
		2.5%	0.7	0.78	0.61	66	25	50
		6%	1.6	1.8	1.4	120	25	51
	Phenol	1%	280	750	66	760 [dir] (31,000)	760 [dir] (11,000)	760 [dir] (8,600)
		2.5%	550	1,300	140	1,500 [dir] (35,000)	1,500 [dir] (11,000)	1,500 [dir] (9,700)
		6%	1,100	2,300	280	3,200 [dir] (37,000)	3,200 [dir] (11,000)	3,200 [dir] (11,000)

NOTES

[sol / vap] = solubility / vapour limit (potentially use if free product identified, although highly conservative).

[dir] = S4uls based on threshold protective of direct skin contact with phenol (brackets long term exposure for illustration purposes).

[g] = derived based on 2,3,4,6-tetrachlorophenol.

Appendix 14 : Selection of Progress Photographs



Figure 1 : Initial vegetation clearance adjacent to Needwood Close at commencement of site works



Figure 2 : Tree surgeons at work along the Thornton Street North boundary of the site



Figure 3 : Tree removal operations well progressed



Figure 4 : Felled timber stacked in anticipation of processing for biomass



Figure 5 : Chipper unit processing felled timber into biomass


Figure 6 : A forestry forwarder being used to collect and stockpile felled timber



Figure 7 : Root mass stockpile awaiting collection and disposal as green waste



Figure 8 : Site entrance retained existing gates until new perimeter fencing had been installed



Figure 9 : Japanese Knotweed identified amongst the standing timber



Figure 10 : Knotweed area delimited using orange mesh fencing, prior to controlled removal



Figure 11 : Excavator working from outside the knotweed quarantine boundary to sift the soils and remove remaining rhizomes



Figure 12 : Loading and export of knotweed-contaminated soils under supervision



Figure 13 : Archaeologists progressing investigative works near the junction of Pagest Street and Rochdale Road



Figure 14 : Relic foundations being exposed prior to removal



Figure 15 : Concrete obstruction encountered in close proximity to boundary fence and earthenware telecomms ducting



Figure 16 : Concrete pile cropped to specified level and surveyed prior to placement of re-engineered fill



Figure 17 : Relic slab being removed by excavator



Figure 18 : Blocks of relic foundations and slabs awaiting processing, segregated from adjacent stockpiles of suitable fill



Figure 19 : Large foundation blocks awaiting reduction in size prior to crushing



Figure 20 : Excavator using a hydraulic muncher to process oversize and stockpile the recovered reinforcement wire



Figure 21 : Hydraulic breaker in use to assist in the removal of a large buried mass concrete foundation



Figure 22 : Crusher in action with misting spray unit deployed to mitigate any potential dust emissions



Figure 23 : Screener being used to process excavated material prior to use as backfill



Figure 24 : Excavator maintaining the stockpile of site-produced crushed brick and concrete



Figure 25 : Segregated stockpiles of excavated materials, with fenced-off drainage manholes (to be retained)



Figure 26 : Stockpile of mixed soils and roots awaiting disposal off site (Needwood Close entrance)



Figure 27 : Pieces of asbestos cement pipe encountered during the works, bagged and awaiting collection by licenced contractor



Figure 28 : Loading of surplus fill material for disposal off site



Figure 29 : Aerial view looking south: surplus soils being loaded for disposal, imported crush being placed to pile mats



Figure 30 : Mechanical and manual maintenance of road pavement and footways during export operations



Figure 31 : GPS control of earthworks operations



Figure 32 : Excavation to natural ground along the Marston Street boundary (north)



Figure 33 : Dozer being used to cut steep batters to profile



Figure 34 : Handling of imported crush for pile mat construction



Figure 35 : Dozer in action to cut to design levels in north of site



Figure 36 : Compaction of suitable fill material in accordance with the specification



Figure 37 : Compaction of suitable fill material in accordance with the specification



Figure 38 : Compaction of suitable fill adjacent to Churnet Street existing sewer easement



Figure 39 : Compaction of suitable fill in accordance with the specification



Figure 40 : Diversion of four BT Openreach ducts adjacent to Rochdale Road



Figure 41 : Seven earthenware BT Openreach ducts located adjacent to Rochdale Road, not relocated



Figure 42 : Typical hand-dug excavation to locate and identify existing services on the site



Figure 43 : Washout hydrant used as termination for existing watermain entering site adjacent to Needwood Close gateway



Figure 44 : Excavated trench ready for diversion of water pipe along Shellard Road on southern boundary of the site



Figure 45 : Installation of water main diversion within Marston Street footpath at north of site



Figure 46 : Installed electricity duct within north footway of Paget Street (looking towards Burgess Street)

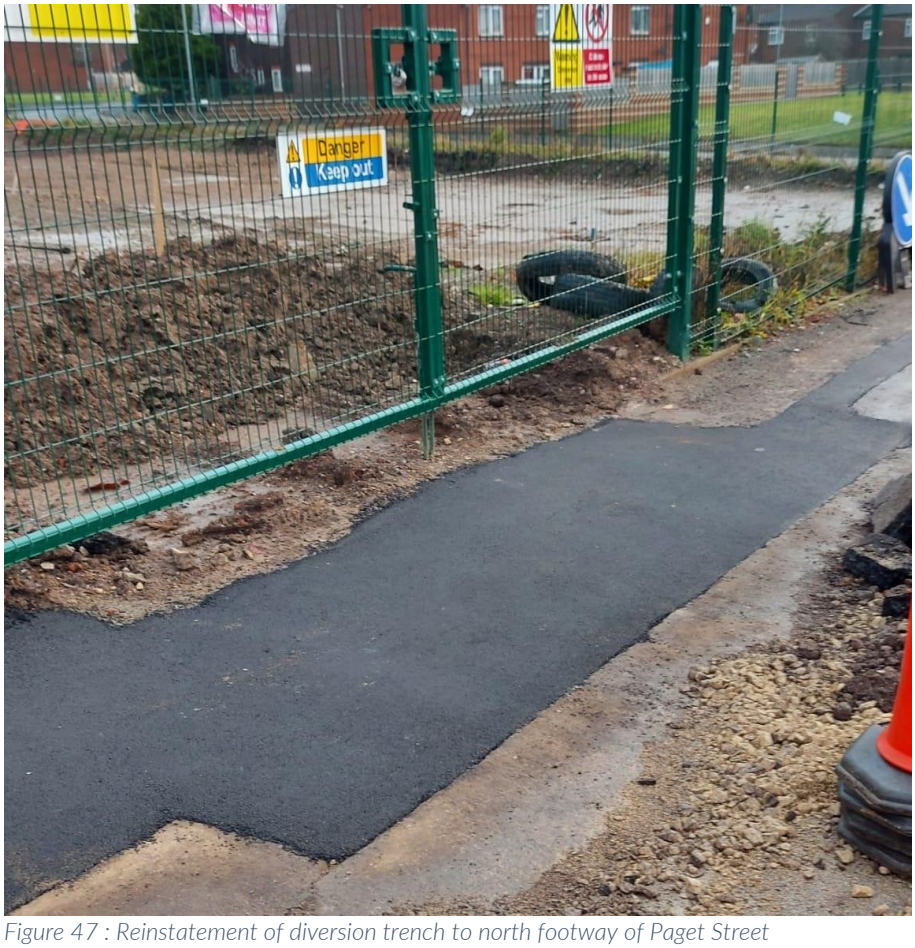


Figure 47 : Reinstatement of diversion trench to north footway of Paget Street



Figure 48 : Diversion of electricity cable across Thornton Street North



Figure 49 : Sampling of imported crush for geotechnical assessment



Figure 50 : Collection of bulk soils samples for laboratory analysis


Figure 51 : Sampling of stockpiled topsoil for laboratory analysis



Figure 52 : CBR testing underway using 25T excavator as kentledge



Figure 53 : CBR testing in progress



Figure 54 : Depth to natural being recorded with surveyor's staff as turnover works proceed



Figure 55 : Easement for BT Openreach fibre-optic fenced off during remediation works to avoid damage. The fibre-optic cable was finally removed in April 2022, after which LKR remobilised to site and completed remediation of the easement corridor



Figure 56 : Southern stockpile of tested subsoil (250m^3)



Figure 57 : Southern stockpile of tested subsoil (270m^3)



Figure 58 : Northern stockpile of tested subsoil (900m^3)



Figure 59 : Northern stockpile of tested subsoil (850m^3)



Figure 60 : Stockpile maintenance and final excavation to design levels underway adjacent to Paget Street



Figure 61 : Pile mat construction and export of surplus soils in northern part of site (backloading to reduce traffic movements)



Figure 62 : Completed pile mat to plots seen under construction in Figure 61 (above); stockpile of tested subsoil to right of frame



Figure 63 : Completed pile mats adjacent to Paget Street, looking towards Rochdale Road



Figure 64 : Completed pile mats in the north-west corner of the site, adjacent to Marston Street footpath



Figure 65 : Security fencing installed along Thornston Street North, with graded batter to adjacent pile mat



Figure 66 : Completed pile mats in north of site adjacent to Needwood Close access



Figure 67 : Works completed in the Park area, root protection fencing removed, topsoil stockpile adjacent to parking area, security bund across access gateway



Figure 68 : Looking southeast across the completed site, with remaining fibre-optic easement fenced in orange, and tested subsoil stockpiles fenced in green. Fibre-optic cable was removed in April 2022; LKR remobilised to site and completed remediation of the easement corridor



Figure 69 : Looking north from Rochdale Road across completed site, with remaining fibre-optic easement fenced in orange, and tested subsoil stockpiles fenced in green. Fibre-optic cable was removed in April 2022; LKR remobilised to site and completed remediation of the easement corridor



Figure 70 : Completed site seen from east looking towards Rochdale Road

Appendix 15 : Retained Certified Soils

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

Final Report

Report No.:	21-23312-1
Initial Date of Issue:	13-Jul-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Peter Dunn
Project	LKR 201044 Collyhurst

Quotation No.:		**Date Received:**	07-Jul-2021
Order No.:	LKR 201044	**Date Instructed:**	07-Jul-2021
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	13-Jul-2021
Date Approved:	13-Jul-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR 201044 Collyhurst

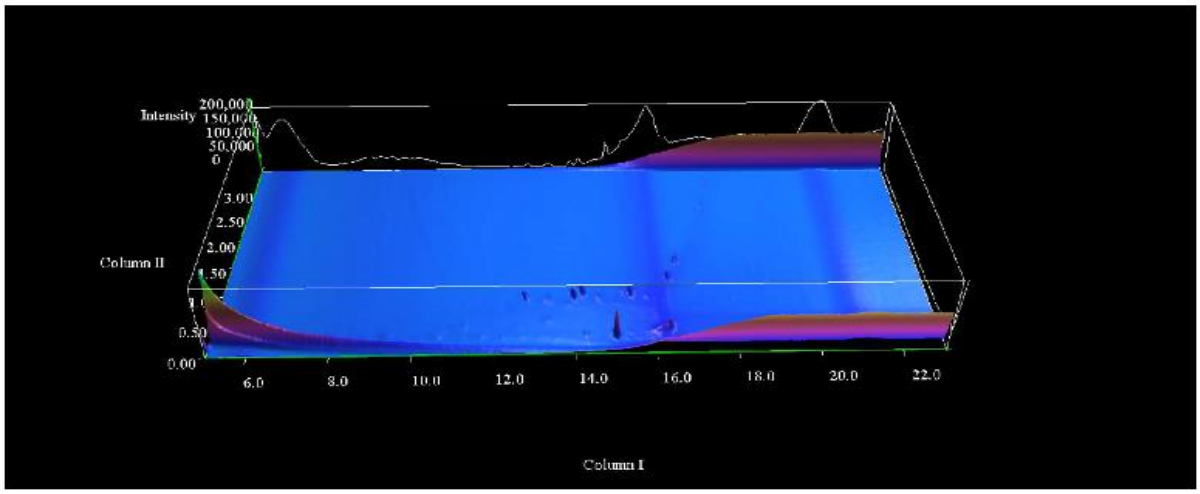
Client: LK Consult		**Chemtest Job No.:**			21-23312	21-23312	21-23312
Quotation No.:		**Chemtest Sample ID.:**			1235953	1235954	1235955
Order No.: LKR 201044		Client Sample Ref.:			TS01	TS02	TS03
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			05-Jul-2021	05-Jul-2021	05-Jul-2021
		Asbestos Lab:			DURHAM	DURHAM	DURHAM
Determinand	**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
Moisture	N	2030	%	0.020	24	27	24
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached
pH	M	2010		4.0	7.7	7.8	7.8
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.1	0.91	1.0
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.021	0.061	0.018
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	1.5	2.2	2.2
Arsenic	M	2450	mg/kg	1.0	21	19	23
Cadmium	M	2450	mg/kg	0.10	10	11	12
Chromium	M	2450	mg/kg	1.0	67	81	82
Copper	M	2450	mg/kg	0.50	120	120	130
Mercury	M	2450	mg/kg	0.10	4.5	4.9	5.7
Nickel	M	2450	mg/kg	0.50	26	25	28
Lead	M	2450	mg/kg	0.50	270	270	520
Selenium	M	2450	mg/kg	0.20	0.64	0.59	0.72
Vanadium	U	2450	mg/kg	5.0	26	24	29
Zinc	M	2450	mg/kg	0.50	220	230	270
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	13	9.1	9.1
Diesel Present	N	2670		N/A	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	56	< 1.0	86
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	56	< 5.0	86
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

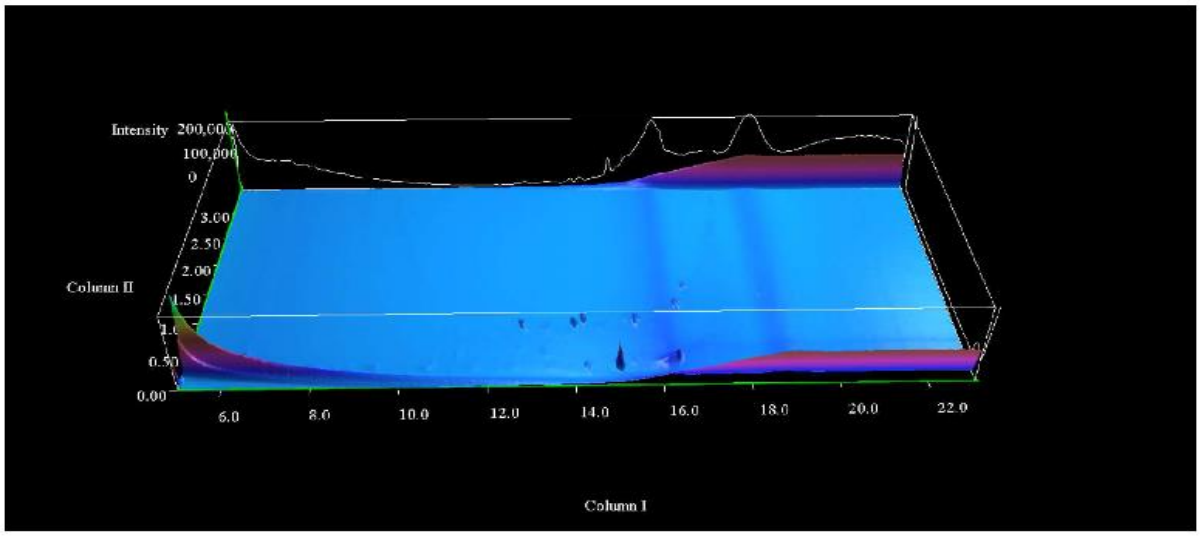
Project: LKR 201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-23312	21-23312	21-23312
Quotation No.:		**Chemtest Sample ID.:**			1235953	1235954	1235955
Order No.: LKR 201044		Client Sample Ref.:			TS01	TS02	TS03
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			05-Jul-2021	05-Jul-2021	05-Jul-2021
		Asbestos Lab:			DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	20
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	11	< 1.0	88
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	11	< 5.0	110
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	67	< 10	190
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.2	0.81	0.71
Acenaphthylene	N	2800	mg/kg	0.10	0.30	0.30	0.18
Acenaphthene	M	2800	mg/kg	0.10	0.42	0.50	0.85
Fluorene	M	2800	mg/kg	0.10	0.38	0.46	0.54
Phenanthrene	M	2800	mg/kg	0.10	3.6	4.6	4.2
Anthracene	M	2800	mg/kg	0.10	0.78	0.91	0.98
Fluoranthene	M	2800	mg/kg	0.10	5.9	7.5	0.60
Pyrene	M	2800	mg/kg	0.10	5.6	6.7	5.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.7	3.2	2.8
Chrysene	M	2800	mg/kg	0.10	2.9	3.3	2.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.6	4.1	3.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.4	1.5	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.3	3.9	3.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.1	2.4	2.0
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.57	0.32	0.40
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.0	2.5	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	37	43	32
Total Phenols	M	2920	mg/kg	0.10	< 0.10	0.13	< 0.10

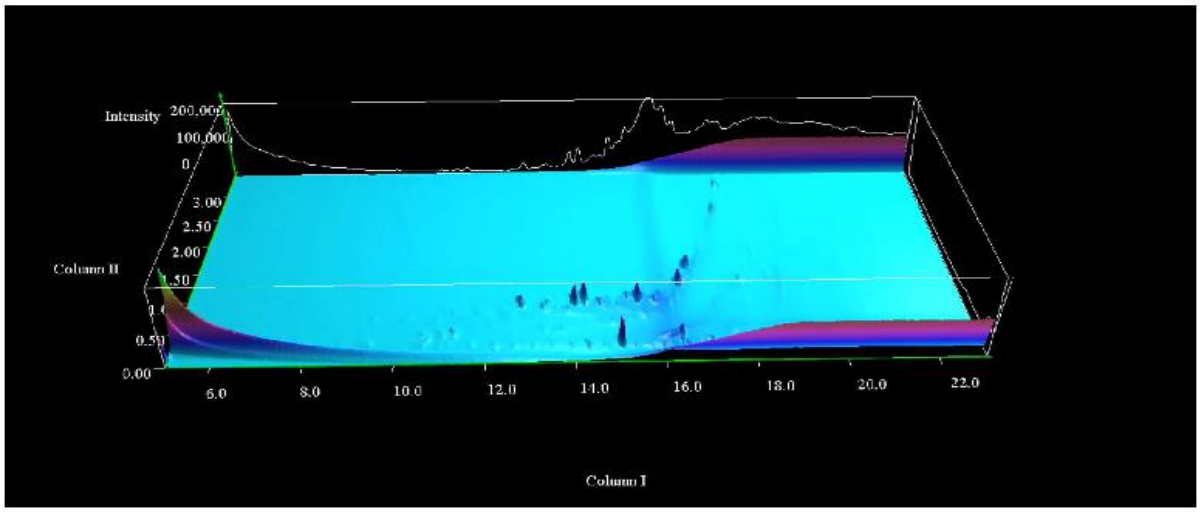
TPH Chromatogram on Soil Sample: 1235953



TPH Chromatogram on Soil Sample: 1235954



TPH Chromatogram on Soil Sample: 1235955



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-23312	1235953	S		TS01			No	PAH
21-23312	1235954	S		TS02			No	N/A
21-23312	1235955	S		TS03			No	PAH

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

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

Final Report

Report No.:	21-30471-1
Initial Date of Issue:	10-Sep-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Contaminated Land Peter Dunn
Project	LKR201044 Collyhurst

Quotation No.:		**Date Received:**	03-Sep-2021
Order No.:	LKR201044/PD	**Date Instructed:**	03-Sep-2021
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	09-Sep-2021
Date Approved:	10-Sep-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR201044 Collyhurst

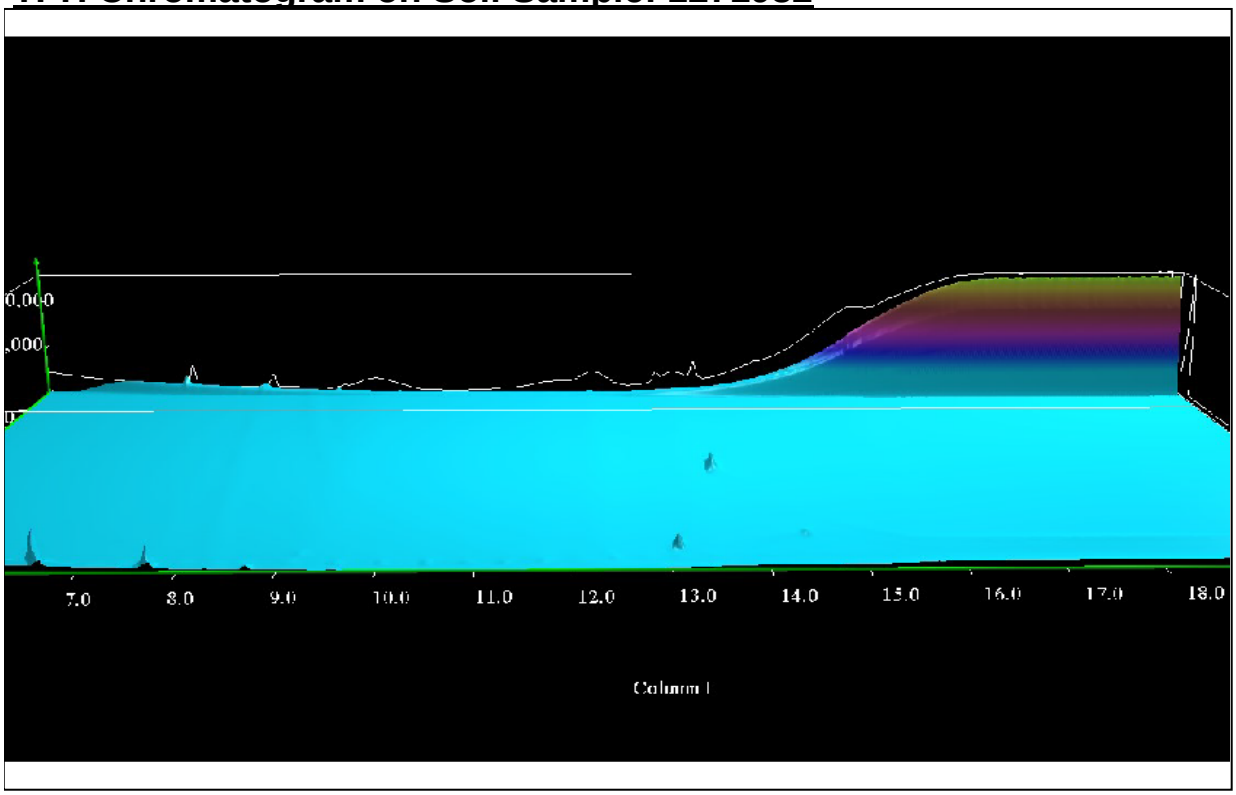
Client: LK Consult				**Chemtest Job No.:**	21-30471	21-30471	21-30471	21-30471	21-30471	21-30471
Quotation No.:				**Chemtest Sample ID.:**	1271932	1271933	1271934	1271935	1271936	1271937
				Sample Location:	SS101	SS102	SS103	SS104	SS105	SS106
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Date Sampled:	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021
				Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**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
Moisture	N	2030	%	0.020	7.6	6.0	13	13	13	14
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones and Roots	Stones and Roots	Stones	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.7	8.6	8.6	8.5	8.5	8.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	0.43	< 0.40	0.49
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.017	< 0.010	0.014	0.016	< 0.010	0.019
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	9.2	5.8	7.9	12	12	5.9
Cadmium	M	2450	mg/kg	0.10	0.16	0.12	0.32	0.38	0.44	0.20
Chromium	M	2450	mg/kg	1.0	24	18	19	23	22	15
Copper	M	2450	mg/kg	0.50	24	17	23	34	47	30
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	0.17	0.31	0.47	0.11
Nickel	M	2450	mg/kg	0.50	34	25	25	29	27	20
Lead	M	2450	mg/kg	0.50	23	18	46	86	100	33
Selenium	M	2450	mg/kg	0.20	0.20	< 0.20	< 0.20	0.20	0.30	< 0.20
Vanadium	U	2450	mg/kg	5.0	25	17	18	23	23	15
Zinc	M	2450	mg/kg	0.50	62	44	72	81	76	56
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	2.0	2.5	2.4	3.4	5.6	2.4
Diesel Present	N	2670		N/A	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	9.7	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

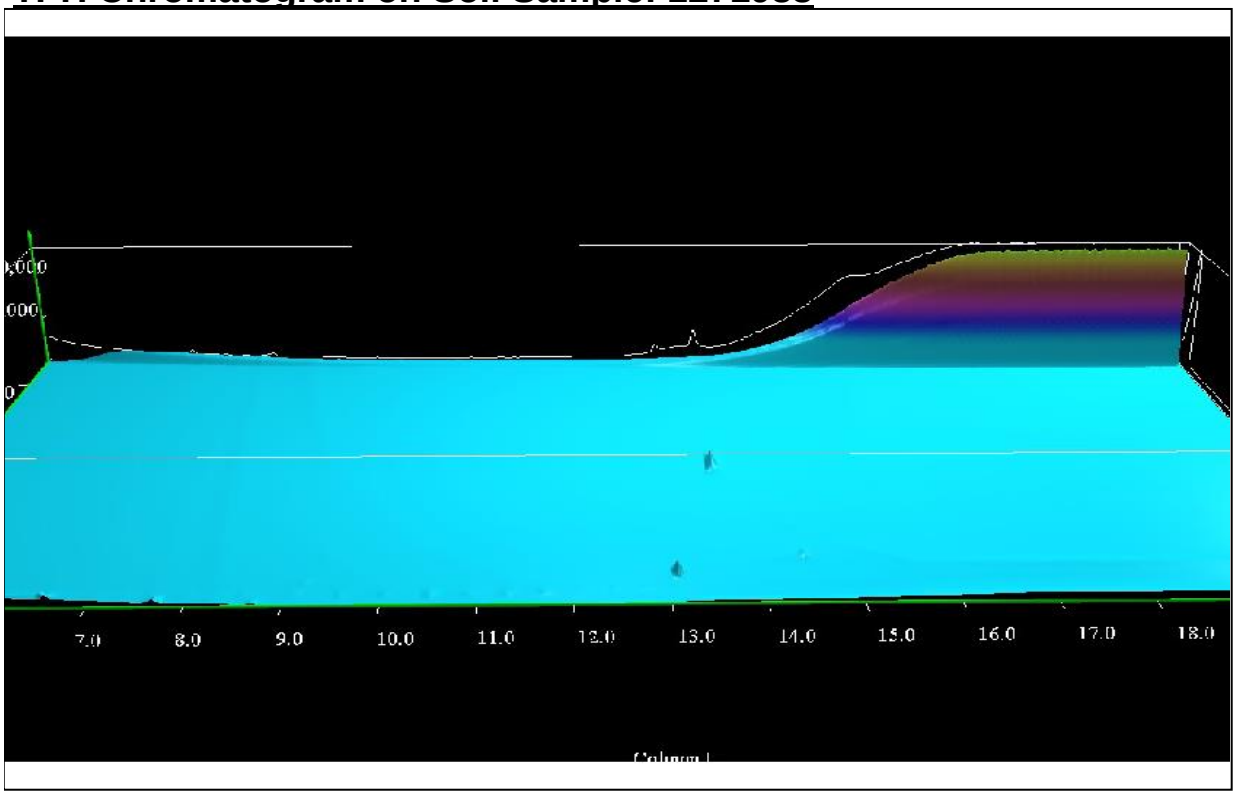
Project: LKR201044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-30471	21-30471	21-30471	21-30471	21-30471	21-30471
Quotation No.:		**Chemtest Sample ID.:**			1271932	1271933	1271934	1271935	1271936	1271937
		Sample Location:			SS101	SS102	SS103	SS104	SS105	SS106
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021	01-Sep-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	34	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	170	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	200	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	210	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.23	0.74	0.36	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.11	0.36	0.11	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.18	1.4	0.28	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15	1.6	0.56	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.55	0.61	1.5	10	2.7	1.7
Anthracene	M	2800	mg/kg	0.10	0.18	0.21	0.43	2.6	0.74	0.45
Fluoranthene	M	2800	mg/kg	0.10	0.54	0.41	1.8	9.1	3.6	2.2
Pyrene	M	2800	mg/kg	0.10	0.50	0.47	1.8	9.0	3.4	1.9
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.39	0.65	1.0	3.8	1.6	1.3
Chrysene	M	2800	mg/kg	0.10	0.54	0.62	0.88	3.8	1.4	0.89
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.67	0.35	1.3	3.8	2.0	1.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.48	0.17	0.44	1.3	0.54	0.66
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.50	0.26	0.83	2.9	1.5	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.40	< 0.10	0.69	2.2	1.5	0.84
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.25	< 0.10	0.39	0.42	0.32	0.47
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.24	< 0.10	0.75	1.9	0.94	0.49
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.2	3.8	13	55	22	14
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

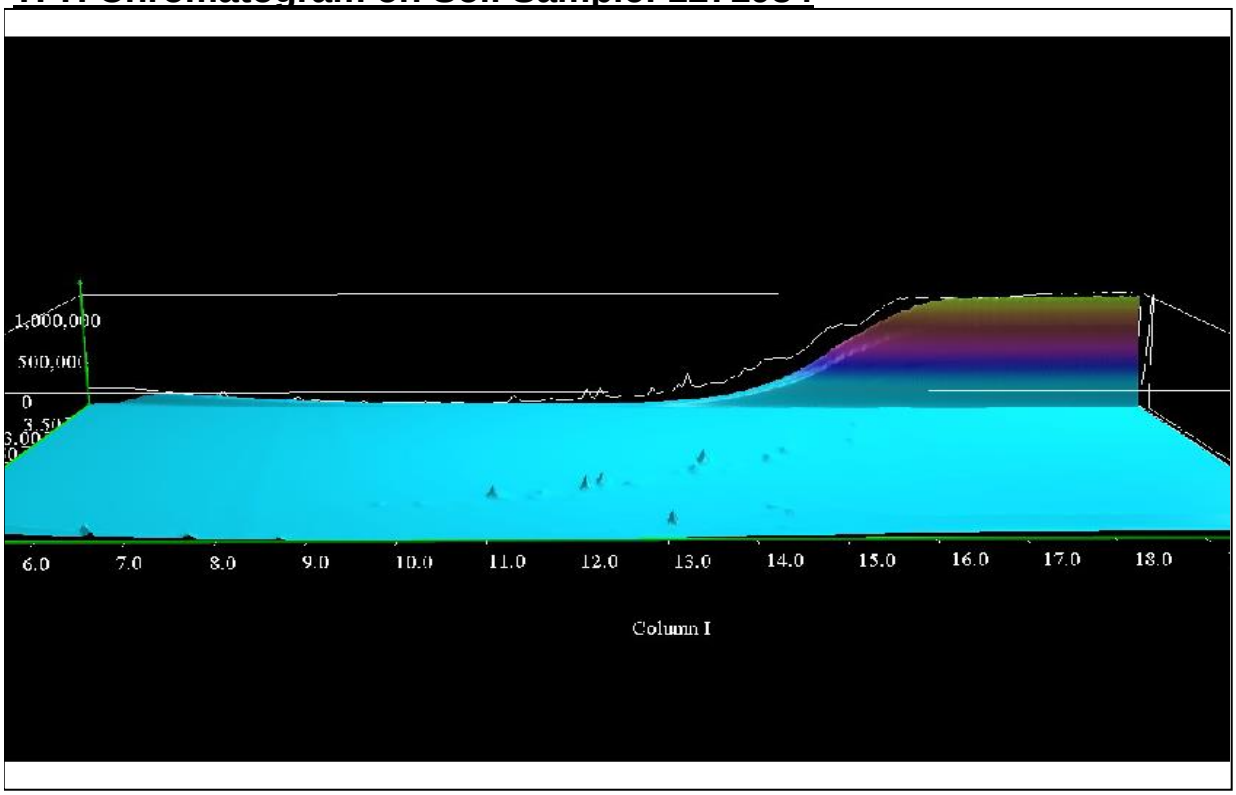
TPH Chromatogram on Soil Sample: 1271932



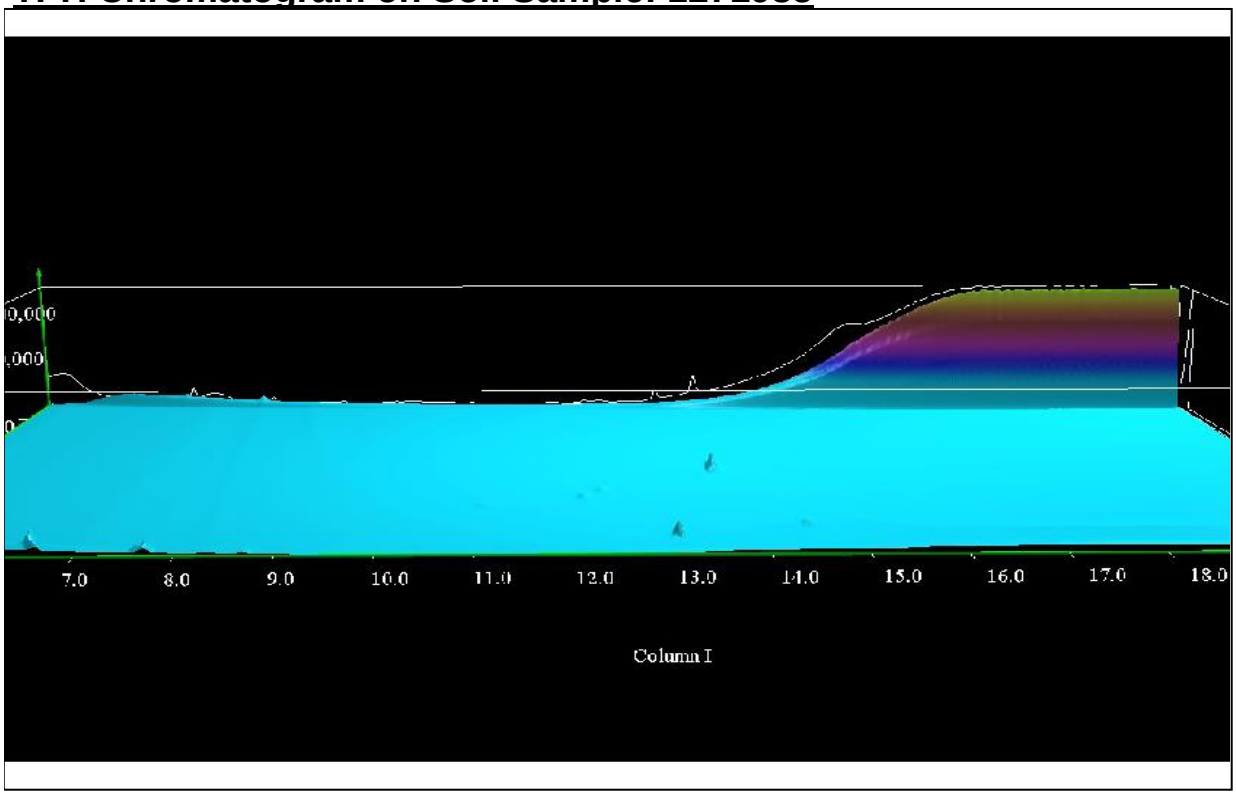
TPH Chromatogram on Soil Sample: 1271933



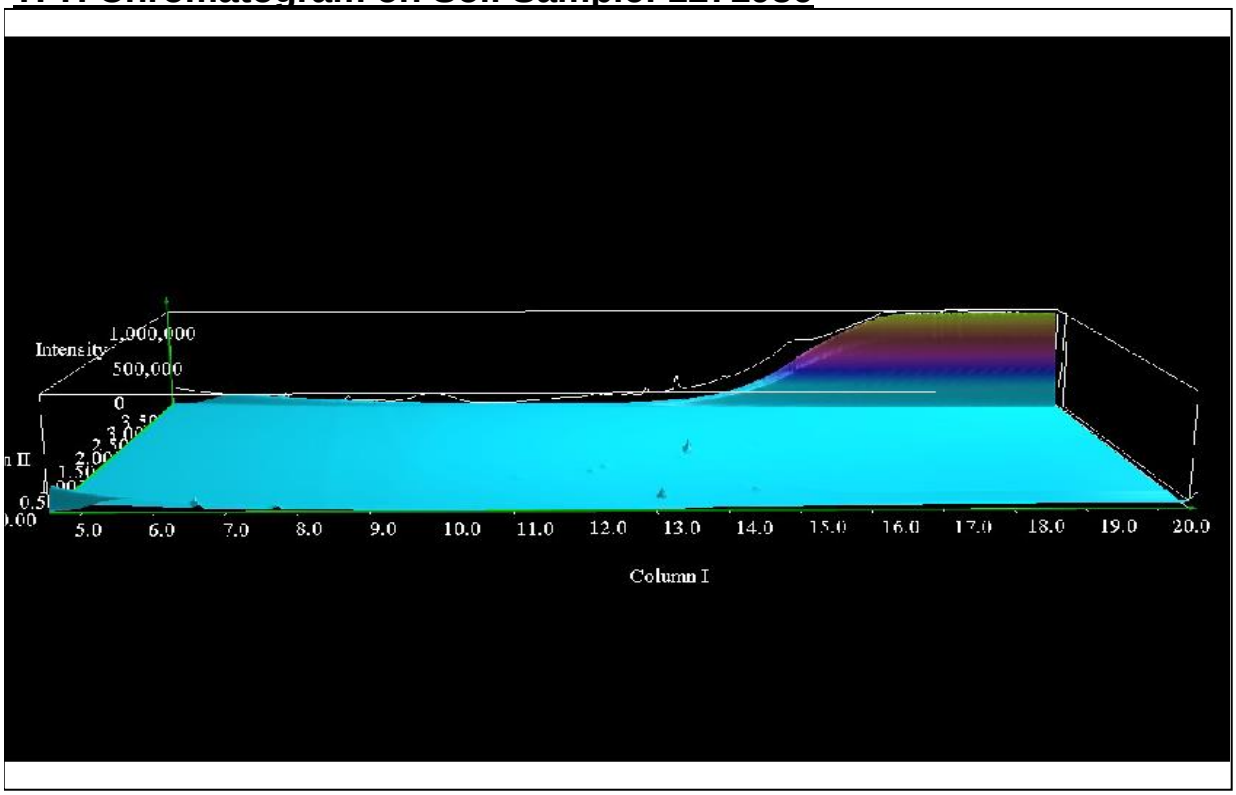
TPH Chromatogram on Soil Sample: 1271934



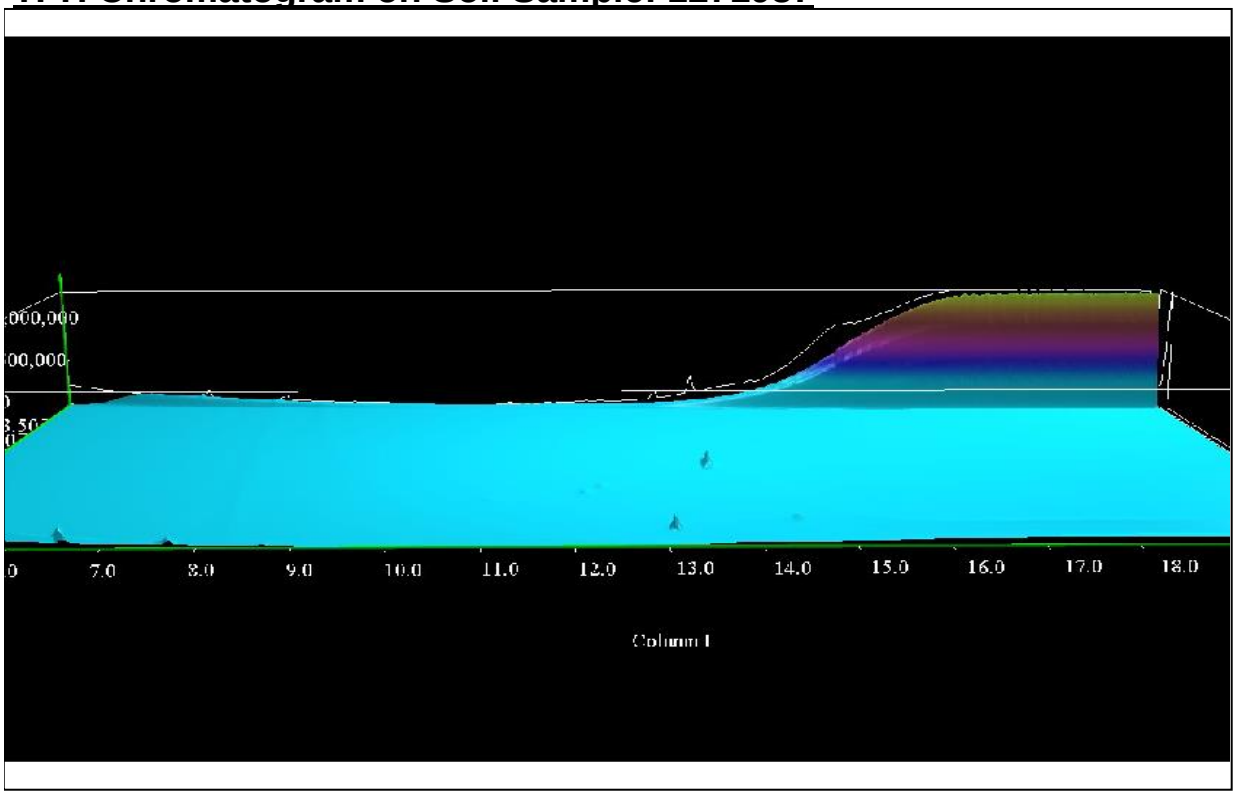
TPH Chromatogram on Soil Sample: 1271935



TPH Chromatogram on Soil Sample: 1271936



TPH Chromatogram on Soil Sample: 1271937



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-30471	1271932	S	SS101				No	N/A
21-30471	1271933	S	SS102				No	N/A
21-30471	1271934	S	SS103				No	PAH
21-30471	1271935	S	SS104				No	N/A
21-30471	1271936	S	SS105				No	N/A
21-30471	1271937	S	SS106				No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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customerservices@chemtest.com

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

Final Report

Report No.:	21-42230-1
Initial Date of Issue:	07-Dec-2021
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Peter Dunn Richard Clarke
Project	LKR 20 1044 Collyhurst

Quotation No.:		**Date Received:**	01-Dec-2021
Order No.:	LKR201044/RC	**Date Instructed:**	01-Dec-2021
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	07-Dec-2021
Date Approved:	07-Dec-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			21-42230	21-42230	21-42230	21-42230
Quotation No.:		**Chemtest Sample ID.:**			1330696	1330697	1330698	1330699
Order No.: LKR201044/RC		Client Sample Ref.:			SS107	SS108	SS109	SS110
		Sample Location:			SP	SP	SP	SP
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Date Sampled:			30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**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
Moisture	N	2030	%	0.020	17	18	16	18
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	9.0	9.0	9.0	8.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	9.1	7.2	5.6	8.6
Cadmium	M	2450	mg/kg	0.10	0.37	0.34	0.25	0.32
Chromium	M	2450	mg/kg	1.0	32	27	18	27
Copper	M	2450	mg/kg	0.50	34	26	11	16
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	40	33	26	36
Lead	M	2450	mg/kg	0.50	35	21	21	33
Selenium	M	2450	mg/kg	0.20	0.23	< 0.20	0.38	0.64
Vanadium	U	2450	mg/kg	5.0	33	28	18	27
Zinc	M	2450	mg/kg	0.50	76	71	45	60
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.9	1.6	1.6	1.4
Diesel Present	N	2670		N/A	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: LKR 20 1044 Collyhurst

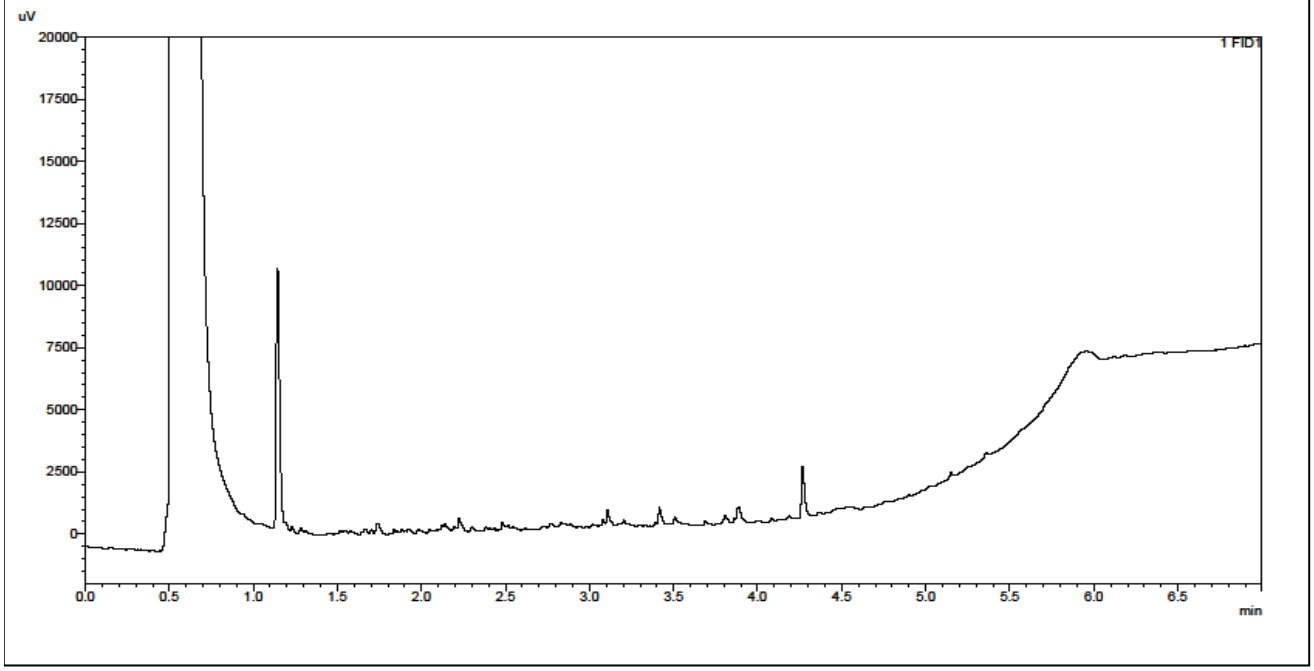
Client: LK Consult		**Chemtest Job No.:**			21-42230	21-42230	21-42230	21-42230
Quotation No.:		**Chemtest Sample ID.:**			1330696	1330697	1330698	1330699
Order No.: LKR201044/RC		Client Sample Ref.:			SS107	SS108	SS109	SS110
		Sample Location:			SP	SP	SP	SP
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Date Sampled:			30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
		Asbestos Lab:			COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.19	< 0.10	< 0.10	0.14
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	0.12
Fluorene	M	2800	mg/kg	0.10	0.20	< 0.10	< 0.10	0.11
Phenanthrene	M	2800	mg/kg	0.10	0.70	0.46	0.65	0.43
Anthracene	M	2800	mg/kg	0.10	0.26	0.20	0.14	0.14
Fluoranthene	M	2800	mg/kg	0.10	0.71	0.48	0.79	0.52
Pyrene	M	2800	mg/kg	0.10	0.65	0.51	0.69	0.53
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.42	< 0.10	0.31	0.24
Chrysene	M	2800	mg/kg	0.10	0.42	< 0.10	0.27	0.29
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.29	< 0.10	0.32	0.25
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.32	< 0.10	0.13	0.13
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.45	< 0.10	0.23	0.26
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.46	< 0.10	< 0.10	0.27
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.35	< 0.10	< 0.10	0.30
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	0.27
Total Of 16 PAH's	N	2800	mg/kg	2.0	6.0	< 2.0	3.5	4.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

TPH Chromatogram on Soil Sample: 1330696

<Sample Information>

Sample Name : 1330696 21-42230
Data Filename : 2021-12-01_01122021_1330696 21-42230_067.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 34
Date Acquired : 01/12/2021 22:20:53
Date Processed : 01/12/2021

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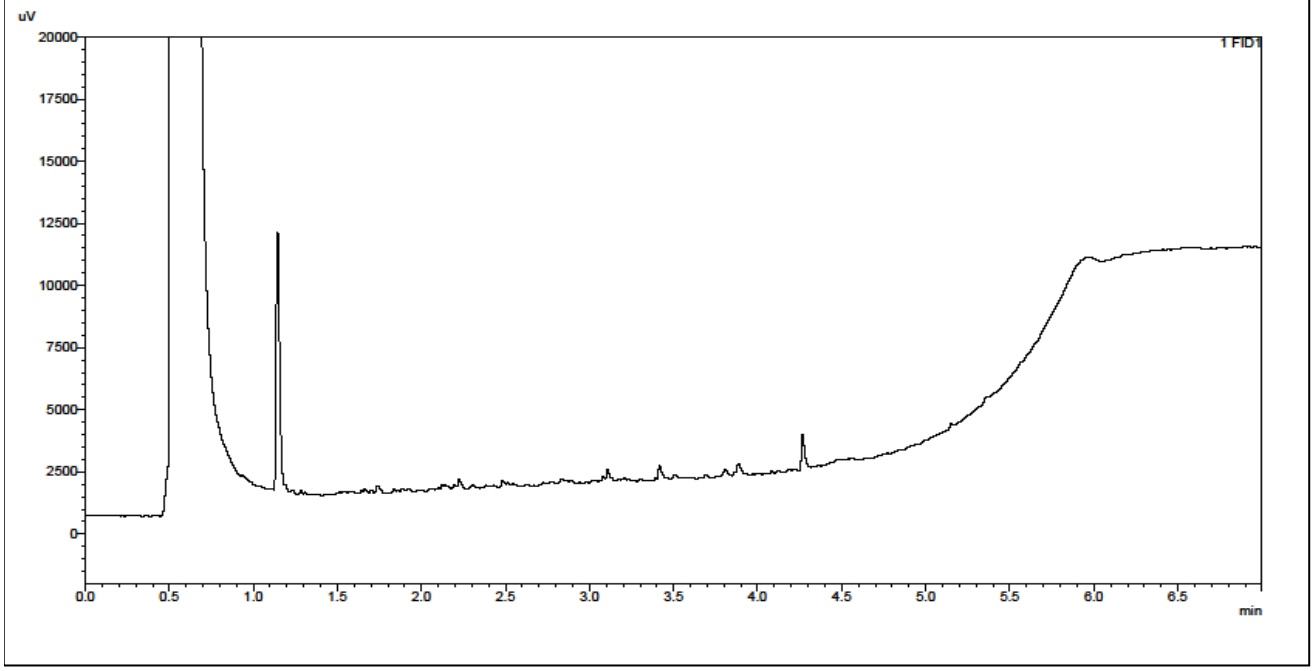


TPH Chromatogram on Soil Sample: 1330697

<Sample Information>

Sample Name : 1330697 21-42230
Data Filename : 2021-12-01_01122021_1330697 21-42230_069.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 35
Date Acquired : 01/12/2021 22:33:27
Date Processed : 01/12/2021

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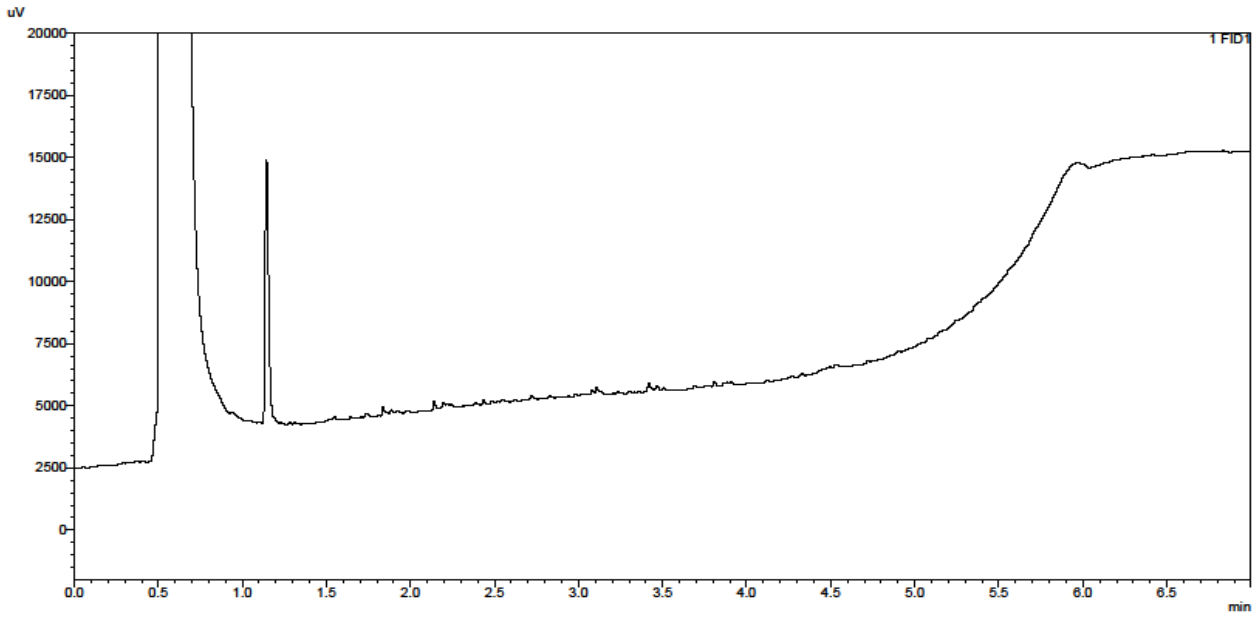


TPH Chromatogram on Soil Sample: 1330698

<Sample Information>

Sample Name : 1330698 21-42230
Data Filename : 2021-12-01_01122021_1330698 21-42230_071.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 36
Date Acquired : 01/12/2021 22:46:09
Date Processed : 01/12/2021

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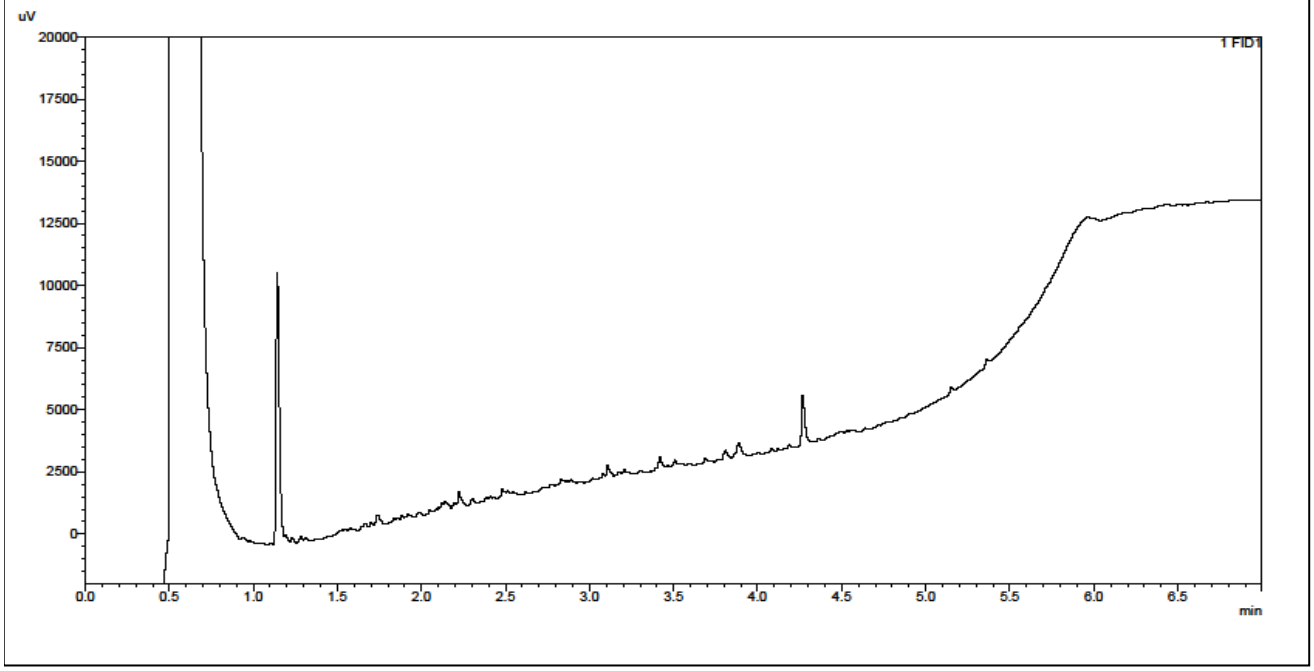


TPH Chromatogram on Soil Sample: 1330699

<Sample Information>

Sample Name : 1330699 21-42230
Data Filename : 2021-12-01_01122021_1330699 21-42230_073.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 37
Date Acquired : 01/12/2021 22:58:59
Date Processed : 01/12/2021

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-42230	1330696	S	SP	SS107			No	N/A
21-42230	1330697	S	SP	SS108			No	N/A
21-42230	1330698	S	SP	SS109			No	N/A
21-42230	1330699	S	SP	SS110			No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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.:	22-06489-1
Initial Date of Issue:	25-Feb-2022
Client	LK Consult
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS
Contact(s):	Richard Clarke
Project	LKR 20 1044 Collyhurst

Quotation No.:		**Date Received:**	22-Feb-2022
Order No.:	LKR 201044/RC	**Date Instructed:**	22-Feb-2022
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	28-Feb-2022
Date Approved:	25-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: LKR 20 1044 Collyhurst

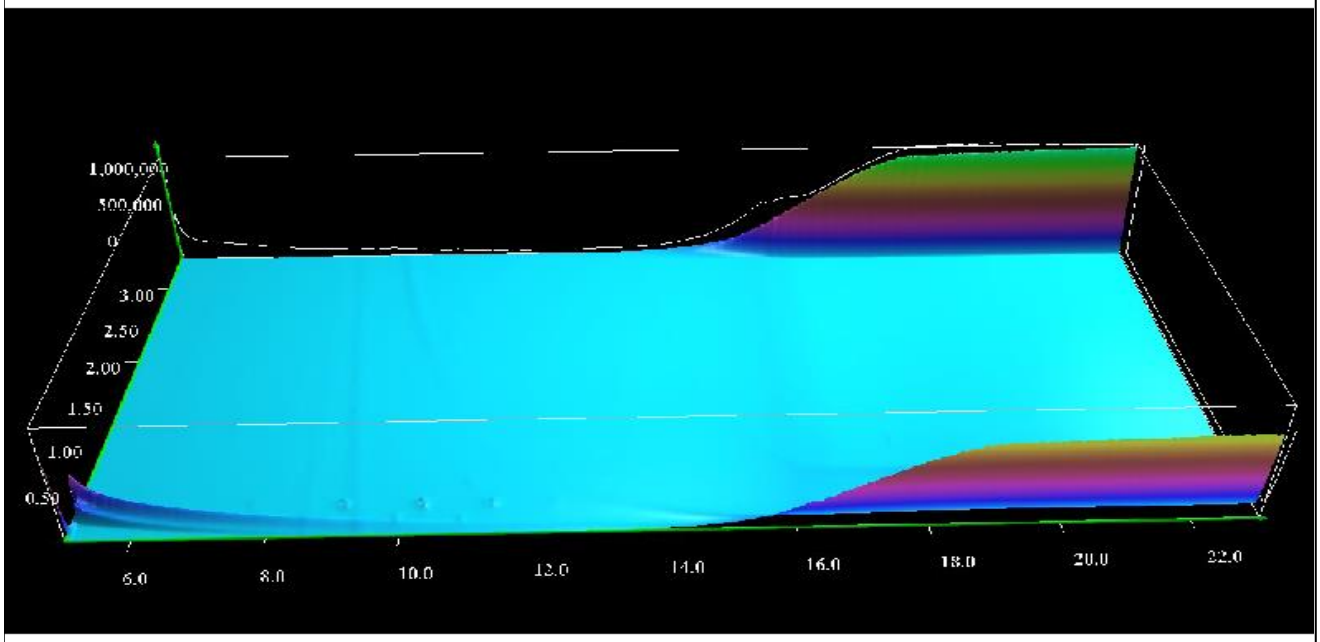
Client: LK Consult		**Chemtest Job No.:**			22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489
Quotation No.:		**Chemtest Sample ID.:**			1376696	1376697	1376698	1376699	1376700	1376701	1376702	1376703
Order No.: LKR 201044/RC		Client Sample Ref.:			SS111	SS112	SS113	SS114	SS115	SS116	SS117	SS118
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**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	23	21	22	22	23	26	24	25
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	None	None	None	None	None	None	None	None
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.8	8.6	8.7	8.7	8.7	8.6	8.7	8.8
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	5.9	0.42	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	1.5
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.53	0.055	0.15	0.041	0.037	0.046	0.047	0.28
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	6.2	3.7	2.5	5.6	4.7	4.7	7.0	5.0
Cadmium	M	2450	mg/kg	0.10	0.10	0.14	< 0.10	0.11	0.10	0.15	< 0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	22	16	11	25	22	25	22	17
Copper	M	2450	mg/kg	0.50	21	15	10	21	19	23	16	16
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10
Nickel	M	2450	mg/kg	0.50	30	22	15	34	30	33	26	24
Lead	M	2450	mg/kg	0.50	11	8.2	6.4	10	9.3	10	30	7.7
Selenium	M	2450	mg/kg	0.20	< 0.20	0.21	< 0.20	< 0.20	< 0.20	0.26	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	22	15	9.8	23	19	23	22	17
Zinc	M	2450	mg/kg	0.50	47	36	24	51	45	49	85	36
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	3.1	1.7	2.2	1.4	2.1	1.6	1.7	2.1
Diesel Present	N	2670		N/A	False	False	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

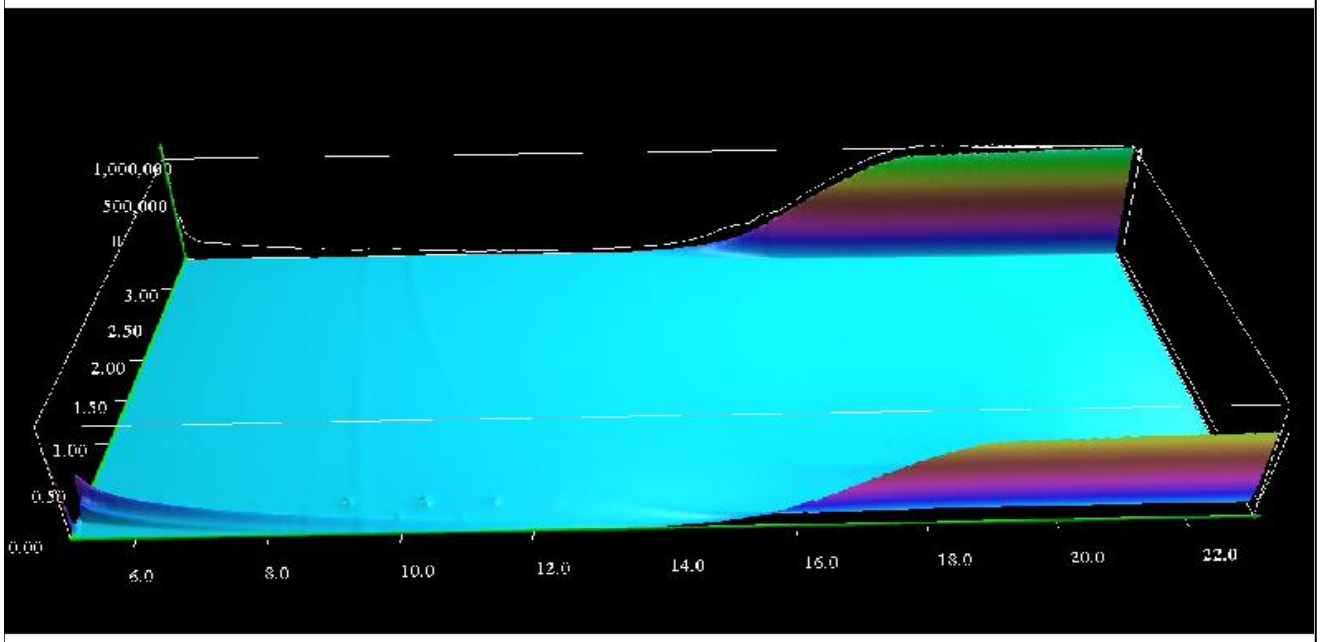
Project: LKR 20 1044 Collyhurst

Client: LK Consult		**Chemtest Job No.:**			22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489
Quotation No.:		**Chemtest Sample ID.:**			1376696	1376697	1376698	1376699	1376700	1376701	1376702	1376703
Order No.: LKR 201044/RC		Client Sample Ref.:			SS111	SS112	SS113	SS114	SS115	SS116	SS117	SS118
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022	21-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	130	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 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	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 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	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.78
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.22
Fluoranthene	M	2800	mg/kg	0.10	0.18	< 0.10	0.47	< 0.10	< 0.10	< 0.10	0.32	0.80
Pyrene	M	2800	mg/kg	0.10	0.22	< 0.10	0.49	< 0.10	< 0.10	< 0.10	0.33	0.96
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.33
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.52
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 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	< 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	< 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	< 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	< 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	< 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	< 2.0	3.6
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

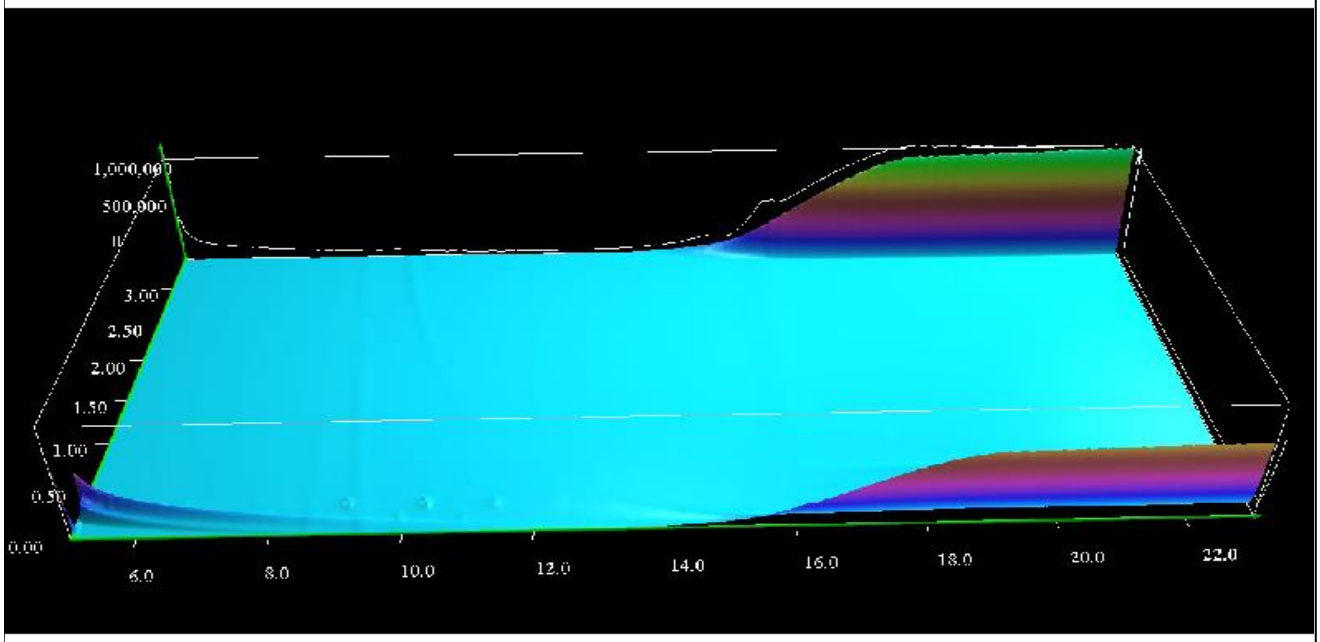
TPH Chromatogram on Soil Sample: 1376696



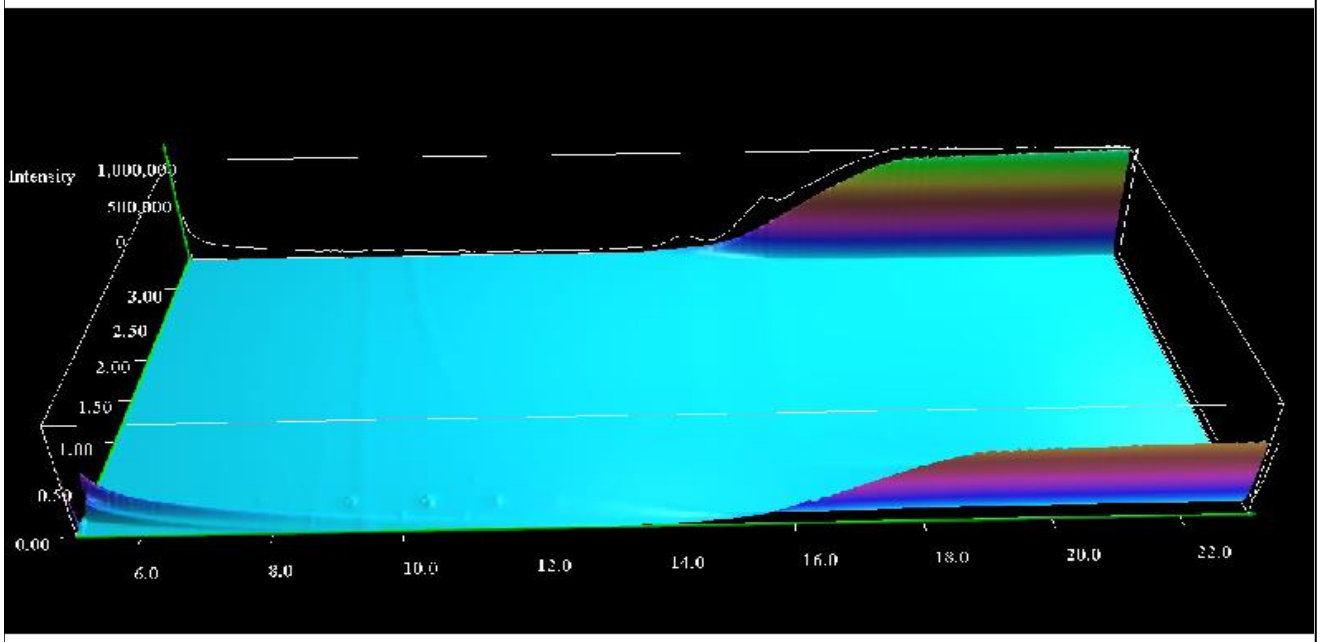
TPH Chromatogram on Soil Sample: 1376697



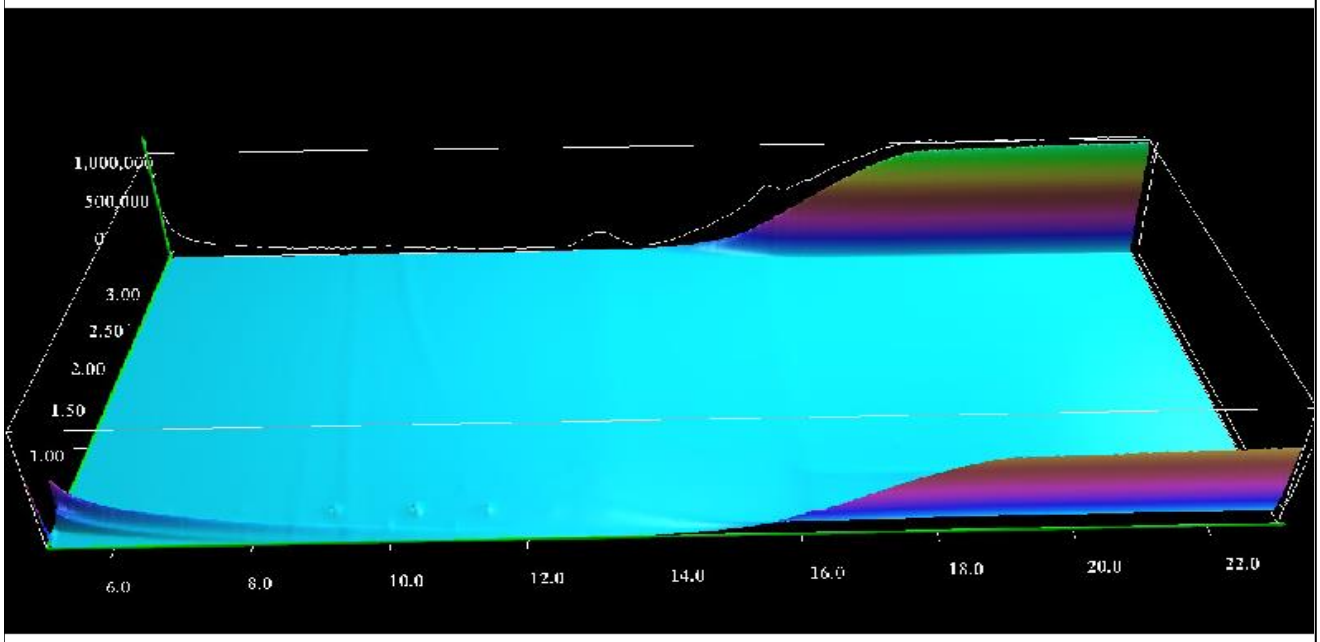
TPH Chromatogram on Soil Sample: 1376698



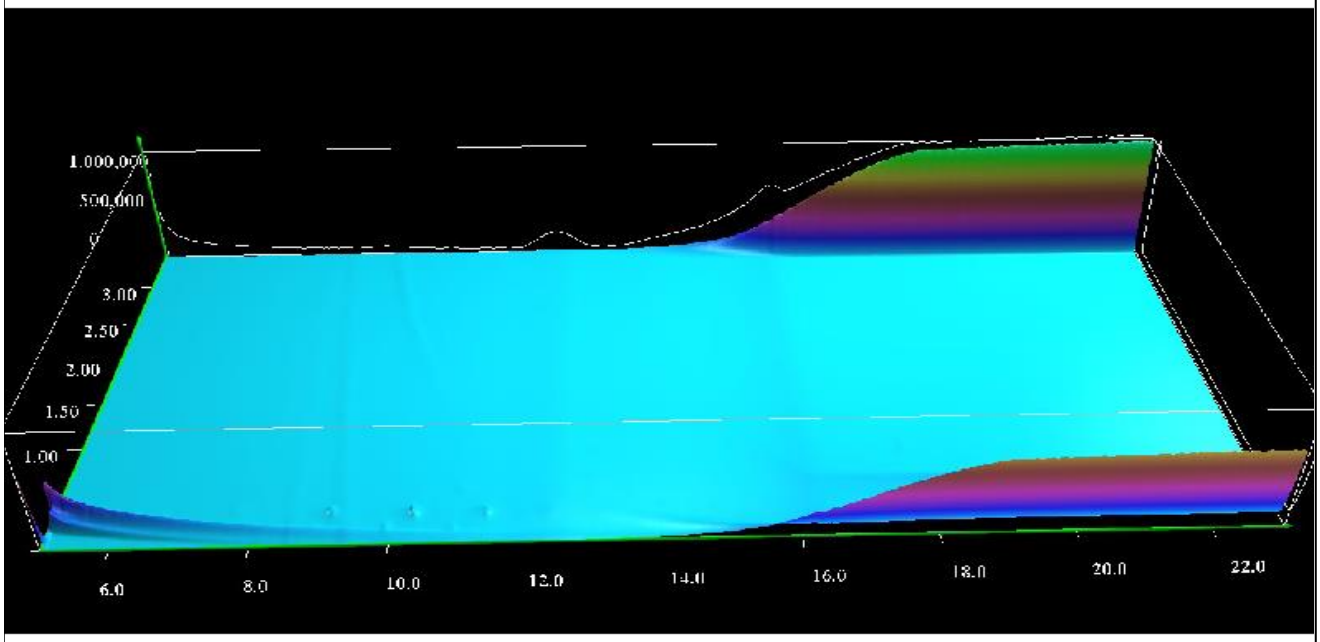
TPH Chromatogram on Soil Sample: 1376699



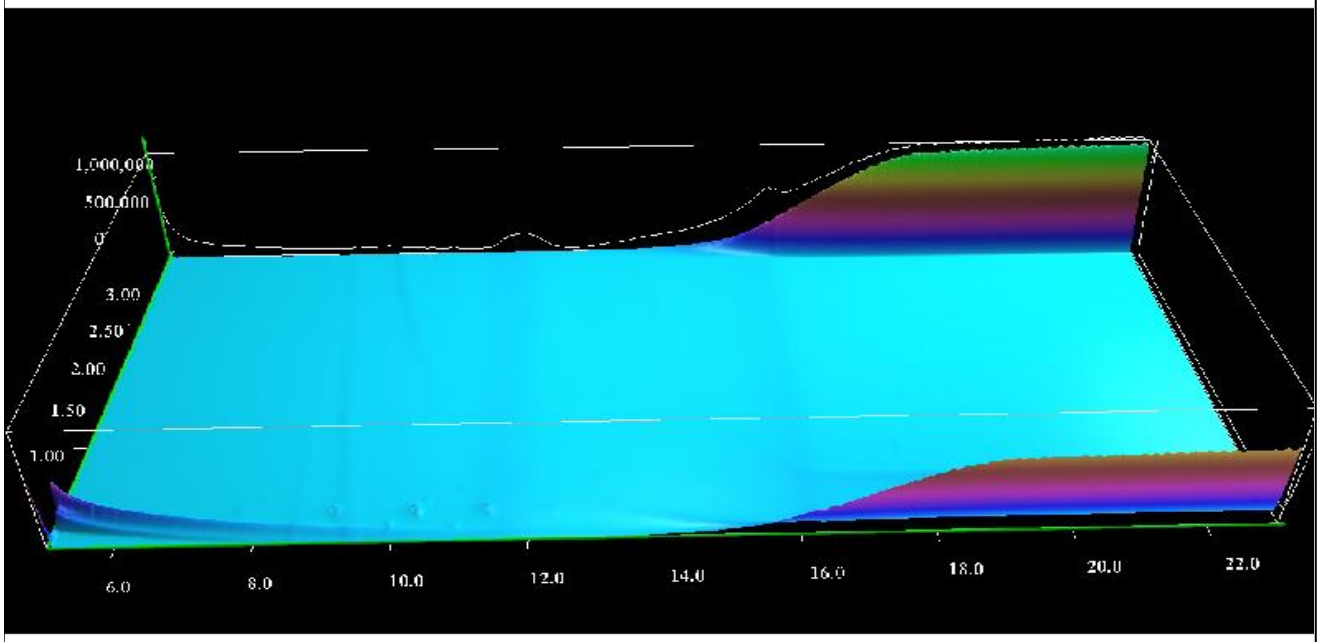
TPH Chromatogram on Soil Sample: 1376700



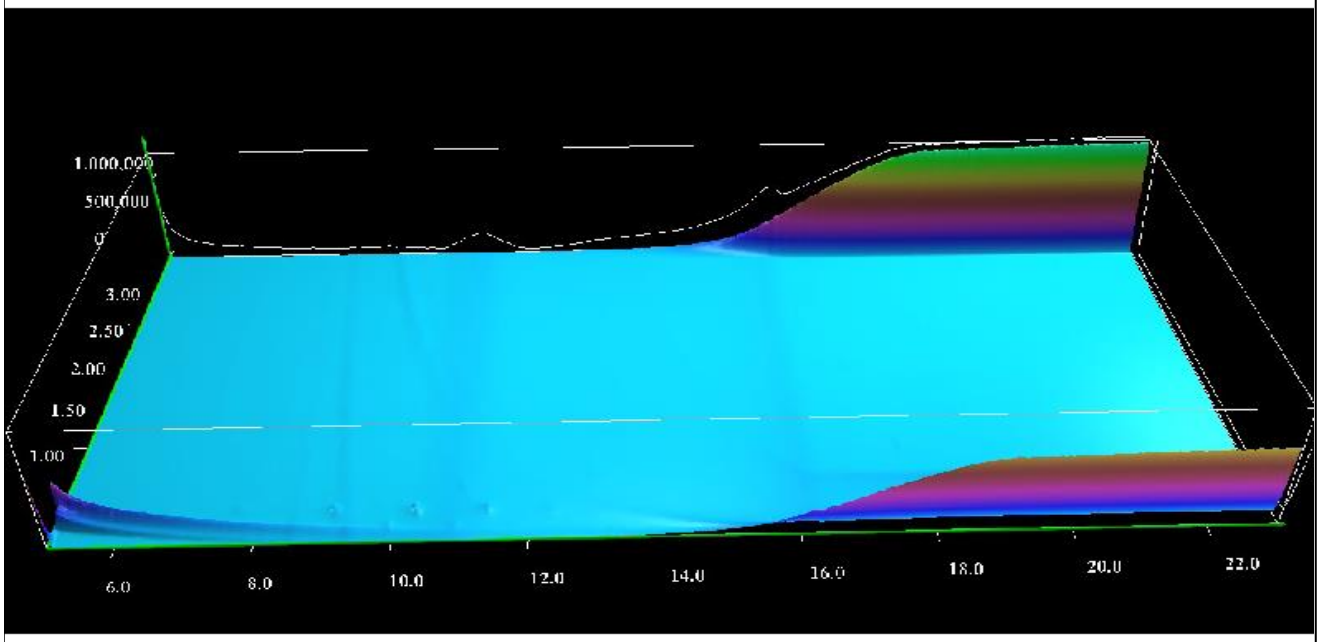
TPH Chromatogram on Soil Sample: 1376701



TPH Chromatogram on Soil Sample: 1376702



TPH Chromatogram on Soil Sample: 1376703



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06489	1376696	S		SS111			No	N/A
22-06489	1376697	S		SS112			No	N/A
22-06489	1376698	S		SS113			No	N/A
22-06489	1376699	S		SS114			No	N/A
22-06489	1376700	S		SS115			No	N/A
22-06489	1376701	S		SS116			No	N/A
22-06489	1376702	S		SS117			No	N/A
22-06489	1376703	S		SS118			No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	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 <37°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
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.
2450	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
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
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

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

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

			Client Sample ID.:	SS101	SS102	SS103	SS104	SS105	SS106	SS107	SS108	SS109	SS110	SS111	SS112	SS113	SS114	SS115	SS116	SS117	SS118
SCREENING SCENARIO	**Residential with plant uptake (1% SOM)**		Report No:	21-30471	21-30471	21-30471	21-30471	21-30471	21-30471	21-42230	21-42230	21-42230	21-42230	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489	22-06489
			Top Depth (m):																		
			Bottom Depth (m):																		
	Determinand	**Units**	**GAC**																		
ASBESTOS	Asbestos Identification	mg/kg		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
NON_METALS	Cyanide (Free)	mg/kg	26.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
METALS	Arsenic	mg/kg	37.0	9.2	5.8	7.9	12	12	5.9	9.1	7.2	5.6	8.6	6.2	3.7	2.5	5.6	4.7	4.7	7.0	5.0
	Cadmium	mg/kg	22.0	0.16	0.12	0.32	0.38	0.44	0.20	0.37	0.34	0.25	0.32	0.10	0.14	< 0.10	0.11	0.10	0.15	< 0.10	< 0.10
	Chromium	mg/kg	910.0	24	18	19	23	22	15	32	27	18	27	22	16	11	25	22	25	22	17
	Copper	mg/kg	2400.0	24	17	23	34	47	30	34	26	11	16	21	15	10	21	19	23	16	16
	Mercury	mg/kg	40.0	< 0.10	< 0.10	0.17	0.31	0.47	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10
	Nickel	mg/kg	180.0	34	25	25	29	27	20	40	33	26	36	30	22	15	34	30	33	26	24
	Lead	mg/kg	200.0	23	18	46	86	100	33	35	21	21	33	11	8.2	6.4	10	9.3	10	30	7.7
	Selenium	mg/kg	250.0	0.20	< 0.20	< 0.20	0.20	0.30	< 0.20	0.23	< 0.20	0.38	0.64	< 0.20	0.21	< 0.20	< 0.20	< 0.20	0.26	< 0.20	< 0.20
	Vanadium	mg/kg	410.0	25	17	18	23	23	15	33	28	18	27	22	15	9.8	23	19	23	22	17
	Zinc	mg/kg	3700.0	62	44	72	81	76	56	76	71	45	60	47	36	24	51	45	49	85	36
	Chromium (Hexavalent)	mg/kg	21.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
	Organic Matter	mg/l		2.0	2.5	2.4	3.4	5.6	2.4	1.9	1.6	1.6	1.4	3.1	1.7	2.2	1.4	2.1	1.6	1.7	2.1
TPH	Aliphatic TPH >C5-C6	mg/kg	42.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C6-C8	mg/kg	100.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C8-C10	mg/kg	27.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C10-C12	mg/kg	130.0	< 1.0	< 1.0	9.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C12-C16	mg/kg	1100.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C16-C21	mg/kg	65000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C21-C35	mg/kg	65000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C35-C44	mg/kg	65000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Total Aliphatic Hydrocarbons	mg/kg		< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	Aromatic TPH >C5-C7	mg/kg	70.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C7-C8	N/A	130.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C8-C10	mg/kg	34.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C10-C12	mg/kg	74.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C12-C16	mg/kg	140.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C16-C21	mg/kg	260.0	< 1.0	< 1.0	34	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C21-C35	mg/kg	1100.0	< 1.0	< 1.0	170	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0
	Aromatic TPH >C35-C44	mg/kg	1100.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Total Aromatic Hydrocarbons	mg/kg		< 5.0	< 5.0	200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0
	Total Petroleum Hydrocarbons	mg/kg		< 10	< 10	210	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	130	< 10	< 10
PAHs	Benzo[a]pyrene (surrogate marker)	mg/kg	5.0	0.50	0.26	0.83	2.9	1.5	1.1	0.45	< 0.10	0.23	0.26	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
BTEX	Benzene	µg/kg	87.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Toluene	µg/kg	130000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Ethylbenzene	µg/kg	47000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	m & p-Xylene	µg/kg	56000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	o-Xylene	µg/kg	60000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	Methyl Tert-Butyl Ether	µg/kg	49000.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PHENOLS	Total Phenols	mg/kg	280.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

			Client Sample ID.:	TS01	TS02	TS03
SCREENING SCENARIO	**POSresi (1% SOM)**		Report No:	21-23312	21-23312	21-23312
			Top Depth (m):			
			Bottom Depth (m):			
	Determinand	**Units**	**GAC**			
ASBESTOS	Asbestos Identification	mg/kg		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
NON_METALS	Sulphate (2:1 Water Soluble) as SO4	g/l		0.021	0.061	0.018
	Cyanide (Free)	mg/kg		< 0.50	< 0.50	< 0.50
	Cyanide (Total)	mg/kg		1.5	2.2	2.2
METALS	Arsenic	mg/kg	79.0	21	19	23
	Cadmium	mg/kg	220.0	10	11	12
	Chromium	mg/kg	1500.0	67	81	82
	Copper	mg/kg	12000.0	120	120	130
	Mercury	mg/kg	16.0	4.5	4.9	5.7
	Nickel	mg/kg	230.0	26	25	28
	Lead	mg/kg	630.0	270	270	520
	Selenium	mg/kg	1100.0	0.64	0.59	0.72
	Vanadium	mg/kg	2000.0	26	24	29
	Zinc	mg/kg	81000.0	220	230	270
	Chromium (Hexavalent)	mg/kg	21.0	< 0.50	< 0.50	< 0.50
	Organic Matter	mg/l		13	9.1	9.1
TPH	Aliphatic TPH >C5-C6	mg/kg	570000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C6-C8	mg/kg	600000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C8-C10	mg/kg	13000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C10-C12	mg/kg	13000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C12-C16	mg/kg	13000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C16-C21	mg/kg	250000.0	< 1.0	< 1.0	< 1.0
	Aliphatic TPH >C21-C35	mg/kg	250000.0	56	< 1.0	86
	Aliphatic TPH >C35-C44	mg/kg	250000.0	< 1.0	< 1.0	< 1.0
	Total Aliphatic Hydrocarbons	mg/kg		56	< 5.0	86
	Aromatic TPH >C5-C7	mg/kg	56000.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C7-C8	N/A	56000.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C8-C10	mg/kg	5000.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C10-C12	mg/kg	5000.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C12-C16	mg/kg	5100.0	< 1.0	< 1.0	< 1.0
	Aromatic TPH >C16-C21	mg/kg	3800.0	< 1.0	< 1.0	20
	Aromatic TPH >C21-C35	mg/kg	3800.0	11	< 1.0	88
	Aromatic TPH >C35-C44	mg/kg	3800.0	< 1.0	< 1.0	< 1.0
	Total Aromatic Hydrocarbons	mg/kg		11	< 5.0	110
	Total Petroleum Hydrocarbons	mg/kg		67	< 10	190
PAHs	Benzo[a]pyrene (surrogate marker)	mg/kg	10.0	3.3	3.9	3.4
BTEX	Benzene	µg/kg	72000.0	< 1.0	< 1.0	< 1.0
	Toluene	µg/kg	56000000.0	< 1.0	< 1.0	< 1.0
	Ethylbenzene	µg/kg	24000000.0	< 1.0	< 1.0	< 1.0
	m & p-Xylene	µg/kg	41000000.0	< 1.0	< 1.0	< 1.0
	o-Xylene	µg/kg	41000000.0	< 1.0	< 1.0	< 1.0
	Methyl Tert-Butyl Ether	µg/kg		< 1.0	< 1.0	< 1.0
PHENOLS	Total Phenols	mg/kg	760.0	< 0.10	0.13	< 0.10

Appendix 16 : Drawings

Apartment Block 01
Plots 169 - 218

Apartment Block 02
Plots 219 - 244

ROCHDALE ROAD

OWLHEY STREET

PAGET STREET

THORNTON STREET NORTH

Substation

Plot Numbers
1 : 500

Note:
Do not scale from this drawing.
Dimensions are to be checked on site.
If in doubt please ask.

FOR TENDER INFORMATION ONLY.
To be read in conjunction with M+E, Structural, Fire and Acoustic reports

A B C D

Apartment Block 1:

2B3P - Duplex	6
3B5P - Duplex	2
1B2P - Apt	12
2B3P - Apt	26
2B4P - Apt	2
3B5P - Apt	2
Total	50

Apartment Block 2:

2B3P - Duplex	6
3B5P - Duplex	2
1B2P - Apt	6
2B3P - Apt	12
Total	26
Total Apartments	76

Housetypes:

HT 01 - 2B4P	32
HT 01a - 2B4P (Gable A)	14
HT 01b - 2B4P (Gable B)	10
HT 02 - 3B5P	68
HT 02a - 3B5P (Gable A)	4
HT 03 - 4B6P	4
HT 03a - 4B6P (Gable A)	8
HT 04 - 4B6P	4
HT 05S - 5B7P	1
HT 06S - 3B5P Special	1
HT 07S - 3B5P	15
HT 08S - 4B6P	5
HT 09S - 4B6P	2
Total	**168**
	244

Rev	Date	Intls	Details
T2	26/11/21	LH	Tender Issue - Apartment plot numbers updated
T1	31/08/21	LH	Highways information updated, and plot numbers added

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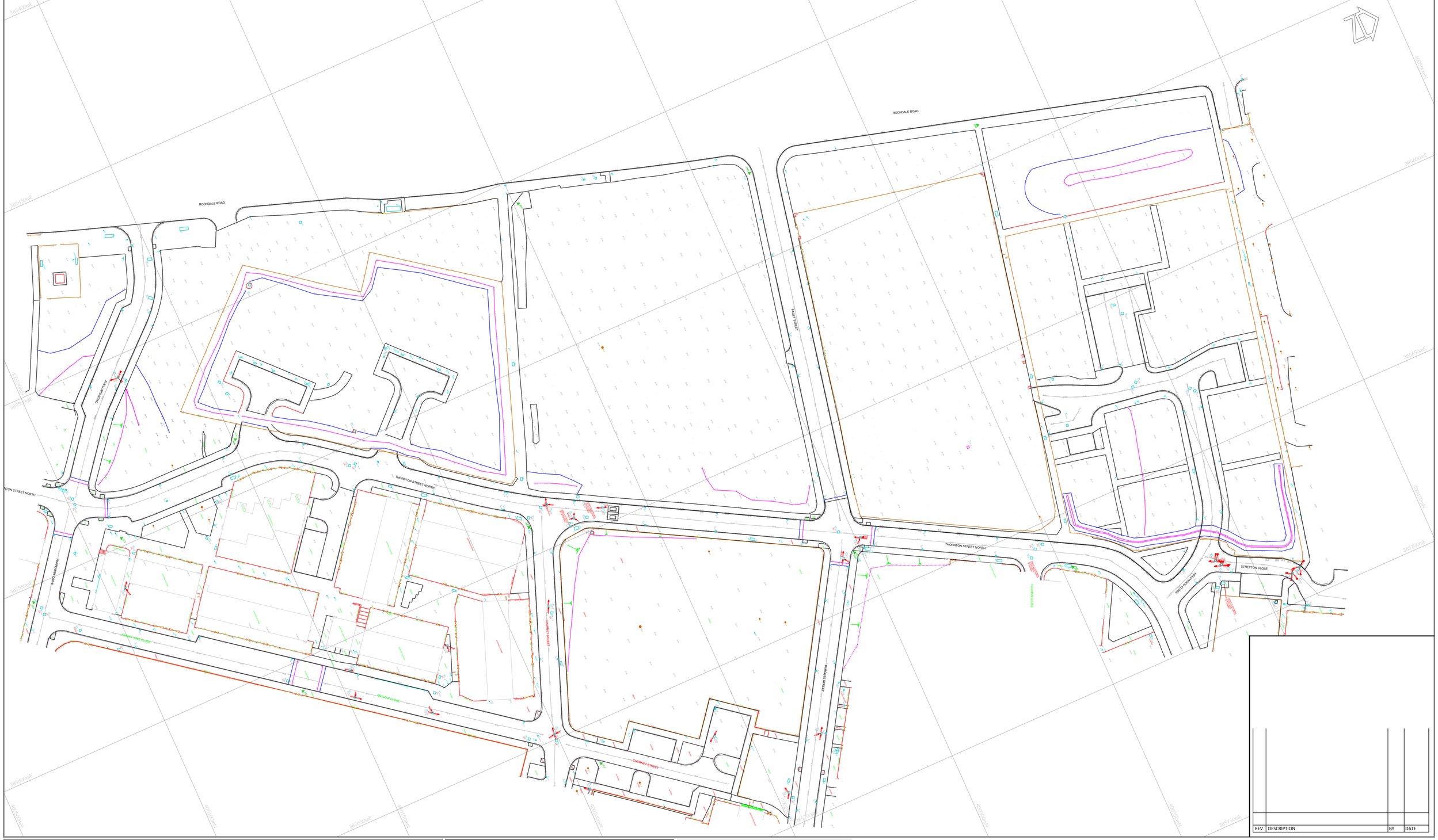
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E contact@buttress.net
W www.buttress.net

Project Title	Collyhurst Village
Client	FEC and MCC
Location	Manchester
Drawing Title	Plot Numbers
Date	23/11/2021 15:52:52
Checked	Checker
Scale	As indicated
Orig Paper Size	A1
Job No:	**8871**
Status	**TENDER**

Project: Origin: Zone: Level: Type: Disc: Number: Rev:
8871-BA-MP-00-DR-A- (04)707- T2

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REV	DESCRIPTION	BY	DATE

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T: 0161 736 7200
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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: INITIAL TOPOGRAPHY

NOTES: DATA TAKEN FROM DRG 1226-01-S-EX-TOPO1.DWG PRODUCED BY CIVIC ENGINEERS; SURVEY DATED DEC 2019 BY SURVEY OPERATIONS LTD

STATUS		
FINAL		
DRAWN BY: RC	SIGNATURE: _	DATE: 12/04/22
APPROVED: DA	SIGNATURE: _	DATE: 12/04/22
SCALE: 1:500 @ A1	DRG No.: 20_1044_01_00	

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REV	DESCRIPTION	BY	DATE
01	UPDATED SURVEY INFORMATION FOLLOWING REMOVAL OF OPENREACH FIBREOPTIC IN NORTHERN AREA OF SITE	RC	20/05/22

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: AS-BUILT SITE LEVELS

NOTES
- 1925 / 56.474 — AS-BUILT LEVEL
- 54.665 — DESIGN PLOT LEVEL
- 56.602 GP / 56.685 GP — PERIMETER FENCE AND ACCESS GATES
- CLEAN TESTED TOPSOIL/SUBSOIL (SEE DRG 20_1044_06 FOR LEVELS AND QUANTITIES)

STATUS	FINAL	
DRAWN BY: RC	SIGNATURE: _	DATE: 14/04/22
APPROVED: DA	SIGNATURE: _	DATE: 14/04/22
SCALE: 1:500 @ A1	DRG No.: 20_1044_02_01	

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BT COMMS CHAMBER
COVER LEVEL: 55.280

FEC DEVELOPMENT SIGN

FEC DEVELOPMENT SIGN

LK GROUP PROJECT SIGN

DRAINAGE CHAMBER
COVER LEVEL: 55.346

DRAINAGE CHAMBER
COVER LEVEL: 55.496

DRAINAGE CHAMBER
COVER LEVEL: 55.248

DRAINAGE CHAMBER
COVER LEVEL: 55.000

DRAINAGE CHAMBER
COVER LEVEL: 56.188

DRAINAGE CHAMBER
COVER LEVEL: 55.056

DRAINAGE CHAMBER
COVER LEVEL: 55.277

EXPOSED GAS PIPE SUPPORTING
OPENREACH DUCT LEVEL: 60.725

TERMINATED AND CAPPED
ELECTRIC CABLE LEVEL: 60.083

DRAINAGE CHAMBER
COVER LEVEL: 61.325

FEC DEVELOPMENT SIGN

LK GROUP PROJECT SIGN

DRAINAGE CHAMBER
COVER LEVEL: 60.793

STOP TAP
COVER LEVEL: 58.140
WATER VALVE CHAMBER
COVER LEVEL: 59.995

TERMINATED AND CAPPED ELECTRIC
CABLE ADJACENT TO FENCE.
LEVEL: 59.837

WASHOUT HYDRANT TERMINATION
ON SIITE BOUNDARY
VALVE LEVEL: 59.710

TERMINATED AND CAPPED GAS PIPE
ADJACENT TO FENCE
LEVEL: 59.276

COMMS DUCT RUNNING
UNDERNEATH AND PARALLEL WITH
BOUNDARY FENCE LEVEL: 59.567

32mm Ø WATER PIPE AT SURFACE

CULVERT DRAINAGE CHAMBER
COVER LEVEL: 58.591

FEC DEVELOPMENT SIGNS

DRAINAGE CHAMBER
COVER LEVEL: 59.355

WASHOUT HYDRANT TERMINATION
ON SIITE BOUNDARY
VALVE LEVEL: 58.394

Existing vegetation to be retained

REV	DESCRIPTION	BY	DATE
01	UPDATED SURVEY INFORMATION FOLLOWING REMOVAL OF OPENREACH FIBREOPTIC IN NORTHERN AREA OF SITE	RC	20/05/22

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www.thelkgroup.com

CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: SERVICES REMAINING

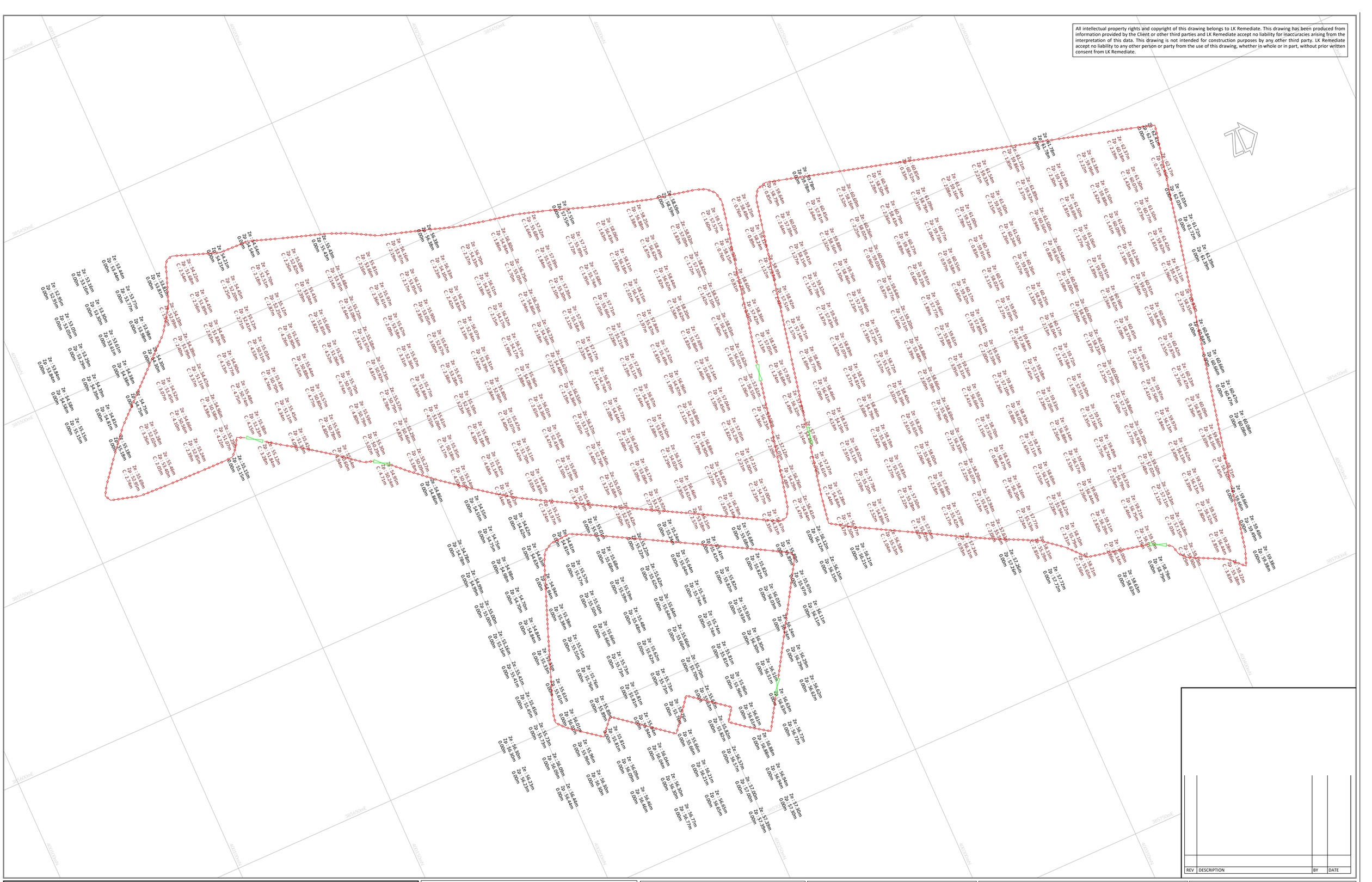
NOTES
- CLIENT-SPECIFIED CULVERT EASEMENT (5m WIDTH)
- WATER MAIN INSTALLED 2021
- PERIMETER FENCE AND ACCESS GATES
- TERMPORARY ROOT PROTECTION ZONE FENCING

CULVERT EASEMENT INFORMATION TAKEN FROM EXISTING UTILITIES DRAWING
TRIAL PIT DATA FOR BT OPENREACH DUCTS REPRODUCED FROM DRG 201044_BTOR_01

STATUS	FINAL		
DRAWN BY	RC	SIGNATURE _	DATE 14/04/22
APPROVED	DA	SIGNATURE _	DATE 14/04/22
SCALE	1:500 @ A1	DRG No.	20_1044_03_01

A1border_841 X 597

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REV	DESCRIPTION	BY	DATE

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: DEPTHS TO NATURAL STRATA

NOTES

Ze : 56.96m
Zp : 54.97m
C : 1.99m

Ze : 55.48m
Zp : 55.48m
0.00m

PERIMETER FENCE AND ACCESS GATES

Ze = COMMENCING LEVEL, Zp = LEVEL OF NATURAL STRATA, C = DEPTH TO NATURAL

GENERATED POINT OUTSIDE WORKS AREA, NO DEPTH TO NATURAL CALCULATED

THE DATA SHOWN ON THIS DRAWING WAS PREVIOUSLY ISSUED DURING THE WORKS PERIOD AS 201044_DTN_01

STATUS: FINAL

DRAWN BY	SIGNATURE	DATE
DA	_	14/04/22

APPROVED	SIGNATURE	DATE
DA	_	14/04/22

SCALE	DRG No.
1:500 @ A1	20_1044_04_00

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CBR TESTS REFERENCE DNR 78336A-J (TOTAL OF 10 TESTS) UNDERTAKEN IN THIS AREA USING A 450mm Ø PLATE

Existing substation to be retained

REV	DESCRIPTION	BY	DATE

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: SAMPLING AND TEST LOCATIONS

NOTES
- T60 GEOCHEMICAL SAMPLE - ENGINEERED FILL
- SS111 GEOCHEMICAL SAMPLE - TOPSOIL AND SUBSOIL STOCKPILES
- CBR40 CBR TEST LOCATION - CRUSH TO PILE MATS AND ROADS
- HS6264-1 CBR TEST LOCATION - FORMATION
- CC22 CORE-CUTTER COMPACTION TEST
- CBR TEST LOCATION - FORMATION WITHIN CUT 13
- PERIMETER FENCE AND ACCESS GATES
- STOCKPILE OF CLEAN TESTED TOPSOIL/SUBSOIL (FOR FUTURE USE)

STATUS: FINAL

DRAWN BY: RC	SIGNATURE: _	DATE: 8/04/22
APPROVED: DA	SIGNATURE: _	DATE: 8/04/22

SCALE: 1:500 @ A1

DRG No.: 20_1044_05_00

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SP18 : 250m³
TESTED SUBSOIL

SP19 : 270m³
TESTED SUBSOIL

SP31A : 900m³
TESTED SUBSOIL

SP34A : 850m³
TESTED SUBSOIL

SP35 : 111m³
TESTED TOPSOIL

REV	DESCRIPTION	BY	DATE

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: FENCES, GATES AND SUB-SOIL STOCKPILES

NOTES
- PERIMETER FENCE AND ACCESS GATES
- STOCKPILES OF SUBSOIL AND TOPSOIL RETAINED FOR FUTURE USE (SEE DRAWING 20_1044_08 FOR FULL LIST OF STOCKPILE REFERENCES DURING THE WORKS)

STATUS: FINAL

DRAWN BY	SIGNATURE	DATE
RC	_	12/04/22
APPROVED	SIGNATURE	DATE
DA	_	12/04/22

SCALE: 1:500 @ A1

DRG No.: 20_1044_06_00

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Ref	Easting	Northing	Elevation	Code
18	385563.000	400213.984	51.288	Pile
19	385564.842	400216.723	51.366	Pile
20	385564.417	400217.871	51.670	Pile
21	385560.988	400219.414	51.915	Pile
22	385561.098	400218.685	51.804	Pile
23	385560.883	400216.108	51.766	Pile
24	385561.285	400217.854	51.513	Pile
25	385560.577	400216.746	51.191	Pile
26	385557.094	400217.944	51.853	Pile
28	385556.547	400216.717	51.726	Pile
29	385558.656	400220.083	51.969	Pile
30	385558.296	400220.078	52.034	Pile
31	385556.737	400221.204	52.150	Pile
32	385554.191	400218.825	51.656	Pile
34	385555.148	400221.769	51.689	Pile
35	385554.614	400221.956	51.829	Pile
36	385554.122	400217.914	51.824	Pile
37	385551.693	400222.883	51.932	Pile
38	385550.995	400219.754	51.999	Pile
39	385550.143	400219.859	52.026	Pile
40	385550.722	400220.047	52.090	Pile
42	385548.406	400220.731	52.774	Pile
43	385548.873	400220.137	52.817	Pile
44	385547.583	400221.659	52.771	Pile
45	385549.579	400221.868	52.479	Pile
46	385549.060	400223.504	52.907	Pile
47	385548.274	400223.781	52.679	Pile
48	385547.707	400221.745	52.789	Pile
49	385547.018	400222.822	52.629	Pile
51	385544.253	400221.769	52.900	Pile
52	385543.288	400221.084	52.792	Pile
53	385544.977	400218.525	52.788	Pile
54	385541.370	400218.485	52.826	Pile
55	385540.795	400219.666	52.935	Pile
56	385541.640	400217.122	52.747	Pile
57	385541.016	400217.797	53.005	Pile
58	385541.368	400216.189	53.050	Pile
59	385541.466	400214.970	52.856	Pile
60	385538.102	400216.262	53.011	Pile
61	385541.090	400214.445	53.017	Pile
62	385537.175	400213.968	52.722	Pile
63	385536.645	400212.957	52.862	Pile
64	385540.081	400211.914	52.465	Pile
65	385536.267	400211.179	52.776	Pile
66	385535.579	400208.632	52.592	Pile
67	385535.012	400206.817	52.310	Pile
72	385562.052	400211.023	51.841	Pile
73	385558.506	400212.256	51.778	Pile
74	385555.831	400214.930	51.850	Pile
75	385555.219	400213.198	51.736	Pile
76	385554.544	400211.423	51.800	Pile
77	385554.756	400212.416	51.486	Pile
78	385553.670	400213.673	51.869	Pile
79	385553.370	400215.608	51.531	Pile
80	385552.811	400214.361	51.818	Pile
81	385551.914	400212.845	51.723	Pile
82	385552.507	400213.536	51.422	Pile
83	385552.058	400216.957	51.228	Pile
84	385549.170	400215.468	51.849	Pile
85	385547.581	400214.462	51.816	Pile

Ref	Easting	Northing	Elevation	Code
86	385545.956	400217.295	52.068	Pile
87	385541.943	400217.650	52.321	Pile
98	385528.641	400190.328	51.811	Pile
100	385527.783	400187.418	51.774	Pile
101	385529.518	400186.954	51.779	Pile
102	385527.063	400185.195	51.929	Pile
103	385525.966	400182.547	52.083	Pile
105	385526.919	400181.801	51.965	Pile
106	385525.073	400180.465	51.587	Pile
606	385546.416	400209.723	51.847	Pile
607	385544.065	400210.109	51.791	Pile
608	385544.828	400209.955	51.783	Pile
610	385543.524	400206.864	51.948	Pile
611	385544.378	400209.093	51.915	Pile
612	385544.497	400208.799	51.895	Pile
613	385545.171	400206.480	51.802	Pile
614	385543.352	400206.479	51.957	Pile
615	385544.129	400205.721	51.938	Pile
616	385541.943	400204.174	52.108	Pile
618	385542.730	400204.137	52.102	Pile
1688	385540.336	400201.071	51.958	Pile
1689	385541.572	400200.730	51.959	Pile
1690	385538.737	400201.757	51.771	Pile
1691	385538.352	400201.622	51.190	Pile
1692	385536.925	400202.229	50.793	Pile
1694	385535.519	400202.960	51.328	Pile
1695	385533.429	400204.023	51.807	Pile
1696	385539.688	400197.408	51.743	Pile
1697	385532.483	400200.688	51.981	Pile
1698	385536.657	400196.164	52.133	Pile
1699	385535.550	400198.910	51.746	Pile
1700	385538.140	400194.236	51.977	Pile
1701	385537.185	400194.920	51.425	Pile
1702	385535.553	400197.926	51.657	Pile
1703	385535.974	400195.317	51.622	Pile
1704	385534.741	400196.109	51.671	Pile
1705	385534.922	400195.492	51.575	Pile
1706	385531.660	400197.226	51.785	Pile
2190	385532.210	400176.575	51.955	Pile
2191	385531.319	400177.316	52.264	Pile
2192	385528.321	400177.687	51.957	Pile
2194	385529.653	400181.111	51.545	Pile
2195	385533.370	400179.479	52.037	Pile
2196	385531.716	400182.280	52.137	Pile
2198	385532.328	400189.546	51.960	Pile
2199	385534.131	400190.134	51.709	Pile
2200	385535.884	400186.300	51.948	Pile
2201	385535.117	400184.684	52.007	Pile
2202	385533.966	400185.296	52.016	Pile
2203	385533.640	400184.280	51.969	Pile
2204	385534.906	400183.338	52.151	Pile
2205	385530.985	400186.144	52.180	Pile
2208	385539.439	400190.357	51.831	Pile
2209	385538.604	400190.335	51.974	Pile
2210	385537.808	400191.679	51.841	Pile
2211	385537.995	400192.247	51.963	Pile
2212	385536.438	400191.800	51.865	Pile
2213	385535.674	400191.997	51.921	Pile
2214	385533.877	400192.803	51.795	Pile
2235	385578.416	400224.238	53.338	Obstruction

SCALE 1:125

SCALE 1:1000

AREA SHOWN ENLARGED IN MAIN DRAWING

REV	DESCRIPTION	BY	DATE

LK Remediate
Eton Hill Road
Radcliffe
M26 2ZS

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

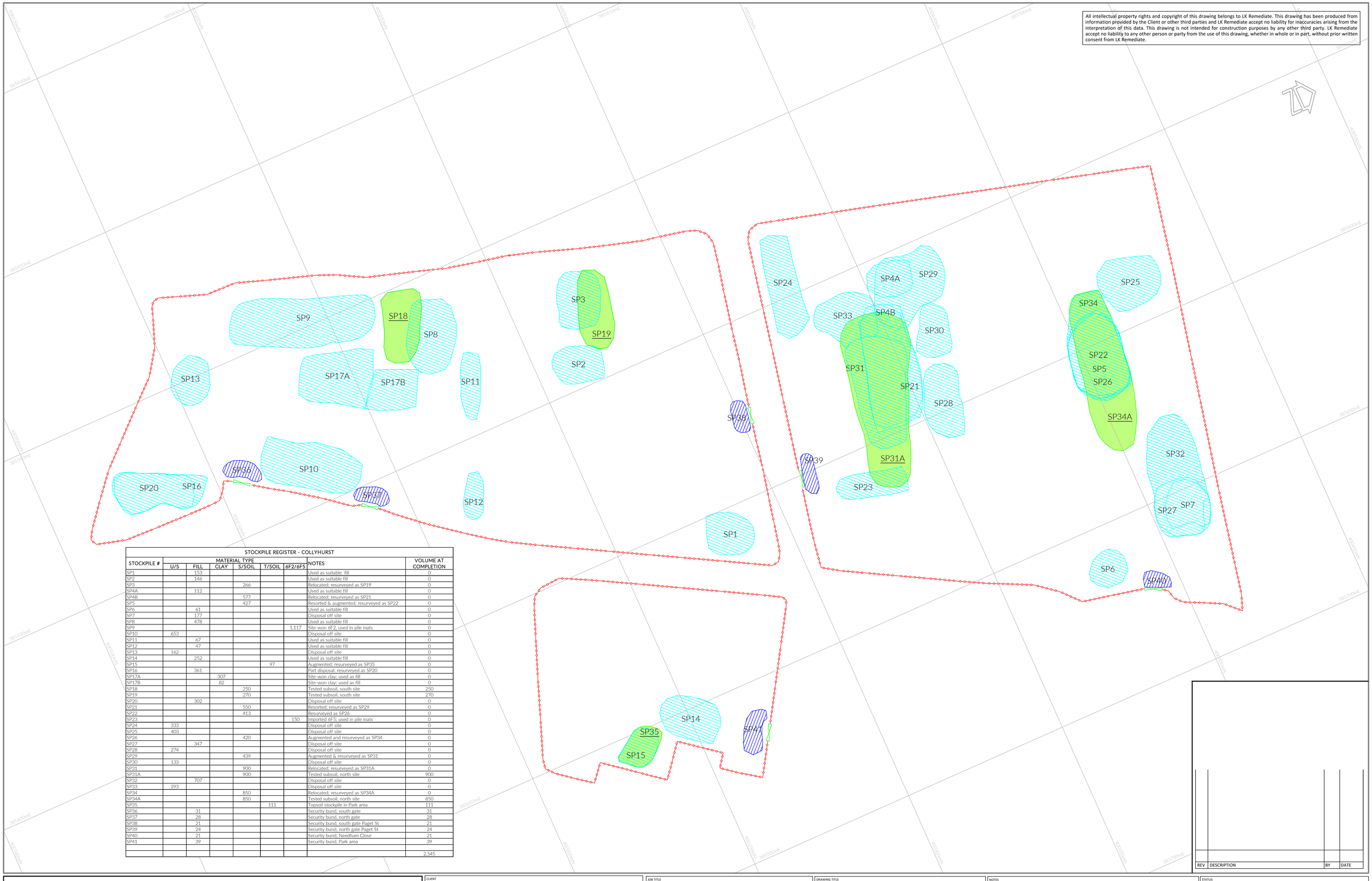
DRAWING TITLE: OBSTRUCTIONS REMAINING

NOTES
REF 2235 53.338 LOCATION AND LEVEL OF CROPPED PILES. REFERENCE NUMBER IS SURVEY POINT NUMBER (SEE INSET TABLE)
PERIMETER FENCE AND ACCESS GATES

FOR SERVICES REMAINING WITHIN THE SITE BOUNDARY AND WHICH THEREFORE PRESENT AS OBSTRUCTIONS, PLEASE REFER TO DRG 20_1044_03_00

STATUS	FINAL		
DRAWN BY	RC	SIGNATURE	_
DATE	12/04/22		
APPROVED	DA	SIGNATURE	_
DATE	12/04/22		
SCALE	AS SHOWN @ A1	DRG No.	20_1044_07_00

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STOCKPILE REGISTER - COLLYHURST

STOCKPILE #	MATERIAL TYPE						NOTES	VOLUME AT COMPLETION
	U/S	FILL	CLAY	S/SOIL	T/SOIL	6F2/6F5		
SP1		153					Used as suitable fill	0
SP2		146					Used as suitable fill	0
SP3				266			Relocated; resurveyed as SP19	0
SP4A		112					Used as suitable fill	0
SP4B				577			Relocated; resurveyed as SP21	0
SP5				427			Resorted & augmented; resurveyed as SP22	0
SP6		61					Used as suitable fill	0
SP7		177					Disposal off site	0
SP8		478					Used as suitable fill	0
SP9						1,117	Site-won 6F2, used in pile mats	0
SP10	653						Disposal off site	0
SP11		67					Used as suitable fill	0
SP12		47					Used as suitable fill	0
SP13	162						Disposal off site	0
SP14		252					Used as suitable fill	0
SP15					97		Augmented; resurveyed as SP35	0
SP16		361					Part disposal; resurveyed as SP20	0
SP17A			307				Site-won clay; used as fill	0
SP17B			82				Site-won clay; used as fill	0
SP18				250			Tested subsoil, south site	250
SP19				270			Tested subsoil, south site	270
SP20		302					Disposal off site	0
SP21				550			Resorted; resurveyed as SP29	0
SP22				413			Resurveyed as SP26	0
SP23						150	Imported 6F5; used in pile mats	0
SP24	333						Disposal off site	0
SP25	403						Disposal off site	0
SP26				420			Augmented and resurveyed as SP34	0
SP27		347					Disposal off site	0
SP28	274						Disposal off site	0
SP29				439			Augmented & resurveyed as SP31	0
SP30	133						Disposal off site	0
SP31				900			Relocated; resurveyed as SP31A	0
SP31A				900			Tested subsoil, north site	900
SP32		707					Disposal off site	0
SP33	293						Disposal off site	0
SP34				850			Relocated; resurveyed as SP34A	0
SP34A				850			Tested subsoil, north site	850
SP35					111		Topsoil stockpile in Park area	111
SP36		31					Security bund, south gate	31
SP37		28					Security bund, north gate	28
SP38		21					Security bund, south gate Paget St	21
SP39		24					Security bund, north gate Paget St	24
SP40		21					Security bund, Needham Close	21
SP41		39					Security bund, Park area	39
								2,545

REV	DESCRIPTION	BY	DATE

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CLIENT: FAR EAST CONSORTIUM

JOB TITLE: COLLYHURST VILLAGE

DRAWING TITLE: TEMPORARY AND FINAL STOCKPILES

NOTES
- PERIMETER FENCE AND ACCESS GATES
- SP31A — STOCKPILES OF SUBSOIL AND TOPSOIL RETAINED FOR FUTURE USE
- SP6 — TEMPORARY STOCKPILES DURING REMEDIATION PERIOD
- SP41 — BUNDED FILL MATERIAL TO PREVENT UNAUTHORISED ACCESS

STATUS	FINAL		
DRAWN BY	RC	SIGNATURE	_
DATE	12/04/22		
APPROVED	DA	SIGNATURE	_
DATE	12/04/22		
SCALE	1:500 @ A1	DRG No.	20_1044_08_00