MCFC Project Taverna

Phase 2 Geo-Environmental Investigation Report

For: Manchester City Football Club

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1.0 INTRODUCTION

This Phase 2 Geo-Environmental Investigation Report has been prepared at the request of Manchester City Football Club. Instructions to proceed were received in March 2026.

This report pertains to a c. 0.63 Ha site located to the east of the Etihad Stadium, Etihad Campus, Manchester, c. 3km northeast of Manchester City Centre, at the approximate post code M11 3FF. The Ordnance Survey Grid Reference for the centre of the site is 386925E, 398736N.

The site is currently partially used as a site compound for the Etihad Stadium north stand extension, operated by Sisk. The site is bound by a Metrolink cutting to the north with Ashton Canal and the Co-op Live Arena beyond to the North, Alan Turing Way to the east, Gibbon Street to the south and the Sisk site compound to the west. Access to the site is via Gibbon Street off Alan Turing Way. An aerial photo of the site is included below, and a site location plan is contained in Appendix 2.



Figure 1: Aerial image of the site dated March 2025. The approximate site boundary is highlighted in magenta.

This Phase 2 Geo-Environmental Investigation Report is to be used for submission to the Local Authority as part of a planning application. It is the client's intention to develop the site into an immersive events space.

A proposed development plan is contained in Appendix 2 with an extract below as Figure 2.

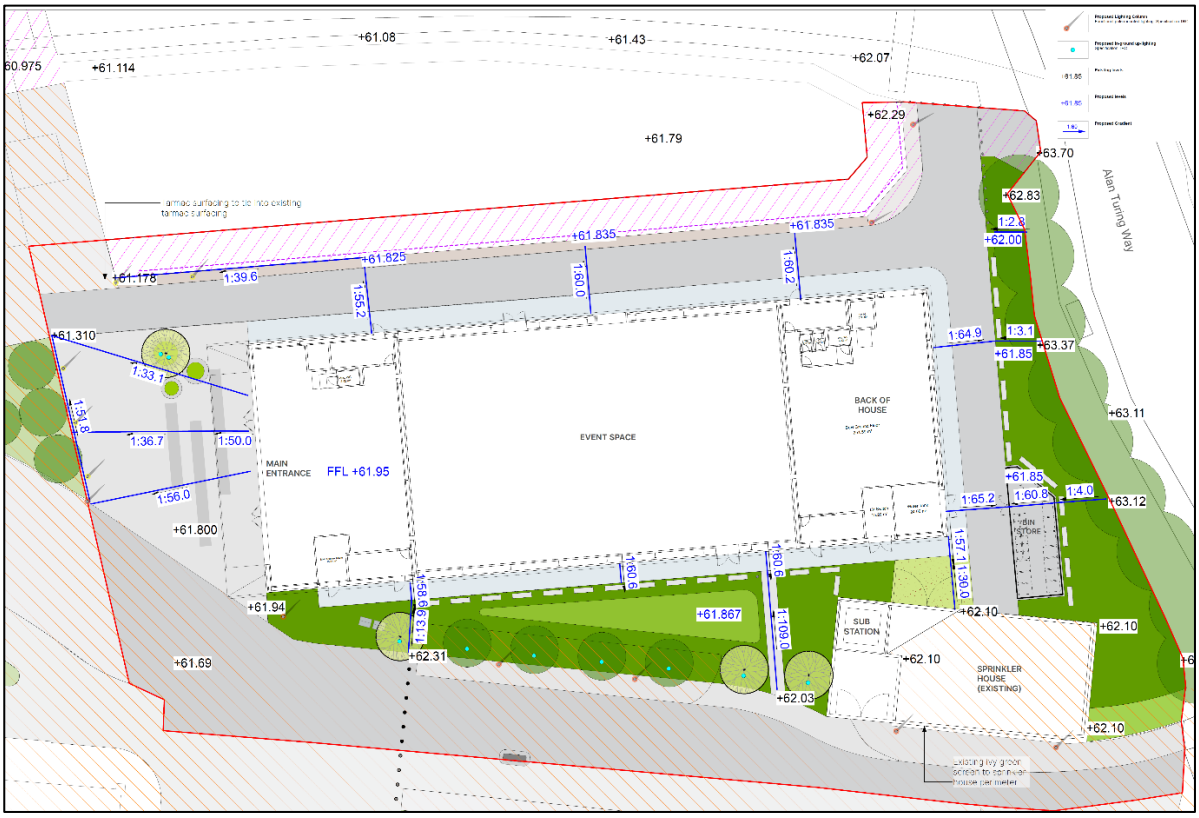


Figure 2: Extract of the proposed development plan

1.1 Brief

The brief was to carry out a Phase 2 geo-environmental ground investigation for the site based upon the findings of the IGE Consulting *Phase 1 Geo-Environmental Report* (4490-01, January 2026) and the proposed development outlined in Section 1.0. This report uses findings and recommendations from the following reports and documents:

- **IGE Consulting** *Phase 1 Geo-Environmental Report* (4490-01, dated January 2026);
- **IGE Consulting** *Coal Mining Risk Assessment Report* (4490-02, dated March 2026); and
- **Planit I.E.** *Landscape General Arrangement* (3679.3-PLA-XX-XX-DR-L-0001, dated March 2026).

The investigation was to include the following tasks:

a) Undertake / install appropriate exploratory holes and collect representative samples from exploratory holes and arrange appropriate chemical testing in accordance with the latest legal framework, record olfactory and / or visual evidence of contamination during intrusive works and undertake on site in-situ and laboratory geotechnical testing;

b) Refine conceptual models to accommodate the findings of the ground investigation works in terms of the risk to human health, ground gas, controlled waters and the wider environment;

c) Identify the risks and evaluate whether a Phase 3 numerical risk assessment and / or a Remedial Strategy, is required;

d) Undertake an assessment of the ground conditions to provide outline recommendations for the proposed foundations; and

e) Undertake ground gas and groundwater depth monitoring including 6 No. visits over 3 months.

A report was to be provided to summarise the findings and recommendations.

2.0 SCOPE OF INVESTIGATION WORK

This Phase 2 Geo-Environmental Investigation has been designed based on the findings of the IGE Consulting *Phase 1 Geo-Environmental Report* (4490-01, January 2026) and the client's requirements in relation to the proposed development outlined in Section 1.0.

The ground investigation works were undertaken between 30th March and 2nd April 2026 and comprised 2 No. cable percussion boreholes, 8 No. dynamic sampling boreholes, 12 No. mechanically excavated trial pits and 16 No. California Bearing Ratio (CBR) determinations via plate load tests. Subsequent laboratory testing was undertaken between 2nd April and 22nd April 2026.

Drilling of dynamic sample boreholes was carried out by RP Drilling Ltd, drilling of cable percussion boreholes was carried out by DMW Drilling Ltd and the CBR determinations via plate load testing were undertaken by TD Construction Testing Ltd.

Testing of soil samples for environmental purposes was carried out by i2 Analytical in accordance with the Environment Agency's MCERTS (Monitoring Certification) quality assurance accreditation scheme. Testing of soil samples for geotechnical purposes was carried out by Murray Rix (Northern) Ltd, which is a UKAS accredited laboratory. These organisations were appointed directly by IGE Consulting to carry out these contracting works.

The locations of the exploratory holes were topographically surveyed (X-Y-Z axis) with an accuracy of 20mm.

The ground investigation was undertaken in general accordance with:

- BS 5930 (2015) + A1 (2020) Code of Practice for Ground Investigation;
- BS EN ISO 17892 Geotechnical Investigation and Testing - Laboratory Testing of Soil;
- BS 10175 (2026) Investigation of Potentially Contaminated Sites – Code of Practice;

- BS EN 1997-2 (2007) Eurocode 7 – Geotechnical Design – Ground Investigation and Testing;
- BS 8485 (2015) + A1 (2019) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings;
- BS 8576 (2013) Guidance on Investigations for Ground Gas – Permanent gases and Volatile Organic Compounds; and
- Land Contamination Risk Management (2025).

Further details pertaining to the ground investigation works are outlined in the following sections.

The limitations of the investigation work and report are included in Appendix 1.

The exploratory holes were undertaken in order to achieve the following:

- to establish the thickness, extent and characteristics of any possible Made Ground and underlying natural superficial deposits;
- to establish bedrock depth across the site;
- to undertake in-situ geotechnical testing within these deposits;
- to target and delineate the historical infilled canal running through the site and any visual or olfactory evidence of contamination associated with it;
- to obtain samples from these deposits for classification and laboratory testing;
- to allow for the installation of ground gas and groundwater monitoring wells.

The exploratory hole location plan is included in Appendix 2 with an extract below as Figure 3:

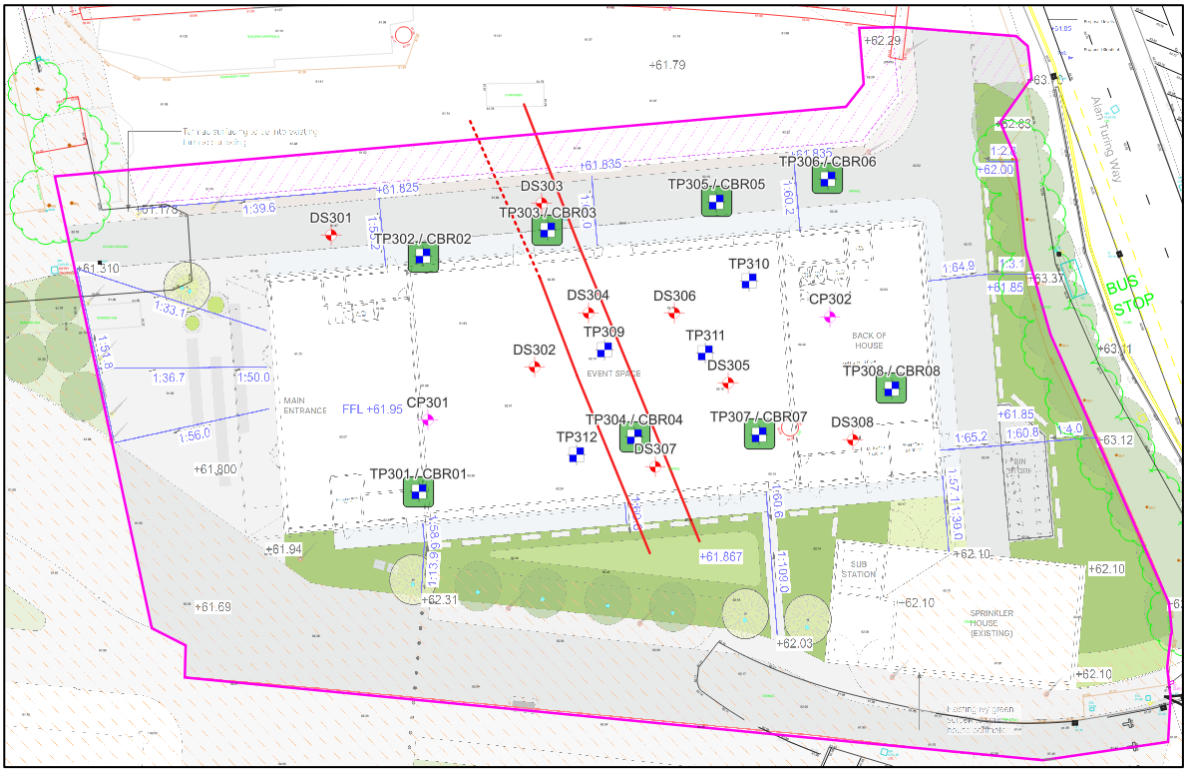


Figure 3: Extract of the exploratory hole location plan

2.1 Trial Pits

12 No. trial pits (TP301 to TP312, inclusive) were mechanically excavated to depths of between 2.40m and 5.10m bgl (59.71m and 57.01m AOD) using a LiuGong 913 FCR (13T) tracked excavator. TP303, TP304 and TP309 were positioned targeting the historical infilled canal and were extended to determine the lateral extents of this feature. The remaining trial pits were placed spatially across the site and according to access constraints to gain a representative view of the ground conditions.

The locations of the trial pits are shown on the exploratory hole location plan in Appendix 2 and trial pit exploratory hole logs and photographs are contained in Appendix 3.

2.2 Dynamic Sampling Boreholes

8 No. dynamic sampling boreholes (DS301 to DS308, inclusive) were constructed spatially across the site to depths of between 0.90m bgl and 3.38m bgl (61.20m and 58.68m AOD).

DS303, DS304 and DS307 were positioned targeting the historical infilled canal whilst the remaining boreholes were placed spatially to gain a representative view of ground conditions and install gas and groundwater depth monitoring wells.

The locations of the dynamic sampling boreholes are shown on the exploratory hole location plan in Appendix 2 and the dynamic sampling borehole logs are contained in Appendix 4.

2.3 Cable Percussion Boreholes

2 No. cable percussion boreholes (CP301 and CP302) were constructed using both 200mm and 150mm casing and tools. CP301 was undertaken to a depth of 16.91m bgl (45.19m AOD) whilst CP302 was undertaken to a depth of 16.83m bgl (45.22m AOD). The boreholes were positioned at the most accessible western and eastern extremes of the site to gain a representative view of ground conditions, establish bedrock depth and install gas and groundwater depth monitoring wells.

The locations of the cable percussion boreholes are shown on the exploratory hole location plan in Appendix 2, and the borehole logs are contained in Appendix 5.

2.4 Site Testing and Sampling

The following site tests and sampling were carried out:

a) Retrieval of environmental samples and bulk disturbed samples from trial pits, cable percussion boreholes and dynamic sampling sleeves for the purposes of chemical and geotechnical laboratory testing and classification;

b) Retrieval of undisturbed 100mm (U100) samples from cable percussion boreholes for geotechnical laboratory testing;

c) Where possible, in-situ and ex-situ shear strength testing was undertaken within fine grained material (clay) from the trial pits and from the dynamic sampling borehole sleeve samples using a 19mm hand shear vane in accordance with BS1377-9;

d) Standard Penetration Tests (SPTs) were undertaken at regular 1.00m intervals between 1.00m and 3.00m bgl within the dynamic sampling boreholes and at

regular 1.00m intervals between 1.00m and 7.00m and at 1.50m intervals below 7.00m in cable percussion boreholes; and

e) California Bearing Ratio determinations were completed in-situ via plate load tests at locations CBR01 to CBR08.

2.5 Laboratory Testing

2.5.1 Chemical Laboratory Testing

18 No. soil samples obtained during exploratory hole construction were sent to i2 Analytical laboratories for chemical testing. These samples were placed into sterile sealed containers to facilitate MCERTS chemical laboratory testing of potential contaminants. Chemical testing suites are outlined below and were based upon the findings of the Phase 1 Geo-Environmental Report.

Asbestos ID, sulphate, pH, nitrate, total and free cyanide, arsenic, barium, beryllium, boron, cadmium, chromium, chromium (hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc, Total Petroleum Hydrocarbon screen, Speciated Total Petroleum Hydrocarbons (TPH-CWG), Monochromatics and Oxygenates (MTBE and BTEX), Speciated Polyaromatic Hydrocarbons, Total Phenols (monohydric) and Volatile Organic Compounds.

2.5.2 Geotechnical Laboratory Testing

The following geotechnical laboratory tests were carried out on selected samples obtained from across the site:

a) Determination of moisture content in accordance with BS EN ISO 17892-1:2014+A1:2022;

b) Determination of liquid limit and plastic limit in accordance with BS EN ISO 17892-12:2018+A2;

c) Determination of particle size distribution (PSD) by dry / wet sieving and sedimentation analysis by pipette method in accordance with BS EN ISO 17892-4:2016;

d) Determination of undrained shear strength in triaxial compression in accordance with BS EN ISO 17892-8:2018;

e) Determination of California Bearing Ratio in accordance with BS1377:9 Clause 4.1 and IAN 73/06 Rev 1 (2009); and

f) BRE Special Digest suite for aggressive ground conditions.

2.6 Previous Earthworks

As presented and discussed in the IGE Consulting Phase 1 Geo-Environmental Report, the site has a considerable industrial history and has been subjected to multiple stages of earthworks and remediation prior to the IGE Consulting ground investigation works. During earthworks, contaminated ground is understood to have been ‘turned over’ and replaced to an engineering specification. According to the remediation reports, the works also involved the removal of contaminated material from within the infilled canal and replacement with geotechnically suitable material.

Given the presence of underground coal workings associated with the former Bradford Colliery, as discussed in the Phase 1 and Coal Mining Risk Assessment reports, the eastern site section has been subject to treatment by drilling and grouting during earthworks. The remaining site section is understood to have remained untreated during this stage of earthworks. The details of previous works undertaken on site are included in the IGE Consulting Phase 1 Geo-Environmental Report (4490-01, dated January 2026) and the IGE Consulting Coal Mining Risk Assessment (4490-02A, dated March 2026).

3.0 FINDINGS

3.1 Ground Conditions

The site currently consists of a gravel surfaced car park in the eastern section and a site compound in the western site section separated by an asphalt road, predominantly utilised for pedestrian access. The site topography is consistent at c. 62.00m AOD with a gentle slope to the west. Figure 4, below, shows elevations across the site based on LIDAR data:

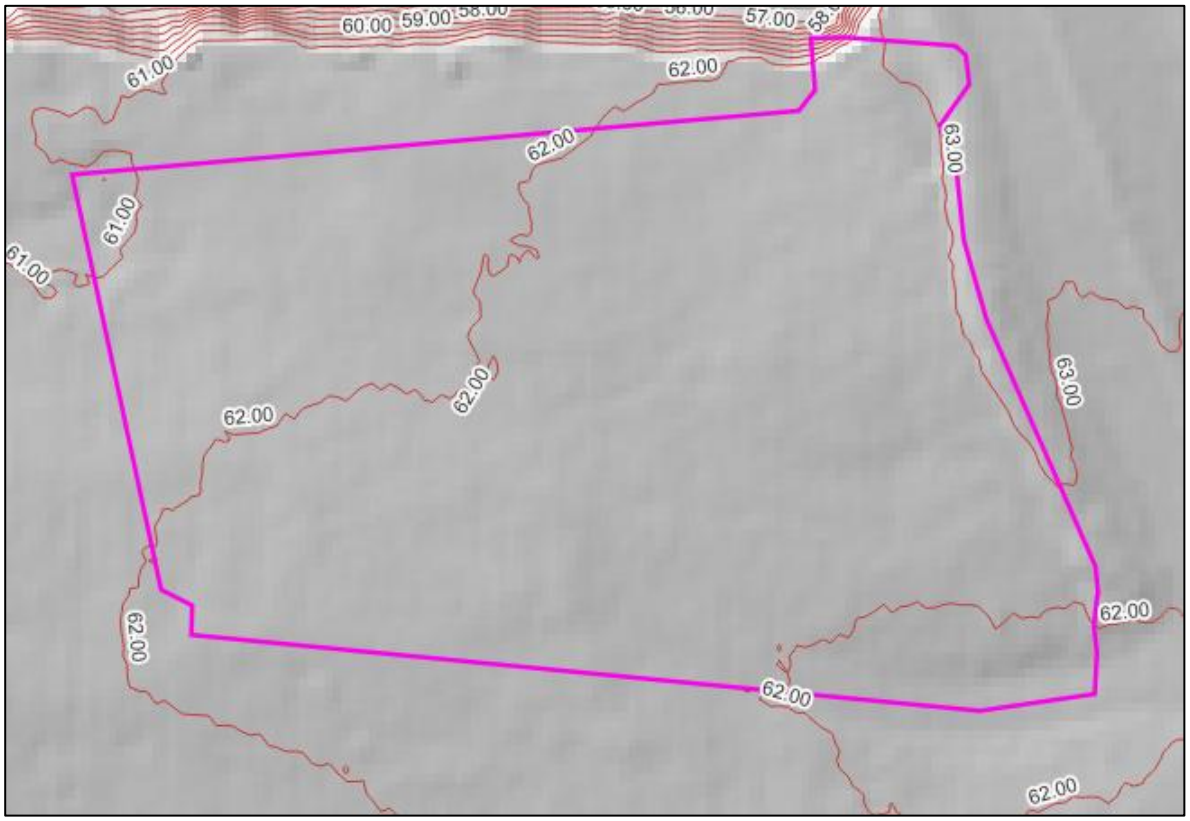


Figure 4: Site location plan showing current site elevations based on LIDAR data

The typical ground conditions encountered across the site are as follows:

- **Made Ground** comprising asphalt (in the road only) to a depth of 0.10m to 0.15m bgl (62.00m to 61.72m AOD), underlain by:
- **Made Ground** comprising dark greyish brown, very gravelly, slightly clayey to clayey fine to coarse SAND to a depth of 2.30m to at least 3.10m (59.73m to 59.03m AOD), underlain by:

- **Glacial Till** comprising stiff to very stiff, light brown, slightly gravelly, slightly sandy CLAY to depths of between 15.00m to 15.80m bgl (47.05m to 46.30m AOD), underlain by:
- **Pennine Upper Coal Measures** comprising weathered MUDSTONE. During cable percussion drilling, this material was recovered as very stiff, grey, slightly gravelly CLAY to a depth of at least 16.91m bgl (45.19m AOD).

Images of the typical Made ground, Glacial Till and Pennine Upper Coal Measures deposits are shown below:



Figure 5: Typical Made Ground encountered in TP301 (left), typical Glacial Till encountered in TP305 (centre) and Pennine Upper Coal Measures in CP302 (right).

3.1.1 Notable Exceptions

The following notable exceptions to the aforementioned typical ground conditions were recorded:

- **Made Ground** comprising stiff, light brown, slightly gravelly, slightly sandy CLAY was encountered in CP302 only from 3.00m to 4.00m bgl (59.05m to 58.05m AOD).
- **Made Ground** comprising soft, black, slightly sandy, gravelly CLAY and dark grey, very sandy, silty GRAVEL with a mild to strong hydrocarbon odour and sheen was encountered within TP303, TP304 and TP309 from 2.60m and 4.40m bgl (59.52m and 57.72m AOD).

3.2 Visual and Olfactory Contamination Findings

During the intrusive investigation works, the soils were examined carefully for both visual and olfactory evidence of contamination.

3.2.1 Infilled Canal

Trial pits TP303, TP304, TP309 and TP312 were undertaken within the extents of the historical infilled canal in order to identify and delineate this feature. During this delineation exercise, a mild to strong hydrocarbon odour and sheen was noted in the Made Ground deposits between 2.60m and 4.40m bgl (59.52m and 57.72m AOD).

Any evidence of hydrocarbon impact and in-situ Photo Ionisation Detector (PID) test results are summarised below:

Location	Depth (m bgl)	Evidence	PID
TP303	1.20	Mild hydrocarbon odour	0.20 ppm at 1.20m bgl
	2.90	Slight hydrocarbon sheen	2.10 ppm at 2.90m bgl
	3.00 – 4.20	Mild hydrocarbon odour and sheen	1.20 ppm at 3.20m bgl 2.30 ppm at 4.20m bgl
TP304	2.70	Mild hydrocarbon odour	2.60 ppm at 2.70m bgl
	4.00 – 4.40	Mild hydrocarbon odour and sheen	12.00 ppm at 4.10m bgl
TP309	2.30	Slight hydrocarbon odour	-
	2.70 – 4.00	Strong hydrocarbon odour and sheen	24.30 ppm at 2.90m bgl 64.00 ppm at 3.60m bgl
TP312	2.40	Slight hydrocarbon odour	-

Figure 6, below, shows the locations of the trial pits in relation to the infilled canal based on the 1893 historical OS map.

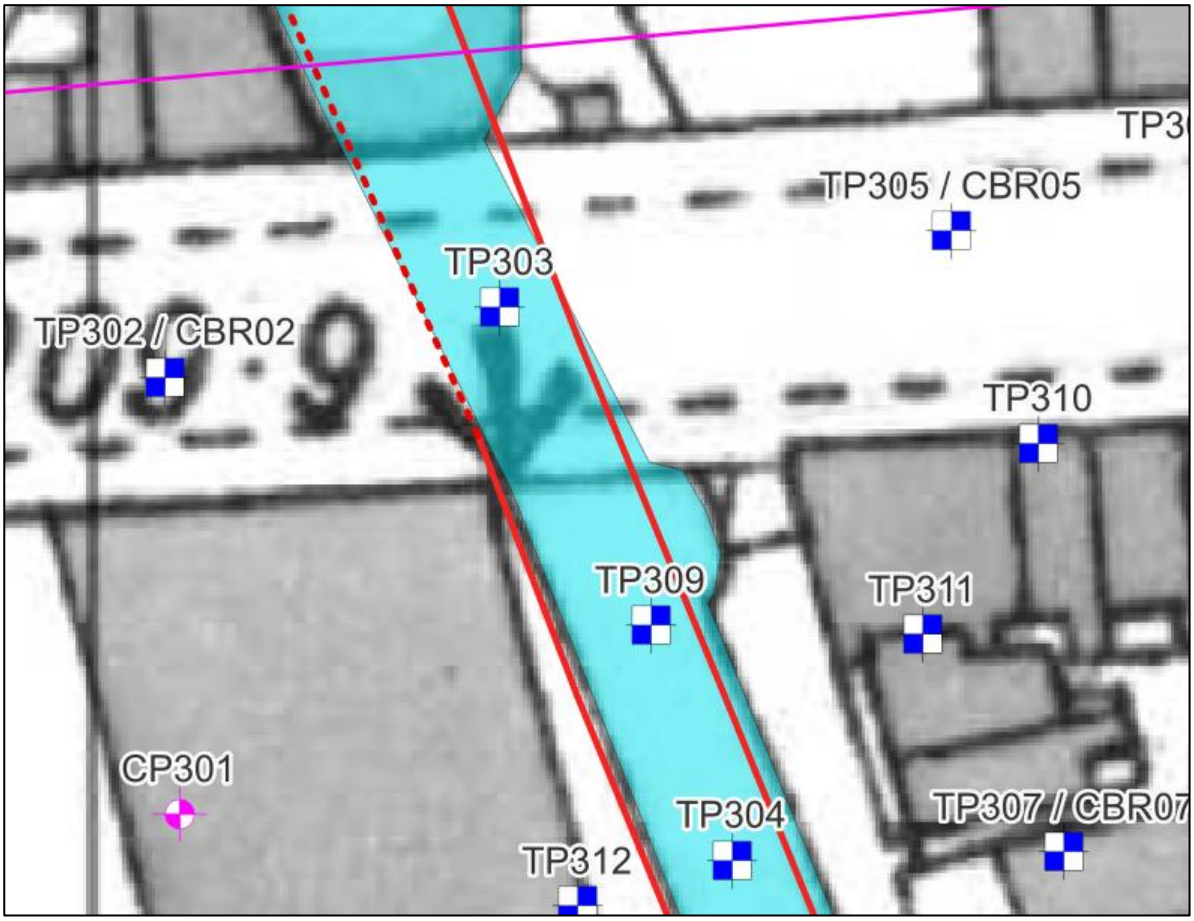


Figure 6: Locations of exploratory holes targeting the historical infilled canal overlain onto the 1893 historical OS map. The location of the canal on the historical map is shown in blue. Extents measured during ground investigation are shown with red lines and inferred extents are shown with a dashed red line.

Evidence of TPH impact was noted to be the strongest in TP309 and significantly weaker in TP304 and TP303. Representative samples were taken from these deposits and sent for chemical laboratory testing to confirm contaminant concentrations. Chemical testing results are included in Appendix 8 and summarised in Section 3.7. Photographs of the recovered material in which strong odours and sheens were recorded are included below as Figure 7:



Figure 7: Photographs of Made Ground where strong hydrocarbon odours and sheens were recorded (TP303, left and TP309, right)

Evidence of TPH impact recorded during the ground investigation and the PID test results are included on the trial pit logs in Appendix 3.

3.3 Water Strikes

No water strikes were recorded within the underlying natural strata. Perched water strikes were recorded within Made Ground deposits and are summarised below:

Exploratory Hole	Depth (m bgl) *(m AOD)*	Comments
TP310	0.70 *(61.42)*	-
TP305	0.80 *(61.25)*	-
CP302	0.80 *(61.25)*	Water level 0.50m bgl (61.55m AOD) after 5 minutes
TP309	2.30 *(59.81)*	-
TP304	2.30 *(59.82)*	-
TP303	3.10 *(58.85)*	-

Water strikes are detailed on the exploratory hole logs contained in Appendices 3 to 5.

3.4 Conceptual Ground Model

The findings of the Phase 2 ground investigation works have been used to create a conceptual ground model of the site. The model illustrates the typical ground conditions outlined in Section 3.1 as well as the deeper Made Ground encountered in the infilled canal. An extract of the conceptual ground model is included below as Figure 8 and presented in Appendix 2:

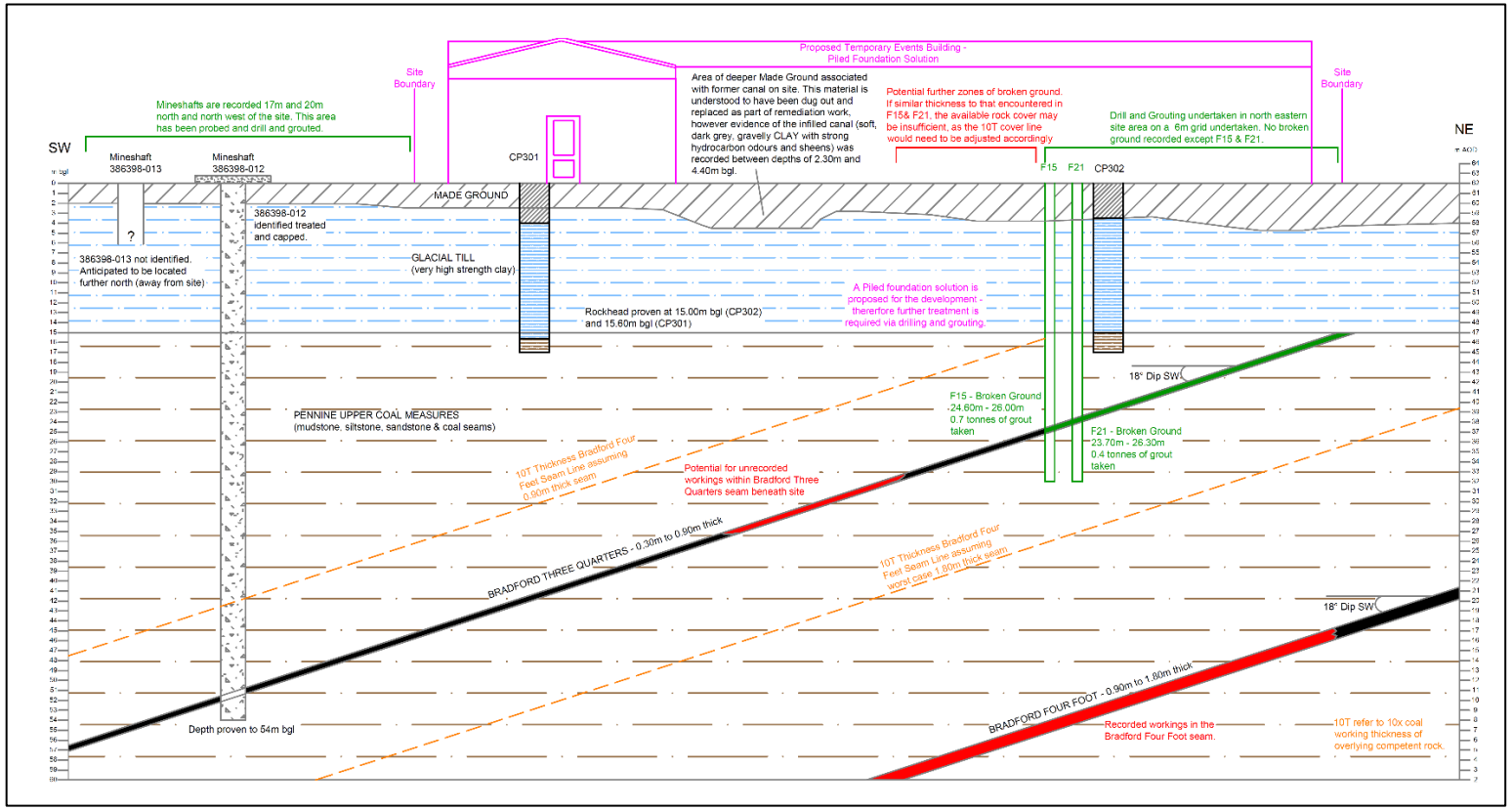


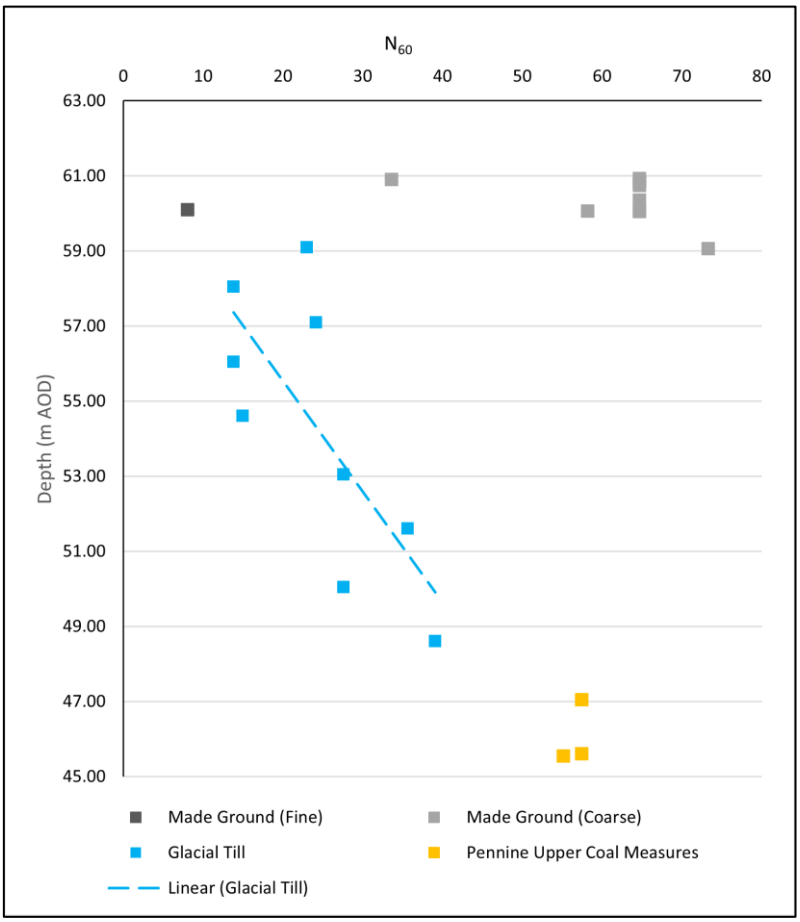
Figure 8: Extract of the conceptual ground model for the site.

3.5 Geotechnical Site Testing

The results of the geotechnical testing undertaken during the ground investigation are summarised below.

3.5.1 Standard Penetration Tests

Standard penetration tests (SPTs) were undertaken at regular 1.00m intervals during the construction of the cable percussion and dynamic sampling boreholes. The following scatter graph outlines the corrected N_{60} (energy ratio of 69) derived from the standard penetration tests undertaken during the ground investigation works.

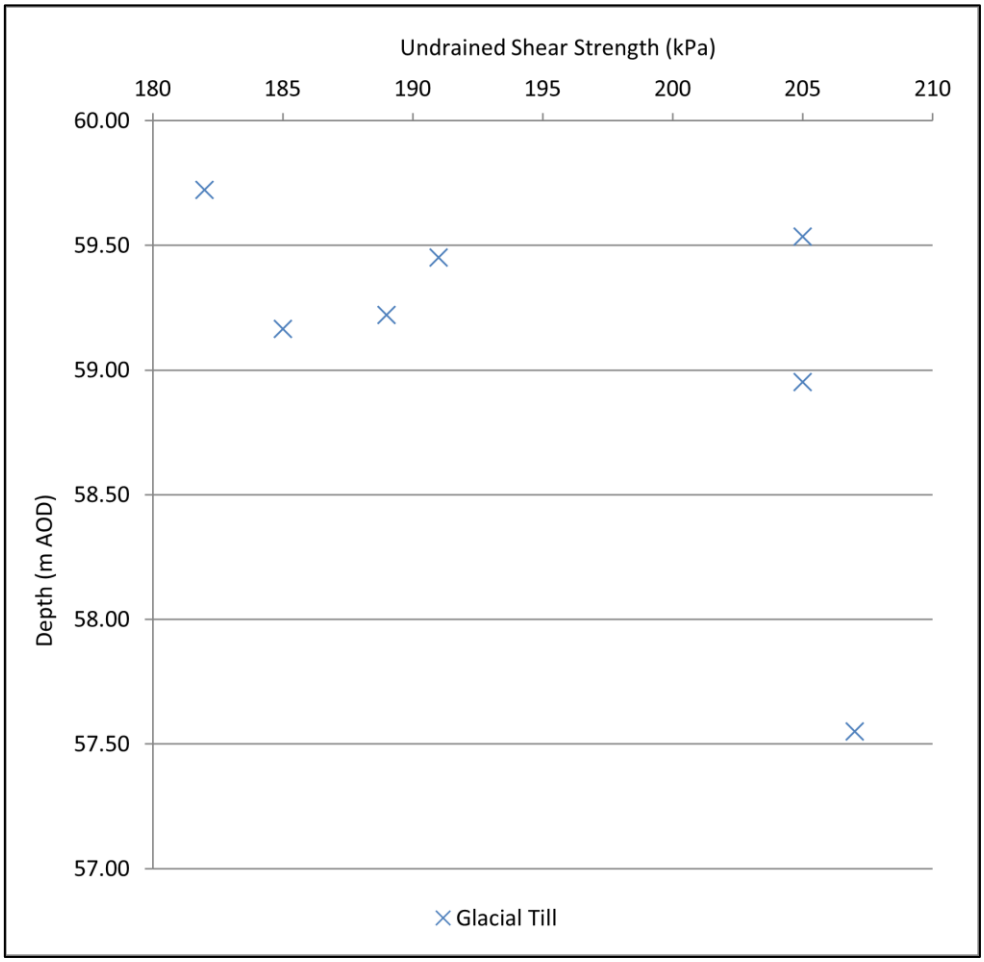


The scatter graph shows that there was a positive correlation between increasing corrected N_{60} with depth within Glacial Till deposits. SPTs undertaken within Made Ground and Pennine Upper Coal Measures mostly resulted in refusals.

SPT results are included on the dynamic sample and cable percussion borehole logs presented in Appendices 4 and 5 respectively.

3.5.2 Hand Shear Vane (19mm) Tests

Where possible, ex-situ undrained shear strength testing was undertaken on samples of fine-grained material (clay) within trial pits and dynamic sampling boreholes using a 19mm hand shear vane in accordance with BS1377-9. It should be noted that undertaking hand shear vane tests below 2m bgl within dynamic sample boreholes is considered inappropriate; the increased sampling disturbance at depth can produce unrepresentative results.



Given the depth of Made Ground encountered across the site and the general recovery of fine Glacial Till deposits as fine gravel to cobble sized pieces, only 7 No. undrained shear strength tests were conducted via hand shear vane during the ground investigation. A correlation between undrained shear strength and depth could not be established with the available data although results were recorded between 185 kPa and results in excess of 205 kPa (average 195). The Glacial Till on

site can therefore be classified as a very high strength clay. Hand shear vane test results are included on the trial pit logs, contained within Appendix 3.

3.5.3 California Bearing Ratio (CBR) Tests

16 No. California Bearing Ratio determinations via plate load testing were undertaken across the site in proposed external areas. 2 No. tests were undertaken at each location, the first at 0.50m bgl and the second at 1.00m bgl using a 300mm plate. Given the thickness of Made Ground on site (2.40m to 4.00m bgl), all tests were carried out within Made Ground deposits. The test results are summarised in the table below, and presented in Appendix 6:

Test	Test depth (m bgl)	Modulus of Subgrade Reaction (k) (kN/m^2/mm)	Equivalent CBR (%)
CBR04	0.50	82.1	20
CBR08	0.50	99.6	28
CBR03	0.50	109.1	33
CBR01	0.50	159	63
CBR05	0.50	162.4	65
CBR02	0.50	183.3	81
CBR06	0.50	184.6	82
CBR07	0.50	196.7	91
CBR06	1.00	87.9	23
CBR01	1.00	122.1	40
CBR03	1.00	226.8	>100
CBR08	1.00	242	>100
CBR04	1.00	252	>100
CBR02	1.00	371	>100
CBR05	1.00	371	>100
CBR07	1.00	371	>100

Orange = Results impacted by surface or perched water ingress into pit during test.

3.6 Geotechnical Laboratory Testing

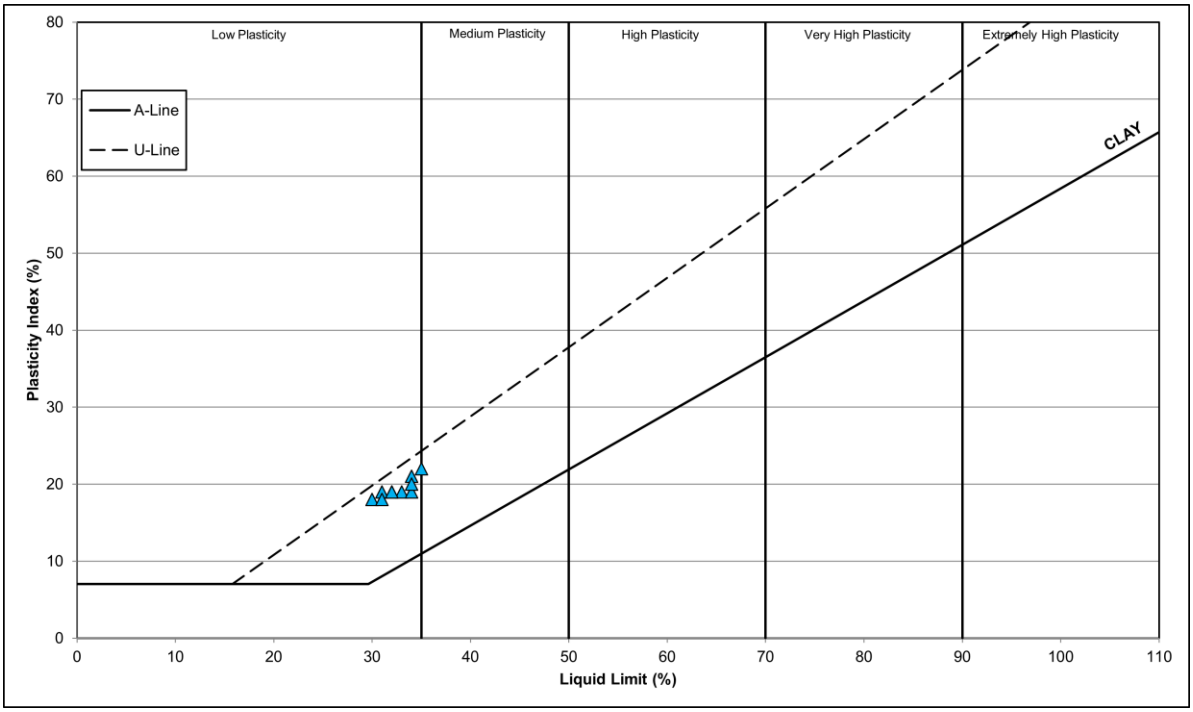
The results of the geotechnical laboratory tests undertaken during the ground investigation are summarised below. The full geotechnical laboratory test results are included in Appendix 7.

3.6.1 Atterberg Limit Tests

Atterberg limit tests were undertaken on 10 No. samples from natural Glacial Till deposits. The results of the Atterberg testing are as follows:

Sample	Sample Depth (m bgl)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Passing through 425 micron (%)	Modified Plasticity Index
TP310	2.40	23.5	34	14	20	88	18
TP305	2.60	19.5	32	13	19	81	15
TP302	2.70	15.7	35	13	22	69	15
CP301	4.00	12.1	34	13	21	86	18
TP309	4.20	21.3	34	15	19	79	15
TP305	4.50	16.7	33	14	19	74	14
CP302	7.00	12.8	31	12	19	90	17
CP301	9.00	12.2	32	13	19	91	17
CP301	12.00	10.3	30	12	18	82	15
CP302	13.50	12.9	31	13	18	87	16
Average		**16**	**33**	**13**	**19**	**-**	**-**

Green = low volume change potential



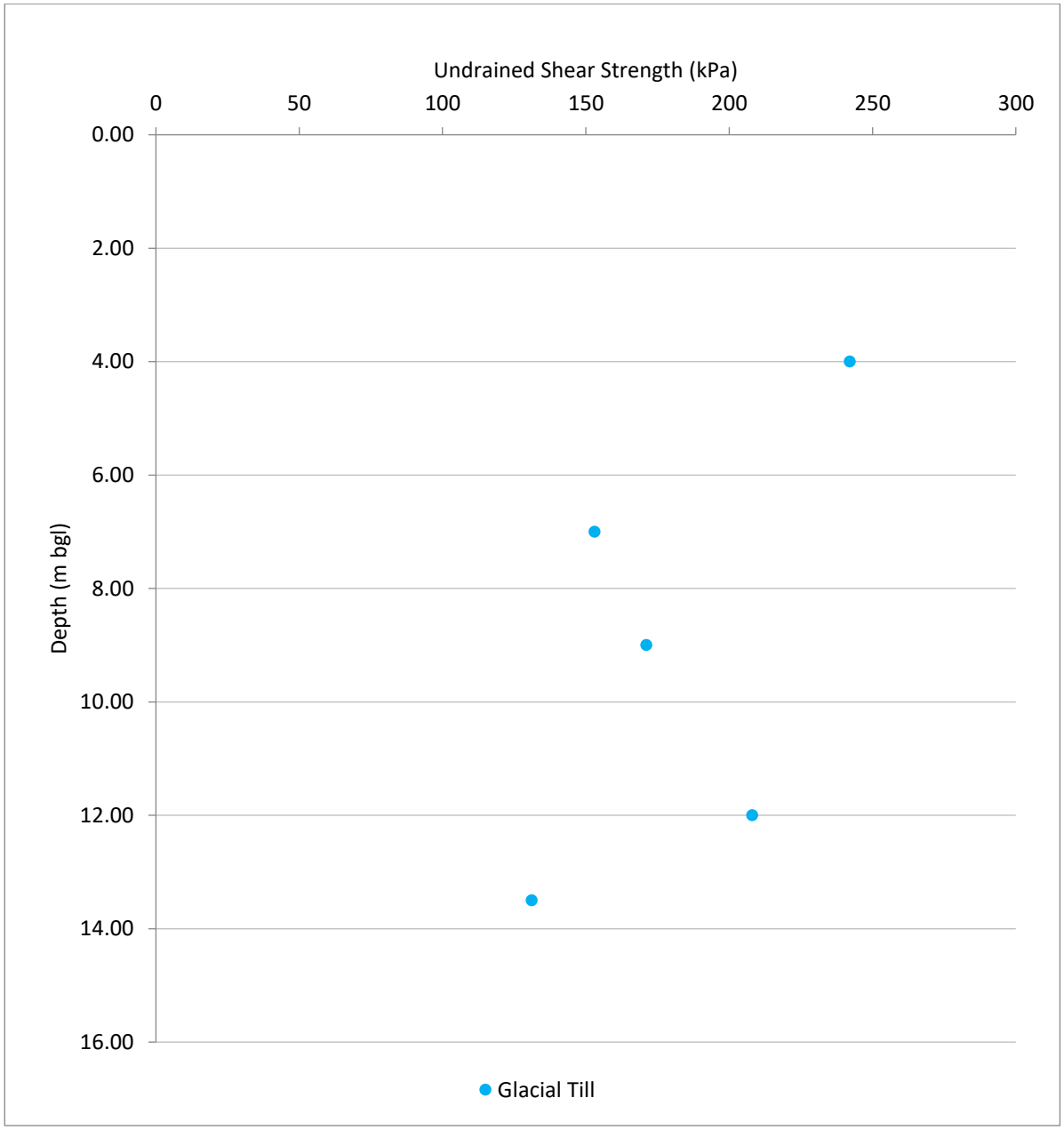
The Atterberg Limit tests indicate that the Glacial Till deposits are generally of low plasticity with the exception of 1 No. sample (TP302 at 2.70m bgl) which is medium plasticity in-line with BS14688 Part 2. The Glacial Till is of low volume change potential as indicated by all Atterberg limit tests.

3.6.2 Quick Undrained Triaxial Testing

5 No. samples of Glacial Till were analysed for undrained shear strength in triaxial compression. The results are summarised below, organised by increasing undrained shear strength:

Exploratory Hole	Depth (m bgl)	Moisture content (%)	Bulk Density (Mg/m^3)	Dry Density (Mg/m^3)	Undrained Shear Strength (kPa)	Mode of failure	Strength
CP302	13.50	12.90	2.17	1.92	131	Bulging	High
CP302	7.00	12.80	2.21	1.96	153	Bulging	Very High
CP301	9.00	12.20	2.25	2.01	171	Plastic	
CP301	12.00	10.30	2.24	2.03	208	Plastic	
CP301	4.00	12.10	2.26	2.02	242	Complex Shear	

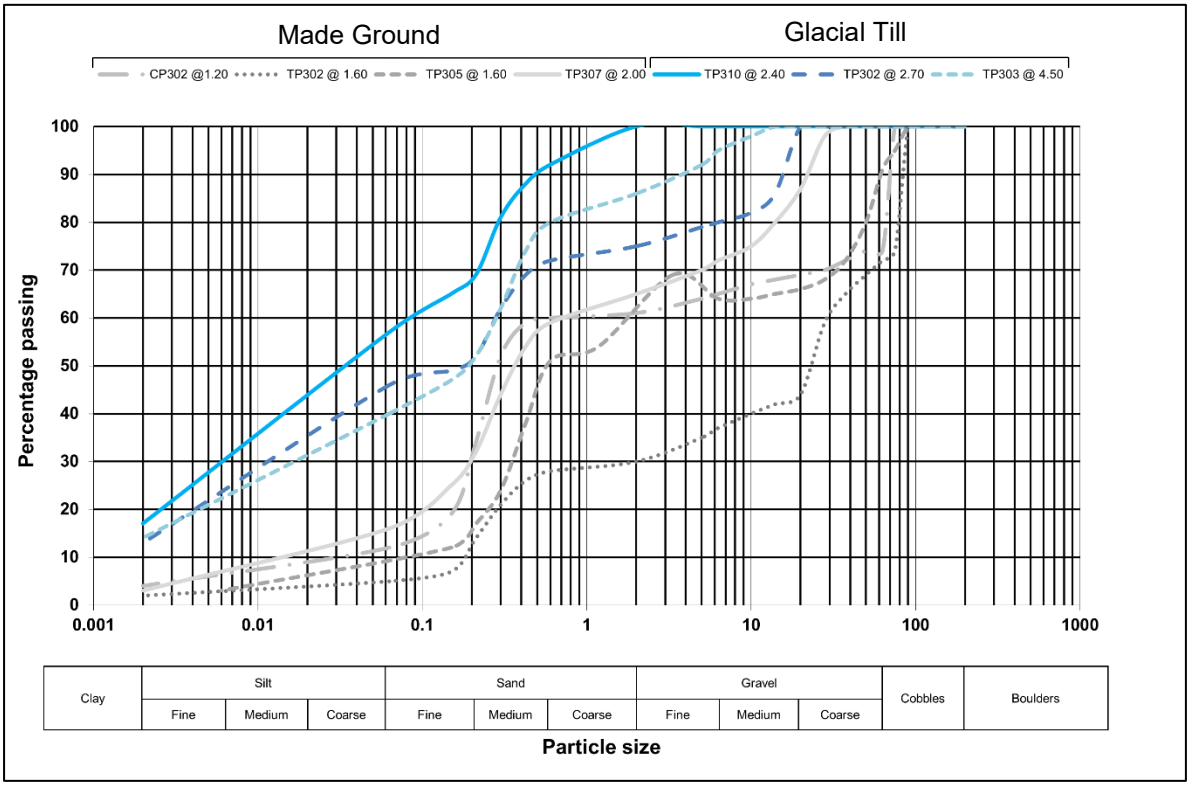
The triaxial testing indicates that the Glacial Till is of very high strength aside from 1 No. test (CP302 at 13.50m bgl) recorded as high strength. The below graph illustrates the undrained shear strength plotted against increasing depth:



3.6.3 Particle Size Distribution (PSD) Testing

6 No. particle size distribution (PSD) tests with sedimentation were undertaken on samples of Glacial Till. The results are summarised below:

Sample	Sample Depth (m bgl)	Formation	Clay (%)	Silt (%)	Sand (%)	Gravel (%)	Cobble (%)
CP302	1.20	Made Ground	4	8	**49**	13	26
TP302	1.60		2	3	25	**39**	31
TP305	1.60		3	9	**57**	22	9
TP307	2.00		3	13	**49**	35	0
TP310	2.40	Glacial Till	**17**	40	43	0	0
TP302	2.70		**13**	33	29	25	0
TP303	4.50		**14**	26	46	14	0



The PSD test results indicate that the Glacial Till is typically a slightly gravelly, slightly sandy to sandy clay. The tests indicate that the Made Ground is a very sandy, slightly clayey gravel or a gravelly to very gravelly, slightly clayey sand with medium to high cobble content. Given the assessed behaviour observed in the field, fine soils encountered on site have been classified as a clay as opposed to a silt, despite the relatively high proportion of silt recorded in the laboratory testing.

3.6.4 BRE Special Digest Suite Testing

In accordance with BRE Special Digest 1: Concrete in Aggressive Ground (2005), the site has been classified as brownfield with mobile groundwater. BRE SD1 testing suites were undertaken on 3 No. samples of Made Ground and 3 No. samples of Glacial Till in order to determine the Design Sulfate (DS) levels and the Aggressive Chemical Environment for Concrete (ACEC), with the findings summarised below:

Sample	Depth (m bgl)	Strata	DS Class	ACEC Class
TP303	1.20	Made Ground	2	AC-2
TP304	2.70		3	AC-3
DS307	1.50		3	AC-3
TP309	4.20	Glacial Till	1	AC-1
TP302	2.70		1	AC-1
TP303	4.50		1	AC-1

3.7 Environmental Laboratory Test Results

The findings of the chemical test results, summarised below, will be assessed against generic assessment criteria (GAC) for the purposes of screening allowable concentrations in comparison to the measured site concentrations. The GAC are defined based on the critical receptors identified at the site, detailed in the Phase 1 Investigation. Receptors are considered in relation to:

- Human health receptors (e.g. end-users, construction workers and the general public) via measured solid concentrations, and;
- Additional receptors which may be relevant e.g. flora/fauna, water, buried concrete.

The GAC adopted for assessment of soils in relation to Human Health are based on published LQM/CIEH S4ULs (2015) for those compounds for which published criteria are available for varying scenarios (residential, commercial, allotment, public open space). In the absence of LQM/CIEH S4ULs (2015) the following GAC defining documents are adopted - CL:AIRE Soil GAC for Human Health Assessment (2010) and Category 4 Screening Levels (C4SLs) (2014).

The primary risk to human receptors from free cyanide in soils is an acute risk (i.e. a single dose could have a lethal effect as opposed to adverse effects from cumulative intake (chronic effect)). There is no current UK guidance available for calculating acute risks from free cyanide, therefore an in-house methodology has been used to derive an acute GAC of 60 mg/kg for all exposure scenarios. The value is given for

Free or Easily Liberatable Cyanide but should be used to assess Total Cyanide in the absence of cyanide speciation. In cases where the Total Cyanide exceeds the GAC then analysis for Free or Easily Liberatable Cyanide should be completed.

Appendix 9 contains the full screening tables for 14 No. samples of Made Ground and 4 No. samples of Glacial Till. Any exceedances of GACs are indicated below. Given the commercial end use but the inclusion of public open space (POS) in the proposed development, all results have been assessed against the relevant GACs for a **Public Open Space - Park** scenario based on a measured organic matter content of **2.5%**.

3.7.1 Asbestos

An asbestos screen was performed on 12 No. samples of Made Ground; asbestos was recorded in 9 No. of the samples. The asbestos screening results are summarised below and are included in the chemical testing results in Appendix 8. A JIWG Decision Support Tool has been used to establish a CAR2012 Work Category for the site. The Decision Support Tool is included with the screening tables in Appendix 9. It should be noted that the laboratory detection limit for asbestos quantification is 0.001%.

Sample	Depth (m bgl)	Total Asbestos (%)	Asbestos Type	Asbestos Containing Material (ACM) Detected
TP303	1.20	<0.001	Amosite and Chrysotile	Loose Fibres
TP309	2.90	0.002	Amosite and Chrysotile	Loose Fibres, Loose Fibrous Debris
TP304	2.70	0.006	Amosite and Chrysotile	Sheeting / Board Debris, Loose Fibres
TP301	0.30	0.001	Amosite and Chrysotile	Loose Fibres, Loose Fibrous Debris
DS302	1.00	<0.001	Chrysotile	Loose Fibres
TP302	0.60	<0.001	Chrysotile	
DS307	1.50	0.003	Amosite and Chrysotile	Bitumen, Loose Fibres
DS306	0.40	<0.001	Amosite	Loose Fibres
DS304	0.50	<0.001	Amosite	Loose Fibres
TP303	2.90	<0.001	Chrysotile	Asbestos Cement

TP304	4.10	<0.001	Amosite and Chrysotile	Loose Fibres
TP306	1.20	<0.001	Amosite and Chrysotile	Loose Fibres, Loose Fibrous Debris

3.7.2 Polycyclic aromatic hydrocarbons (PAHs)

Of the sixteen PAH compounds, 5 No. exceedances of the POS - Park GAC were noted. The sample taken at 3.60m bgl in TP309 was taken from within the infilled canal. The exceedances are summarised in the table below:

Determinand	Location	Depth of Sample (m bgl)	Result (mg/kg)	GAC (mg/kg)
Benzo(b)fluoranthene	TP309	3.60	16.00	15.00
benzo(a)pyrene	DS306	0.40	14.00	12.00
	TP309	3.60	18.00	
dibenz(a,h)anthracene	DS306	0.40	1.60	1.30
	TP309	3.60	1.70	

3.7.3 Metals and metalloids

No exceedances of any metals or metalloids were recorded in any of the samples submitted for laboratory analysis.

3.7.4 Total Petroleum Hydrocarbons (TPH)

There were no TPH compounds recorded in excess of the Public Open Space – Park GAC in any of the samples tested across the site.

3.7.5 Monoaromatics and Oxygenates

14 No. samples of Made Ground were tested for the presence of BTEX (benzene, toluene, ethyl benzene and xylenes) and methyl tert-butyl ether (MTBE). Concentrations of BTEX compounds above laboratory detection limits were noted in 7 No. samples, however no exceedances for the Public Open Space – Park GAC were recorded in any of the samples tested.

3.7.6 Volatile Organic Compounds (VOCs)

3 No samples taken from the infilled canal area were tested for the presence of VOCs (not including contaminants previously discussed in this section). Although selected VOCs were recorded at concentrations above the laboratory detection limit within these samples, the VOCs in question (1,1,2,2 Tetrachlorethane, n-Propylbenzene, 1,3,5– Trimethylbenzene, 1,2,4– Trimethylbenzene and p-Isopropyltoluene) are considered low risk and do not have an associated general assessment criteria (GAC) value.

3.8 Ground Gas Monitoring

The following dynamic sampling and cable percussion boreholes were installed with a standpipe to allow for monitoring of ground gas concentrations and any underlying groundwater which may be present:

Exploratory Hole	Response Zone Stratum	Response Zone Depth m bgl *(m AOD)*	
		Top of Response Zone	Base of Response Zone
DS302	**Made Ground** comprising very gravelly clayey fine to coarse SAND	0.50 *(61.62)*	1.00 *(61.12)*
CP301		1.00 *(61.10)*	3.00 *(59.10)*
CP302	**Glacial Till** comprising slightly gravelly slightly sandy CLAY	5.00 *(57.05)*	8.00 *(54.05)*

The monitoring wells are constructed of 51mm diameter HDPE plain pipe to the depth of the response zone. The response zones comprise slotted pipe surrounded by a gravel annulus which are sealed above and below with hydrated bentonite seals. The monitoring wells are topped with a flush lockable cover.

4 No. visits out of a scheduled programme of 6 visits have been completed; the results have been summarised below:

Gas Monitoring Well	Steady O_2 Concentration (%)	Peak CO_2 Concentration (%)	Peak CH_4 Concentration (%)	Peak H_2S Concentration (ppm)	Atmospheric Pressure (mbar)	Steady Gas Flow (l/hr)
DS302	18.7 – 19.2	0.1	0.1	1	1004 – 1022	0.1
CP301	19.0 – 19.8	0.1	0.1 – 0.2	1	1003 – 1023	0.1
CP302	3.3 – 14.1	0.2 – 1.0	0.1	1	1004 – 1022	0.1

Ground gas monitoring was undertaken utilising a GFM 4300 gas analyser. Grey = Result below instrument detection limit

The ground gas monitoring results and calibration certificate are included in Appendix 10.

3.9 Groundwater Depth Monitoring

The above wells were also installed for the purposes of groundwater depth monitoring. Groundwater monitoring is ongoing, however, after 4 No. visits the following range of results has been recorded:

Groundwater Monitoring Well	Response Zone (m bgl)	Water Level (m bgl)
DS302	0.50 – 1.00	0.25 – 0.75
CP301	1.00 – 3.00	1.53 – 1.80
CP302	5.00 – 8.00	7.21 – 7.69

The groundwater depth monitoring results are included with the gas monitoring results in Appendix 10.

4.0 ENVIRONMENTAL CONCLUSIONS

4.1 Assessment of Environmental Results

Soil sample analyses have assessed the presence of contaminants on a spatial basis, and the concentrations at which they occur across the site.

PAH exceedances for the *'POS - Park'* land use scenario were recorded for 2 No. samples of Made Ground sent for laboratory chemical testing. Asbestos was detected in 12 No. samples of Made Ground in the form of chrysotile and amosite loose fibres, sheeting, board debris and asbestos cement.

Visual and olfactory evidence of TPH impact was recorded in the infilled canal as detailed in §3.2. Strong hydrocarbon odours and sheens were recorded in exploratory holes undertaken within the extents of the infilled canal between depths of 2.40m and 4.40m bgl. Speciated TPH analysis within these deposits recorded no GAC exceedances for the ('*POS – Park')* land use scenario.

The original conceptual models produced in the IGE Consulting *Phase 1 Geo-Environmental Investigation Report* have been revised / updated using the findings from the geo-environmental ground investigation.

4.2 Conceptual Model for Human Health Risk

The possible sources of contamination identified within the Phase 1 report include:

- On-site Made Ground;
- On-site historical industrial land use;
- On-site historical infilled canal; and
- Off-site historical industrial land use.

The human health receptors identified within the Phase 1 report include:

- End users (POS – Park land use scenario);
- Construction workers; and

- The general public and adjacent site users.

The human health pathways identified within the Phase 1 report include:

- Ingestion of dust and soil;
- Dermal contact with dust and soil;
- Inhalation (dust);
- Inhalation (vapours); and
- Inhalation and oral backgrounds.

Made Ground was identified across the site to a depth of between 2.30m and 4.00m bgl and was noted to be consistent in composition aside from the material encountered within the area of the infilled canal. GAC exceedances were recorded for the POS – Park land use scenario for PAHs in 2 No. samples of Made Ground when screened against the relevant S4ULs. Although the concentration of benzo(a)pyrene recorded acceptable concentrations when screened against C4SL criteria, a PAH profiling tool was used to determine whether benzo(a)pyrene could be used as a surrogate marker. The profiling determined that due to the variance from the Culp et al results, benzo(a)pyrene cannot be used as a surrogate marker for PAH concentrations on site.

The most severe contaminant pathway with regards to human health risk is ingestion of dust and soil, particularly given there is currently no hardstanding or soft landscaping breaking the pathway between the contaminative source and the receptor. However, a c. 950m^2 area of soft landscaping is included in the proposed development in the southern and eastern site sections; this area is to comprise 300mm topsoil overlying 400mm subsoil. This material will need to be imported onto site and thus chemically tested at source and on site, thus producing a clean cover system breaking a key contaminative pathway. The remaining external areas will be overlain by asphalt within the proposed development further reducing contaminative pathways. Details of the clean cover system requirements, testing frequencies and further discussion are presented in §4.6.

However, a c. 400m^2 external area is to remain in the existing condition according to the proposed development plan. Given that the pathways will not be broken within this area and that is unclear whether this area will be open to public following development, the risk is elevated within this region.

As discussed in § 3.7.1, Asbestos in the form of chrysotile and amosite is present within the Made Ground deposits at concentrations of up to 0.006% (sheeting / board debris). A JIWG Decision Support Tool has been used to confirm the classification of any groundworks carried out within the Made Ground, although the assessment has classified the work as non-licensed work, there is an uncertainty as to the level of degradation of intact ACMs caused by the work and whether any exposure limit will be exceeded. However, the risk assessment has been completed conservatively, assuming significant degradation and 'full time occupational exposure' to account for this. Given the work will take place outside and will utilise dust suppression and appropriate PPE and RPE, it is not deemed necessary to class the work as notifiable at this stage.

4.2.1 Human Health Conclusions

Based on the above revised conceptual site models, the site is considered to pose a **low risk** to human health of site users, the general public and construction workers.

A clean cover system should be installed in areas of soft landscaping as detailed in §4.6.

The JIWG Decision Support Tool indicates that any groundworks within the asbestos-impacted soil will be classed as non-licensed work in-line with CAR2012 involving the use of localised and basic personal decontamination facilities, localised dust suppression and the use of EN149 type FFP3 face masks. Groundworkers should be trained in non-licensed work and empowered to stop works if necessary. Any potential increase in risk to construction workers associated with acute interaction with soils can be mitigated with the aforementioned health and safety procedures and PPE / RPE.

4.3 Conceptual Model for Ground Gas Risk

For the purposes of this ground gas risk assessment, the proposed development has been considered to be a Type C building in accordance with BS 8485 (2015) + A1 (2019) – *commercial building with central building management control of any alterations to the building, its uses and maintenance (including gas protection measures). Small to large rooms with active ventilation or good passive ventilation.*

Potential ground gas sources identified within the Phase 1 report include:

- On-site Made Ground;
- On-site historical shafts and workings; and
- On-site coal seam and potential workings.

Potential ground gas pathways identified within the Phase 1 report include:

- Migration through fractures and fissures in bedrock;
- Preferential migration along foundations and service ducts;
- Migration within groundwater;
- Ingress through cavity walls and floors; and
- Inhalation.

Potential ground gas receptors identified within the Phase 1 report include:

- End users;
- Construction workers; and
- The general public and adjacent site users.

Made Ground was recorded in all exploratory holes undertaken on site to a maximum depth of 4.00m bgl. The Made Ground was noted to contain no putrescible or organic rich material during the investigation works although strong hydrocarbon odours were recorded between depths of 2.40m and 4.40m bgl in trial pits undertaken within the infilled canal presenting a potential risk from Volatile Organic Compounds (VOCs).

However, Photo Ionization Detector (PID) tests undertaken on samples of this material recorded a maximum result of 64.00 ppm and subsequent spot PID tests undertaken during ground gas monitoring visits have recorded a maximum value of 5.20 ppm.

No significant ground gas concentrations were recorded during the ground gas monitoring visits undertaken to date, although reduced oxygen was recorded in CP302. It is inferred that this is likely due to the presence of rootlets within Glacial Till deposits in which the monitoring well was placed. Made Ground on site can therefore be discounted as a significant ground gas source.

Mine gas from underlying coal seams and workings is considered separately below, in-line with best practice guidance.

4.3.1 Mine Gas Risk Assessment

Shallow coal workings were identified as a potential ground gas source in the Phase 1 Geo-Environmental Report. Following the completion of the IGE Consulting Coal Mining Risk Assessment (Ref: 4490-02A), and the intrusive ground investigation, the conceptual site model with respect to mine gas emissions has been updated below:

No evidence of shallow coal seams or shallow coal workings were identified during the ground investigation given that the cable percussion boreholes were not progressed to significant depths within bedrock. During drilling and grouting works undertaken previously in the eastern site section, the Bradford Three Quarter coal seam was encountered at depths of 16.60m to 29.60m bgl and was noted to be mostly intact aside from broken ground combined with flush loss in 2 No. boreholes at depths of 24.60m to 26.30m bgl. Therefore, there is a potential for broken ground / shallow workings further west on site. The shallowest recorded workings on site are at a depth of c. 47.00m bgl as indicated by the Coal Mining Consultants Report and abandonment plans obtained for the IGE Consulting Coal Mining Risk Assessment.

During the previous drilling and grouting works, the presence of 2 No. mine shafts north of the site were investigated by probing with 1 No. shaft found to be present

and appropriately treated and the other not identified after 150 probe holes undertaken in a spiral pattern out from the recorded centre of the shaft.

Therefore, based on the above findings, without any further consideration the site is deemed to be at moderate risk based on the CL:AIRE Good Practice for Risk Assessment of Coal Mine Gas Emissions (October 2021) Figure 13.1: Decision Support Tool For Mine Gas Risk Assessment, therefore, a detailed mine gas risk assessment is recommended and has been undertaken below.

Based on the ground investigation undertaken, including the trial pits, dynamic sample boreholes and cable percussion boreholes, fine Glacial Till is present on-site to a depth of between 15.00m and 15.40m bgl. Therefore, generally across the site there is at least 11.00m of fine Glacial Till underlying the Made Ground. The presence of a significant thickness of cohesive Glacial Till will significantly reduce if not negate the vertical migration of ground gas from the underlying suspected workings at c. 47.00m bgl.

Additionally, mudstone was recorded at rockhead which will also significantly reduce the possibility of vertical migration of mine gas. No faults, including underground faults, are recorded on site or in close proximity to the site, therefore migration along faults and fissures is also not considered a feasible pathway.

Therefore, no significant vertical migration pathways have been identified on site. However, numerous mine shafts are recorded off site to the north and northeast. 2 No. shafts (Ref: 386398-012 and 386398-013) are located c. 17m and 20m north of the site, respectively, based on the MRA recorded location. Mine entry 386398-012 has been identified and treated by grouting and capped whilst mine entry 386398-013 has been subject to a comprehensive probing investigation involving 150 probe holes. The investigation did not locate the mine entry but concluded that it lies further to the north than recorded on the MRA drawings.

Mine entries are considered significant pathways for mine gas migration as they may provide direct conduits for mine gas migration. Where mine shafts have been grouted or backfilled with concrete and capped, the likelihood of migration of mine gas is

reduced given the low permeability of the backfill material. However, as it is unknown if the mine shafts adjacent to the site have been backfilled, mine gas migration up the mine shafts may occur.

Although the mine shafts are located off-site, given their proximity to the site, the risk of mine gas migrating from the shafts onto the site cannot be discounted. Migration from shaft ref: 386398-012 is unlikely given the previous investigation and treatment; migration from 386398-013 is unlikely given the low probability that lateral migration will occur at depth due to the low permeability Glacial Till and mudstone which will reduce diffuse gas migration. Although some granular bands may be present within the Glacial Till, they are not anticipated to be continuous or present at consistent depths and are often water bearing, therefore lateral migration of mine gas from the shaft along granular bands is also deemed unlikely. However, where unsaturated granular Made Ground is present near the surface, or where service trenches are present leading from the vicinity of the shaft onto the site, lateral mine gas migration may occur.

However, abandoned mine gas emissions are characterised by a high rate of emissions immediately following closure of the mine, with the emission rate falling to much lower rates over a period of c. 10 years. Therefore, as the last recorded workings beneath the site are more than 130 years ago in 1891 as recorded by the MRA, it is envisaged that the desorption of methane from the coal workings will be very low at present. This is also likely to be true for the oxidation of coal and the generation of carbon dioxide, as the longer the duration since the coal was exposed to the atmosphere (i.e., during mining), the lower the risk. Weathered / oxidised coal also consumes oxygen at a rate much lower than freshly mined coal, therefore the risk of oxygen deficient air being emitted is also considered to be low. Therefore, although pathways may be present along shallow granular deposits from the off-site mine entry, given the anticipated very low concentrations of mine gas which will be diluted and dispersed, the accumulation of significant concentrations of mine gas within proposed structures is deemed unlikely.

The mine entries located more than 50m from the site have not been considered in this risk assessment given the relatively low risk associated with mine shafts located more than 50m from the site given their distance.

Given the ground conditions encountered on site and the anticipated load of the proposed development, the structure will utilise a piled foundation solution. The piles are unlikely to be driven into the bedrock given the presence of Glacial Till to c. 15.00m bgl. Additionally, ground gas migration along piled foundations is not considered a feasible pathway as the piles are in intimate contact with the surrounding soil. A considerable thickness of cohesive Glacial Till will be present beneath the foundations, consequently, additional pathways will not be created by the construction of piled foundations.

The installation of possible soakaways, attenuation tanks and deep drainage in the proposed development is unknown at this stage. However, if any of the aforementioned features are installed, an increase in the mine gas risk is not anticipated as a significant thickness of Glacial Till will negate the possibility of vertical migration and accumulation within service trenches or drainage features.

It should also be noted that given the relatively shallow depth of investigation, none of the exploratory holes are deemed to be potential pathways to the future developments as they were backfilled with arisings or bentonite upon completion. Nonetheless, it is recommended that prior to development, the ground gas monitoring wells are appropriately decommissioned.

Based on the above conceptual site model, given the lack of feasible pathways of mine gas migration, the risk posed by mine gas remains moderate.

4.3.2 Carbon Monoxide

A peak and steady carbon monoxide concentration of 27 ppm was recorded in CP302 during the first monitoring visit which correlated with oxygen depletion at the time of monitoring.

Carbon monoxide is an odourless, colourless and tasteless gas produced by incomplete combustion of fossil fuels such as coal, wood, gas or oil. The ‘Workplace

Exposure Limits' safety level as specified by the Health and Safety Executive is 35mg/m^3 or 30ppm for long term exposure (8-hour period) which is greater than the recorded concentration in CP302. The source of the carbon monoxide is anticipated to be due to the presence of significant quantities of coal within the fine Glacial Till deposits. Given the level of carbon monoxide recorded and the proposed development, carbon monoxide is deemed to pose a low risk.

4.3.3 Gas Screening Value

The results of the 4 No. ground gas monitoring visits have been assessed in accordance with BS 8485 (2015) + A1 (2019). The characteristic Gas Screening Value (GSV) is calculated by dividing the maximum methane or carbon dioxide concentration by 100 and multiplying by the maximum steady flow rate recorded at the same monitoring point (the instrument detection limit of 0.1 l/hr is utilised when below detection limit flow rates are recorded). If required, the worst case GSV can be calculated by dividing the maximum carbon dioxide and methane concentration by 100 and multiplying by the maximum steady flow rate on site.

Ground gas monitoring has recorded a maximum peak carbon dioxide concentration of 1.0% v/v. No methane concentrations or steady flow rates above detection limits were recorded.

As no steady flow rates were recorded on site, the GSV and the worst case GSV for carbon dioxide at the site can be calculated as (1.0/100)*0.1= 0.001l/hr.

4.3.4 Ground Gas Conclusions

Based on the ground gas monitoring undertaken and based on a traditional assessment utilising a gas screening value, the site falls in-line with Characteristic Situation 1. However, based on the mine gas risk assessment undertaken in Section 4.3.1, there is a moderate risk of mine gas as sources and possible pathways have been recorded. Consequently, the site is designated as a **Characteristic Situation (CS3).** Based on the proposed development being a Type C building in accordance with BS8485 (2015) + A1 (2019), ground gas protection measures will be required to mitigate the ground gas risk, achieving a minimum of **3.0 points.** Details of suitable ground gas protection measures to achieve the required points are outlined in §4.6.3.

4.3.5 Radon

The Indicative Atlas of Radon in England and Wales produced by the Health Protection Agency and British Geological Survey indicates that the site lies within a lower probability area, less than 1% of homes are above the action level. Consequently, no radon protection measures are necessary in the construction of new dwellings or extensions.

4.4 Conceptual Model for Controlled Waters Risk

The possible sources of contamination identified within the Phase 1 report include:

- On-site Made Ground;
- On-site historical industrial land use (1848 – 1992); and
- On-site historical infilled canal (1848 – 1992).

The controlled water receptors identified within the Phase 1 report include:

- Groundwater contained within the underlying Secondary Undifferentiated Aquifer and Secondary A Aquifer; and
- Surface water – off site Ashton Canal (15m north).

The controlled waters pathways identified within the Phase 1 report include:

- Vertical migration through coarse Made Ground and coarse soils;
- Lateral migration along low permeability natural soils & pooling at relative low points;
- Vertical migration along future foundations and pooling at base;
- Migration through porous bedrock; and
- Overland flow.

Made Ground was encountered consistently to depths of between 2.30m and 4.40m bgl on site. Strong hydrocarbon sheens and odours were recorded during exploratory hole construction within the historical infilled canal with tar recorded during the

construction of TP309. No further visual or olfactory evidence of contamination was noted in the Made Ground or Glacial Till deposits elsewhere across the site. Chemical testing undertaken has recorded elevated PAH concentrations within Made Ground deposits and elevated VOC concentrations in Made Ground encountered in the historical infilled canal.

No natural groundwater strikes were recorded during the investigation, and the groundwater monitoring visits undertaken to date have recorded water levels between (0.25m – 7.69m bgl) inferred to be due to the monitoring wells acting as a sump for perched water within Made Ground deposits. Both PAHs and VOCs are relatively insoluble and thus immobile in groundwater further reducing the risk to controlled waters. Furthermore, given the presence of c. 12.00m fine Glacial Till deposits underlying the Made Ground, lateral migration will be a preferential pathway as opposed to vertical migration and given the slight downward sloping topography to the south, and lateral migration will be away from the Ashton Canal north of the site.

Consideration has been given to the possibility of piled foundations creating a contaminant linkage to controlled waters. The primary pathways in this case include the sinking of contaminants directly at the base of the pile, migration down the sides and through the centre of the piles and piles directly causing turbidity in underlying aquifers. Given the relatively low concentrations of contaminants and low mobility of elevated contaminants (PAHs), the sinking of contaminants at the base of the pile is unlikely to cause a significant impact to controlled waters. The pile will cause densification of the surrounding soil along the length of the pile, thus ‘closing up’ the soil and preventing the migration of contaminants along the edges. Finally, the lack of natural groundwater encountered across the site during the ground investigation reduces the risk further and negates the risk of causing turbidity in underlying aquifers.

Consequently, the risk to controlled waters is deemed **low** as no contaminative linkages have been negated. No further assessment or remedial measures are considered necessary.

4.4.1 Controlled Waters Conclusions

The risk to controlled waters is deemed **low** due to a lack of significant contaminative sources and no contaminative linkages having been identified. No further assessment or remedial measures are considered necessary.

4.5 Conceptual Model for Building Materials & Services

In accordance with BRE Special Digest 1: Concrete in Aggressive Ground (2005), the site has been classified as brownfield with mobile groundwater, the Made Ground soils have been classified as Design Sulfate level DS-3 and subsequently within the Aggressive Chemical Environment for Concrete (ACEC) classification of AC-3. Therefore, all concrete to be used on site should be designed to meet the requirements of DS-3, AC-3.

The chemical laboratory testing results are contained within Appendix 8.

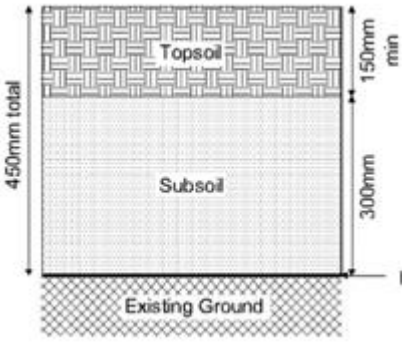
4.6 Outline Remedial Strategy

As discussed in §4.2.1, due to the human health GAC exceedances for the POS - Park scenario recorded within the on-site Made Ground and the confirmed presence of asbestos, remedial measures are required for the proposed development. A clean cover system will be required in proposed areas of soft landscaping in order to break the contaminative linkages. Details of the required clean cover system are included below. Ground gas protection measures achieving a minimum of 3.0 points are also required for the proposed development.

4.6.1 Clean Cover System

Made Ground is present depths exceeding 450mm below finalised external levels across the site. Therefore, in accordance with Manchester City Council Planning and Contaminated Land Technical Guidance (dated February 2021), the following procedure is proposed for use in areas of soft landscaping:

1. Excavate to 450mm bgl in soft landscaping areas;
2. A 450mm clean cover system is recommended to be added to the proposed soft landscaping. This is to consist of:
   - No less than 150mm suitable topsoil, underlain by;
   - 300mm suitable subsoil to a total (topsoil + subsoil) depth of 450mm, underlain by;
- A high vis geotextile marker;
- Validate in line with the below strategy.



4.6.2 Clean Cover System Validation

Once the 450mm clean cover system is installed to break contaminative linkages, validation requirements include:

- Details of the source of the cover material;
- Chemical test results to demonstrate that the soil is free from contamination and 'suitable for use' in-line with the below chemical testing suites and rates;
- Waste transfer notes to provide evidence of source;
- Confirmation of cover depth by either measurement tape or topographical survey with photographs consisting of three pits in the proposed soft landscaping area.

No topsoil is present on site, therefore all topsoil will need to be imported, and this must be validated as detailed below to ensure its suitability for use (i.e., no glass or plastic is to be included and meets chemical testing acceptability criteria). The Glacial Till deposits are deemed chemically suitable for re-use subject to further testing during earthworks.

Imported topsoil and subsoil is required to be tested at source prior to import to confirm suitability. All topsoil and subsoil, whether site-won or imported is required to be tested at the following frequency:

Source	Material End Use	Sampling Frequency[1]	Testing Suites[3] (see below)
Greenfield Source:	Topsoil	1 per 200m^3	A, B, C, D, F
	Subsoil	1 per 200m^3	A, B, C, D, F
Brownfield Source:	Topsoil	1 per 50m^3	A, B, C, D, F, H
	Subsoil	1 per 100m^3	A, B, C, D, F
	General Fill[2]	1 per 1000m^3	A, B, C, E, G

1) Minimum 3 samples regardless of volume.
2) 'General Fill' is material used primarily to raise levels, specifically not within areas of public open space, or soft landscaping, e.g. 6F2.
3) In addition to the standard suites given, the laboratory testing suite should include any additional contaminants of concern based on the source of the samples.

Testing Suites:

A. Asbestos ID, Asbestos quantification.
B. pH, total and free cyanide, soluble sulfate, organic matter.
C. Arsenic, Beryllium, Boron, Cadmium, Chromium (III and VI) Copper, Lead, Inorganic Mercury, Nickel, Selenium, Vanadium, Zinc.
D. Speciated PAHs: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(ghi)perylene.
E. Total (non-speciated) PAHs.
F. Speciated Total Petroleum Hydrocarbons (TPH): Aliphatic >EC5 - EC6, >EC6 - EC8, >EC8 - EC10, >EC10 - EC12, >EC12 - EC16, >EC16 - EC21, >EC21 - EC35, and > EC35 - EC44, and Aromatic >EC5 - EC7, >EC7 - EC8, >EC8 - EC10, >EC10 - EC12, >EC12 - EC16, >EC16 - EC21, >EC21 - EC35, > EC35 - EC44.
G. Total Petroleum Hydrocarbons (TPH): TPH EC6 – EC40.
H. BTEX: Benzene, Toluene, Ethylbenzene, p- & m-xylene, o-xylene. Methyl tertiary butyl ether (MTBE).

Once tested, the results are to be compared against the following Acceptability Criteria:

Suite	Determinand (mg/kg unless stated)	Acceptability Criteria for:			
		Private Gardens	Public Open Space (residential)	Soft Landscaping or Public Open Space (Park)	General Fill
A	Asbestos (%)	ND	ND	ND	<0.001 – 0.01%
B	pH	>6 - <8(3)	>6 - <8(3)	>6 - <8(3)	>5 - <10(3)
	Total Cyanide	0.5(3)	0.5(3)	0.5(3)	0.5(3)
	Free Cyanide	0.5(3)	0.5(3)	0.5(3)	0.5(3)
	Soluble Sulfate (mg/l)	500(3)	500(3)	500(3)	500(3)
C	Arsenic	37	79	170	640
	Beryllium	1.7	2.2	63	12
	Boron	290	21000	46000	240000
	Cadmium	11	120	560	190
	Chromium (III)	910	1500	33000	8600
	Chromium (VI)	6	7.7	220	33
	Copper	2400	12000	44000	68000
	Lead	200(1)	630(1)	1300	2330(1)
	Inorganic Mercury	40	120	240	1100
	Nickel	130	230	800	980
	Selenium	250	1100	1800	12000
	Vanadium	410	2000	5000	9000
	Zinc	3700	81000	170000	730000
D	Naphthalene	2.3	4900	1200	
	Acenaphthylene	170	15000	29000	
	Acenaphthene	210	15000	29000	

	Fluorene	170	9900	20000	
	Phenanthrene	95	3100	6200	
	Anthracene	2400	74000	150000	
	Fluoranthene	280	3100	6300	
	Pyrene	620	7400	15000	
	Benzo(a)anthracene	7.2	29	49	
	Chrysene	15	57	93	
	Benzo(b)fluoranthene	2.6	7.1	13	
	Benzo(k)fluoranthene	77	190	370	
	Benzo(a)pyrene	2.2	5.7	11	
	Indeno(1,2,3-cd)pyrene	27	82	150	
	Dibenz(a,h)anthracene	0.24	0.57	1.1	
	Benzo(ghi)perylene	320	640	1400	
E	Total PAHs				1000[4]
F	TPH-CWG - Aliphatic >EC5 - EC6	42	570000	95000	
	TPH-CWG - Aliphatic >EC6 - EC8	100	600000	150000	
	TPH-CWG - Aliphatic >EC8 - EC10	27	13000	14000	
	TPH-CWG - Aliphatic >EC10 - EC12	130	13000	21000	
	TPH-CWG - Aliphatic >EC12 - EC16	1100	13000	25000	
	TPH-CWG - Aliphatic >EC16 - EC21	65000	250000	450000	
	TPH-CWG - Aliphatic >EC21 - EC35				
	TPH-CWG - Aliphatic > EC35 - EC44	65000	250000	450000	
	TPH-CWG - Aromatic >EC5 - EC7	70	56000	76000	
	TPH-CWG - Aromatic >EC7 - EC8	130	56000	87000	
	TPH-CWG - Aromatic >EC8 - EC10	34	5000	7200	
	TPH-CWG - Aromatic >EC10 - EC12	74	5000	9200	
	TPH-CWG - Aromatic >EC12 - EC16	140	5100	10000	
	TPH-CWG - Aromatic >EC16 - EC21	260	3800	7600	
	TPH-CWG - Aromatic >EC21 - EC35	1100	3800	7800	
	TPH-CWG - Aromatic > EC35 - EC44	1100	3800	7800	
G	TPH > EC6 - EC40				5000[4]
H	Benzene	0.087	72	90	
	Toluene	130	56000	87000*	
	Ethylbenzene	47	24000	17000*	
	p & m-xylene	56	41000	17000*&**	
	o-xylene	60	41000	17000*	
	MTBE (Methyl Tertiary Butyl Ether)	LOD[3]	LOD[3]	LOD[3]	

LQM/CIEH S4ULs for Human Health Risk Assessment (3rd edition, 2015) used unless stated:

1) *Category 4 Screening Levels (March 2014)*
2) *CL:AIRE Soil GAC for Human Health Assessment (January 2010)*
3) *In-house screening criteria used as no GAC methodology currently exists*
4) *Hazardous waste thresholds. This limit only applies to imported material, not to in-situ soil.*

Assumed 1% SOM (most conservative) for those values dependent upon SOM.
ND = Not Detected
LOD = Limit of Detection
**Exceeds vapour saturation limit*
***Exceeds solubility saturation limit*

The above acceptability criteria for PAHs for imported topsoil and subsoil are based on the published LQM/CIEH S4ULs (2015) for each individual PAH and not based on the Category 4 Screening Level using benzo(a)pyrene as a surrogate marker. This is as the source of the imported material is unknown therefore using the surrogate

marker approach may not be suitable as the distribution of PAHs in the imported material may not be similar to those in the Culp et al. (1998)[1] study. Once chemical testing had been undertaken on imported soil and the distribution of PAHs compared to the distribution in the Culp et al. (1998) study, it may be suitable to use the surrogate marker approach / C4SL.

4.6.3 Ground Gas Protection Measures

As stated in § 4.2.2, ground gas protection measures achieving a minimum of 3.0 points are required for the proposed development. Based on no basement and the unknown suspended floor slab design, 2 No. examples of how the required 3.0 points can be achieved are given below:

		BS:8485 (2015) + A1 (2019) Scores	Floor Slab Design Options			
			Pre-cast Beam and Block Suspended Slab		Cast In-situ Suspended Slab	
			Design Choice	Score	Design Choice	Score
Floor Slab	Precast suspended segmental subfloor	0	✔	0		
	Cast in-situ ground bearing floor slab (with only nominal mesh reinforcement)	0.5				
	Cast in-situ monolithic reinforced ground bearing raft or reinforced cast in-situ suspended floor slab with minimal penetrations	1 or 1.5*			✔	1.5
Ventilation	Pressure relief pathway	0.5				
	Passive sub-floor dispersal layer	1.5 or 2.5**	✔	2.5		
	Active dispersal layer	1.5 to 2.5				
	Active positive pressurisation	1.5 to 2.5				
Membrane	**Ground gas resistant membrane*** **	**2**	✔	**2**	✔	**2**
Total Points Achieved			4.5		3.5	

* To achieve a score of 1.5 the raft or suspended floor slab should be well reinforced to control cracking and have minimal penetrations cast in.
** 2.5 points = very good performance. 1.5 points = good performance.
*** To achieve the 2 points the gas membrane must meet all criteria set out in BS:8485 (2015) + A1 (2019) Table 7.

[1] Culp et al. (1998), *A comparison of the tumors induced by coal tar and benzo[a]pyrene in a 2-year bioassay*, **Carcinogenesis,** vol.19, no.1, pp.117–124.

4.6.4 Ground Gas Protection Measures Validation

The installers will be required to be trained and experienced in the installation of ground gas resistant membranes. In line with CIRIA 735 (2014), an independent verifier will verify the installation of the gas protection measures for the proposed development, utilising a visual inspection method, including pick testing. This will be undertaken following the laying of the gas membrane, but prior to laying insulation and finishes. The independent verifier should:

- Identify that the correct membrane has been used, including sealing / jointing tape and pre-formed components e.g. tophats, corners;
- Inspect the general condition of the membrane for rips, tears and punctures;
- Check that all jointing has been carried out to the manufacturer's specification;
- Check that the membrane has been installed correctly across cavities, including correct jointing in these areas;
- Check that top hats have been correctly installed around service entries, including jubilee clip around pipe and correct lapping and jointing to membrane at base;
- Check that vents have been installed around the perimeter of the building in sufficient number and in the correct locations, including inspecting the condition i.e. not blocked or otherwise restricted;
- Check the presence of a ventilation layer, including measuring that this is of a sufficient depth and the void has not been filled or otherwise compromised. Check that internal sleeper walls are also vented to provide adequate flow-through within the void so that none of the walls are blocking off unvented sections within the void; and
- Take photographs to provide evidence of the above.

4.6.5 Validation Procedure and Report

The following plan details the required actions to demonstrate the successful installation of ground gas protection on the site. In accordance with BS8485+A1 (2019), the verification shall include, as a minimum, the following:

- Objectives of the verification;
- A brief overview of the site conditions and summary of the ground gas regime;
- A description of the installation, including gas-resistant membrane manufacturer and type used (including sealing / jointing tape and pre-formed components e.g. top hats, corners). The manufacturer specification / datasheet shall be included;
- Installer and verifier and credentials of such organisations, i.e. level of competency of installer – NVQ Level 2 or general groundworker;
- Detailed description of any deviations from the specification provided in this report, with explanation and justification of such deviations;
- As-built construction drawings and product specifications of components used:
- A description of the verification approach – in this case visual inspection, including pick testing;
- Verification evidence – in this case photographic evidence;
- Any record of relevant communications with regulatory bodies; and
- Verification conclusions, including any future monitoring or management requirements (anticipated none in this case due to passive approach), and limitations of the measures installed.

When the above has been completed and prior to use, this information will be compiled in a validation / completion report which will be submitted to and approved in writing by the local planning authority.

4.6.6 Asbestos and Dust Management

As discussed in §3.7.1, Asbestos in the form of amosite loose fibres, loose fibrous debris, sheeting / board debris, bitumen and asbestos cement (<0.001% to 0.006%) was recorded in the Made Ground. Consequently, based on the findings of the chemical laboratory test results, a risk assessment has been undertaken for the made ground using the *JIWG Decision Support Tool for the Categorisation of Work Activities Involving Asbestos in Soil or Construction & Demolition Materials in accordance with CAR 2012* (FINAL Version 2.1, March 2017).

The risk assessment for the Made Ground has been undertaken based on the worst-case scenario; 0.006% amosite and chrysotile sheeting / board debris.

Whilst some uncertainty remains regarding the level of degradation caused by the work and the exposure levels during the work, the JIWG risk assessment has been completed conservatively to account for this. The JIWG risk assessment concludes that any groundworks proposed on site involving the Made Ground will be classified as Non-Licensed Work. According to the above risk assessment, localised mechanical dust suppression and localised and enhanced personal decontamination facilities will be required during groundworks. An EN149 type FFP3 disposable mask must be worn by all construction workers involved in the proposed groundworks. It would be prudent to obtain guidance from a specialist asbestos contractor prior to selecting a removal / remediation method for on-site asbestos.

5.0 GEOTECHNICAL CONCLUSIONS

5.1 Geotechnical Assessment of Ground Conditions

It is the client's intention to develop the site into an immersive events space. The intrusive investigation works have revealed that the ground conditions at the site generally comprise Made Ground underlain by Glacial Till underlain by Pennine Upper Coal Measures.

The principal strata identified are outlined in further detail below.

5.1.1 Made Ground

Made Ground was recorded in all exploratory holes and generally comprised dark grey, very gravelly to gravelly, slightly clayey, fine to coarse sand with medium to high cobble content or dark grey, very sandy, slightly clayey, very angular to subrounded, fine to coarse gravel with medium to high cobble content.

Due to an extensive industrial history on site and the subsequent earthworks undertaken post-demolition, the Made Ground was found to be heavily compacted particularly at depths exceeding 1.00m bgl. The compaction of the Made Ground caused difficulty when excavating or drilling through the deposits with all dynamic sample boreholes terminating short of the target depth due to SPT refusals. Trial pit excavations terminated short of the target depth due to hard digging at TP301, TP307 and TP311 and thus did not reach the base of the Made Ground deposits.

16 No. California bearing ratio (CBR) tests were undertaken within Made Ground deposits at positions CBR01 to CBR08 at depths of 0.50m bgl and 1.00m bgl at each position. CBR values of between 20% and in excess of 100% and *k* values of between 82.10 and 371 kN/m^2/mm were recorded in the testing. Higher values were recorded in tests undertaken at 1.00m bgl with select results recording lower value as a result of surface water ingress into the pit during the test.

12 No. Standard Penetration Tests (SPTs) were undertaken within Made Ground deposits, all of which recording refusals apart from DS307 at 2.00m bgl, CP301 at

1.20m bgl and CP301 at 2.00m bgl recording N-values of 45, 26 and 7 respectively. Given the inherent heterogeneity of Made Ground, the SPT N-values should not be taken as characteristic or representative.

5.1.2 Glacial Till

Glacial Till deposits were encountered underlying the Made Ground and were noted to be consistent across the site, comprising stiff to very stiff, light brown, slightly gravelly, slightly sandy to sandy clay.

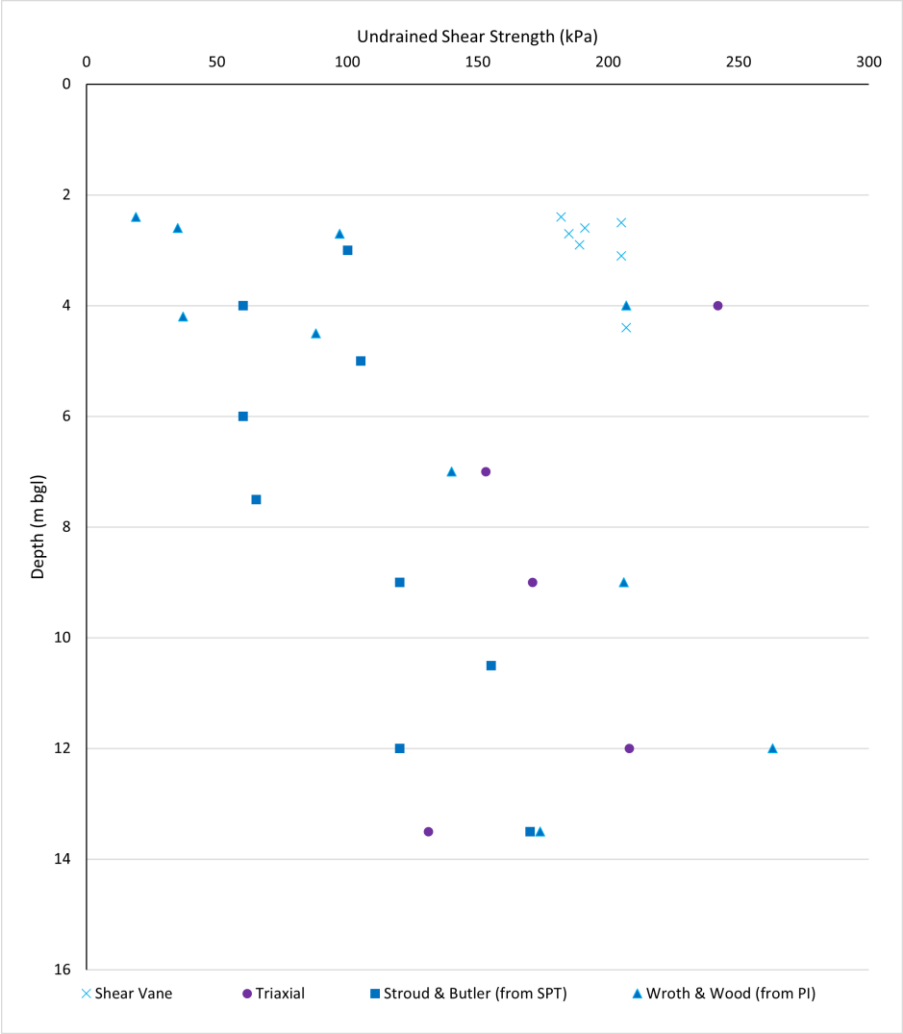
7 No. hand shear vane tests were undertaken within the Glacial Till which recorded undrained shear strengths of between 189kPa and >207kPa (average 195kPa). Given the low number of hand shear vane tests undertaken, a clear correlation between shear strength and depth could not be established.

5 No. undisturbed samples were submitted for quick undrained triaxial testing to determine the in-situ undrained shear strength, with results recorded between 131 and 242 kPa, indicative of a generally very high strength material at depth.

9 No. SPTs were undertaken in this stratum recording N-values of between 12 and 50 (average 20) and corrected N_{60} of between 9 and 34 (average 21) which increased linearly with depth.

10 No. Atterberg tests were undertaken on samples of shallow Glacial Till (2.40m – 13.50m bgl), which indicated that the Glacial Till deposits are clays of low to medium plasticity and low volume change potential.

The correlations between uncorrected N-values and undrained shear strength proposed by *Stroud & Butler* and between undrained shear strength and plasticity indices proposed by *Wroth & Wood* have been used to augment the dataset of undrained shear strength. The direct measurements (hand shear vane and triaxial) are presented alongside the empirical estimations, below. The undrained shear strength of the Glacial Till generally increases with depth, with no direct measurements below 100kPa.



5.1.3 Pennine Upper Coal Measures

Pennine Upper Coal Measures were encountered in CP301 and CP302 at depths of 15.40m and 15.00m bgl respectively encountered as weathered mudstone. Recovered as: Very stiff, slightly gravelly clay. Weathered mudstone was proven to a depth of at least 16.91m bgl (45.19m AOD). 3 No. SPTs were undertaken within the Pennine Upper Coal Measures resulting in 2 No. refusals (N-value = 50) and 1 No. result of 48.

5.2 Groundwater

No groundwater strikes were recorded within natural strata during the ground investigation works, however perched water was encountered within the Made Ground deposits at depths of between 0.70m and 3.10m bgl. Groundwater depth monitoring wells were installed during the ground investigation to monitor any longer

term fluctuations in groundwater levels. During the groundwater monitoring visits undertaken to date, water levels between 0.25m and 7.69m bgl have been recorded, inferred to be due to the wells acting as sumps for perched water overlying impermeable Glacial Till deposits. Groundwater control may be required for excavations on site, though simple techniques including sump pumping are likely to be sufficient for the perched water. Excavation support in accordance with guidance contained in CIRIA R97 should be utilised for any deep excavations on site and health and safety best practice should be adhered to at all times.

5.3 Foundations

Based on proposed levels, anticipated loads and the ground conditions encountered on site, shallow foundations are not deemed suitable for the proposed development. Although a raft foundation solution has been considered and would theoretically be feasible, it is understood that a piled foundation solution is the preferred methodology for the development. Given the presence of very high strength clays across the site from depths of c. 2.40m to 15.00m bgl, a piled foundation solution utilising skin friction is likely to be the most cost-effective foundation solution.

In consideration of the Made Ground deposits, a specialist piling contractor has been consulted in order to select the most feasible piling method for the development. Driven piles are unlikely to be feasible for the development due to the high compaction of the Made Ground deposits; instead, replacement piling methods such as continuous flight auger (CFA) piling utilising pile diameters greater than 450mm are considered suitable for the proposed development.

It is recommended that a temporary working platform is undertaken in line with BRE470 with appropriate in-situ testing to validate the installation. The movement/tracking of the piling rig onto and across site should be considered within the design. It is recommended that suitable plate incremental tests to appropriate pressures are undertaken following completion of the temporary working platform to ensure they have been installed appropriately.

All concrete on site, including that used for piles, should be designed to meet the requirements of DS-3, AC-3.

An assessment of the impact of existing services upon the proposed foundations should be made before selecting a final foundation solution.

Whilst it is not proposed to progress any piles into the underlying bedrock, given the possibility of broken ground and unrecorded shallow workings beneath the site, remediation of the historical coal mining is recommended. This should comprise drilling and grouting, following on from previous remedial works. This will likely involve drilling to 35.00m bgl and grouting to the surface based on a 6x6m primary grid in areas where the broken ground is encountered. The treatment area should extend as far west as required according to the depth of the Bradford Three-Quarter coal seam; due to the southwest dip of the seam, treatment may cease once the coal seam is not encountered within 35.00m bgl. The full details of the scheme will be provided in a drilling and grouting specification report, which should be provided to piling specialists prior to selecting a final solution.

5.4 Earthworks and External Areas

5.4.1 Highways and External areas

Given the consistent nature of the Made Ground deposits as noted visually and recorded in the CBR tests, it is envisaged that the entire site is underlain by well-compacted coarse Made Ground, therefore the hard-surfaced external works including the access road and pavements may be constructed directly on Made deposits across the site.

5.4.2 Earthworks

A full earthworks programme should be designed and completed for the works once finalised levels are known.

5.4.3 Stockpile Management

During the course of the development there will also be areas of stockpiled soils intended for re-use within the proposed development or for disposal off site. These will have been subjected to off-site testing and approved for use on site. It is imperative that the stockpiles are well managed to avoid inadvertent mixing or

depositing of surplus or deleterious materials that would compromise the continued use. We would recommend that the site management reviews the proposed positions for placement of stockpiles and places either fencing or warning signs to ensure compliance.

5.4.4 Export of Materials

Any soils to be removed from site must be classified in accordance with WM3 under the definition of waste and chemically tested to determine their destination, i.e. reuse or landfill. Waste ticket records must also be retained as proof of the export of materials from site.

6.0 RECOMMENDATIONS

- Following any variation in a finalised proposed development detailed design including earthworks design, proposed levels and arboricultural survey (tree survey) it is recommended that the above conclusions are re-appraised to determine the suitability;
- The conclusions of this report should be agreed with relevant regulatory authorities prior to the commencement of works;
- Further work involving drilling and grouting is required to achieve adequate competent rock thickness above shallow workings, the specification of which will be detailed in a separate report;
- Given the presence of asbestos in the Made Ground deposits, any groundworks on site will be classed as non-licensed work, requiring control measures discussed in § 4.6.6;
- A clean cover system, detailed in § 4.6.1, is deemed necessary in the area of soft landscaping proposed in the southern site section in order to break contaminative linkages;
- Ground gas protection measures are deemed necessary given that sources and potential pathways for ground gas have been identified on site. Ground gas protection measures achieving a minimum of **3.0** points are required;
- If any hereto unidentified visual or olfactory evidence of contamination is encountered during earthworks or construction work, then the Local Authority Environmental Health Officer and Environment Agency should be contacted immediately to determine appropriate mitigation measures;
- It is recommended that the presence and associated constraints of all site services are established prior to significant intrusive works beginning.

APPENDIX 1

LIMITATIONS OF REPORT AND INVESTIGATION WORKS

LIMITATIONS OF REPORT

This consultancy report was compiled and carried out by IGE Consulting Limited ('IGE') for the client, as defined in the main report (the 'client'), on the basis of a defined programme and scope of works and the terms of a contract between IGE and the client. IGE undertook this with all reasonable skill and care, taking into account the limits of the scope of works required by the client, the prevailing site conditions, the time scale involved and the resources, including financial and manpower resources, agreed between IGE and the client. IGE cannot accept responsibility to any parties whatsoever, following the issue of this report, for any matters arising which may be considered outwith the agreed scope of works.

Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices. This report may not be relied upon, or transferred to, by any other party without the written agreement of its author. If a third party relies on this report, it does so wholly at its own and sole risk and IGE disclaims any liability to such parties.

It is IGE's understanding that this report is to be used for the purpose described in the 'Brief' section of this report. That purpose was a significant factor in determining the scope and the services to be provided. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without IGE's review and advice shall be at the client's sole and own risk.

The information contained in this report is protected by disclosure under Part 3 of the Environmental Information Regulations 2004 pursuant to the provisions of Regulation 12(5) without the consent in writing of a Director of IGE.

This report is a function of the date it was written and should be read in light of any subsequent changes in legislation, statutory requirements and industry practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of IGE. In the absence of such written advice of IGE, reliance on the report in the future shall be at the client's own and sole risk. Should IGE be requested to review the report in the future, IGE shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between IGE and the client.

The observations and conclusions described in this report are based solely upon the scope of works agreed between the client and IGE. IGE has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report. IGE is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the agreed scope of works. For the avoidance of doubt, this report is strictly limited to the nature of contamination contained within the ground and groundwater at the site. The report does not cover environmental aspects such as air or noise pollution and ground vibrations and the like. In addition, ecological matters relating to wildlife, flora and fauna have not been investigated as part of this report. In particular, the site has not been inspected for the presence or otherwise of invasive species (e.g. Japanese Knotweed). It is recommended that the client appoints a specialist in this subject to carry out a detailed inspection / survey of the site if its presence is suspected. Where mention has been made to the identification of asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute or replace full and proper surveys.

LIMITATIONS OF INVESTIGATION WORK

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations, the potential exists for ground conditions to be encountered which are different to those considered in this report. The explored extent of the site area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried

out for a limited number of parameters, based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Exploratory Holes

Where exploratory holes have been carried out as part of this investigation, the spacing has been determined to provide a reasonable indication of the general ground conditions across the site, but the number has ultimately been limited by commercial constraints. The findings of the exploratory holes relate specifically to the exploratory hole locations and are no absolute guarantee of the ground conditions between such locations. Due allowance should be made for the possibility of variation in conditions between exploratory hole locations.

Extent of Contamination Testing

The extent of contaminated land testing carried out on samples obtained from the site has been determined in accordance with the latest legal guidance issued by the government to provide, with reasonable certainty, the probable general levels of contamination present on site that could pose a significant hazard to human health or waters. The extent of site investigation works including chemical testing has also been limited by reasonable commercial constraints. Although extensive testing of samples has been carried out, the volume of samples taken for testing are a minute fraction of the total volume of soils and groundwater present on site. Therefore, there is a residual risk that undetected pockets of contamination may be present on site, situated between testing locations.

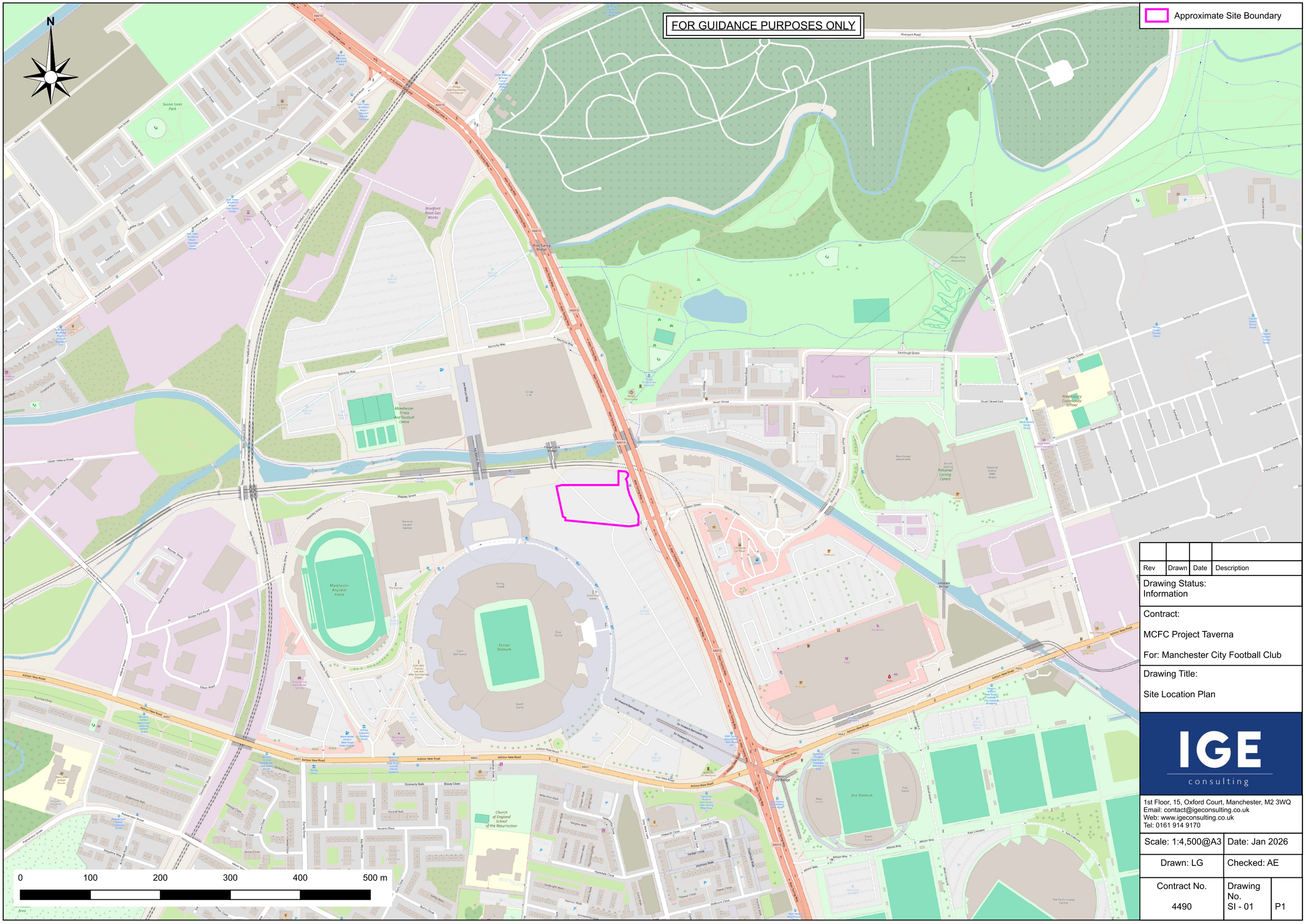
When investigating or developing potentially contaminated land it is important to recognise that sub-surface conditions may vary spatially and temporally. The absence of certain ground, ground gas, contamination or groundwater conditions at the positions tested is not a guarantee that such conditions do not exist anywhere across the site. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities. The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

Extent of Geo-Environmental Studies

This report is strictly limited to the nature of contamination contained within the ground and groundwater at the site. The report does not cover environmental aspects such as air or noise pollution and ground vibrations and the like. In addition, ecological matters relating to wildlife, flora and fauna have not been investigated as part of this report. In particular, the site has not been inspected for the presence or otherwise of invasive species e.g. Japanese Knotweed. It is recommended that the Client appoints a specialist in this subject to carry out a detailed inspection / survey of the site if its presence is suspected. Where mention has been made to the identification asbestos or asbestos-containing materials this is for indicative purposes only and does not constitute or replace a full and proper survey. If an Unexploded Ordnance (UXO) report has been obtained within the report, it has been so on the basis of Health and Safety concerns and no assessment has been made other than transcribing the recommendations of the sub-contractor contained within the report. In terms of a potential contaminative source, unless ordnance has been manufactured / stored on site, UXOs will only be determined as a contaminative source following a positive identification on site.

APPENDIX 2

FIGURES AND DRAWINGS



Rev	Drawn	Date	Description

Drawing Status:
Information

Contract:

MCFC Project Taverna

For: Manchester City Football Club

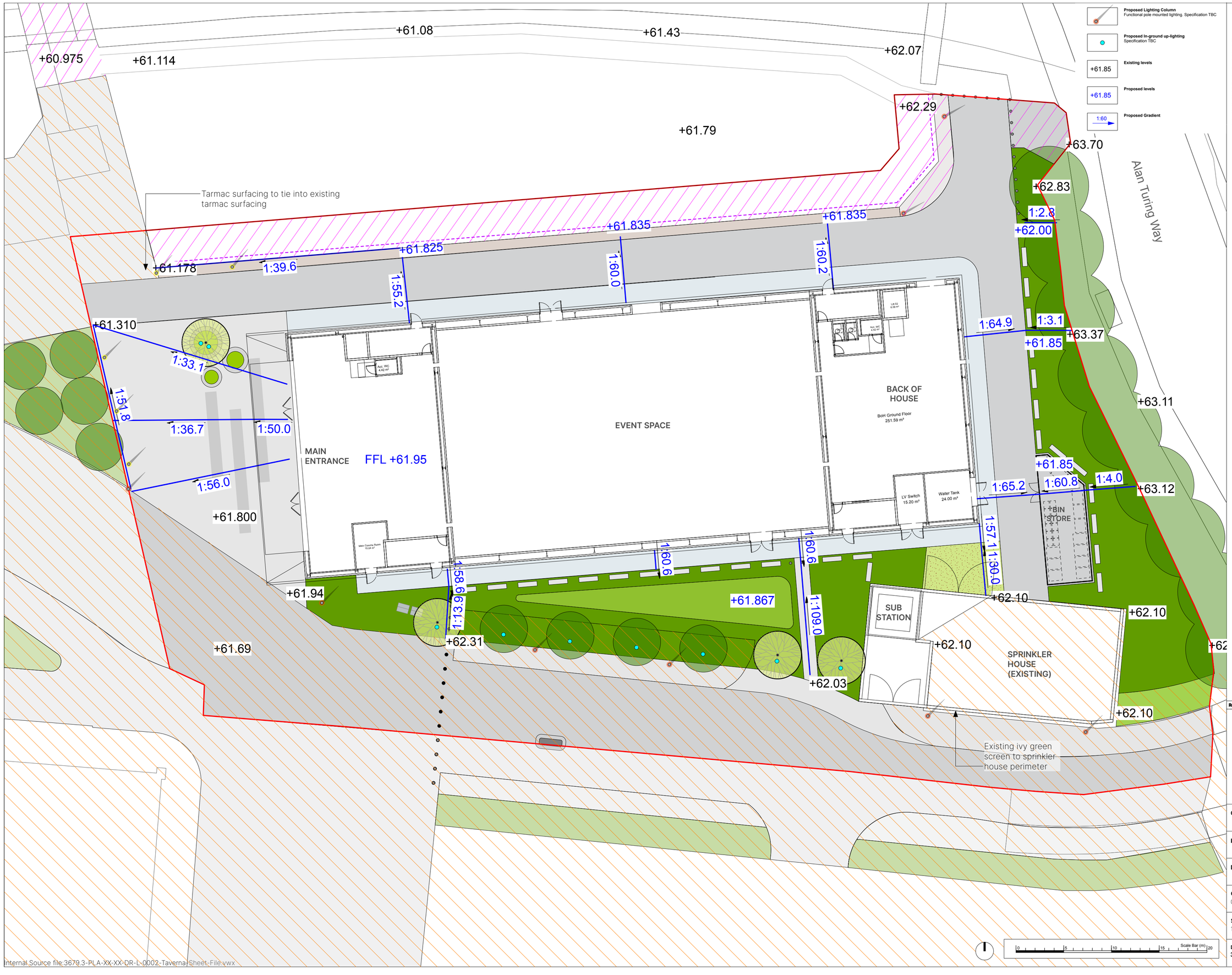
Drawing Title:

Site Location Plan

IGE consulting

1st Floor, 15, Oxford Court, Manchester, M2 3WQ
Email: contact@igeconsulting.co.uk
Web: www.igeconsulting.co.uk
Tel: 0161 914 9170

Scale: 1:4,500@A3	Date: Jan 2026	
Drawn: LG	Checked: AE	
Contract No. 4490	Drawing No. SI - 01	P1



Proposed Lighting Column
Functional pole mounted lighting. Specification TBC

Proposed In-ground up-lighting
Specification TBC

Existing levels
+61.85

Proposed levels
+61.85

Proposed Gradient
1:60

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NOTES:
1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

Key

Ornamental Planting
Mixed shrub, herbaceous perennial and ornamental grass planting (plant species to tie into existing North Stand works)
Notes: 300mm topsoil oveer 400mm subsoil

Rain Garden Planting
Rain garden suitable planting mix
Notes: 300mm topsoil oveer 400mm subsoil

Climbers
Tensile wire system with climbing plants to soften and screen the new substation enclosure. Twining climber species - final extent to be coordinated with substation ventilation requirements

Proposed Street tree
Semi-mature tree
20-25cm girth
Notes: 300mm topsoil over 600mm subsoil

Existing Tree

Surface Type 1
Insitu concrete with large format precast concrete banding to arrival plaza

Surface Type 2
Concrete block paving to footpath around the perimiter of the building. Specification to be in keeping with the North Stand development

Surface Type 3
Tarmac to access road to match existing surfacing on North Stand development.

Surface Type 4
Filter Drain along northern edge of access road to form part of the drainage strategy

Surface Type 5
Reinforced grass to sprinkler house access point

Large pre cast concrete planters
Placed in the arrival plaza, the raised concrete planters help soften the entrance facade and allow people to perch on the planter edge

Fixed Bollard
To form HVM line. Specification TBC

Fixed Concrete Block
Fixed concrete block with gabion cladding / artwork to improve appearance. To form HVM line. Specification TBC

Timber Post and rail fence
1.2m high to the northern edge of the access road
Product TBC

Bin Store
Steel frame with timber uprights and lockable gates.
Product TBC

Proposed Lighting Column
Column mounted projectors. Specification TBC

Area to Remain as Existing

Emerging Context Under North Stand Public Realm Works

Revision	Date	Description	Drawn	Apprvd.
P05	02/03/26	Incorporating Architects Comments	CB	SC
P04	27/02/26	Planning	CB	SPL
P03	30/01/26	Review and comment	CB	SPL
P02	28/01/26	For Review and Comment	CB	SPL
P01	22/01/226	For Review and Comment	CB	SPL

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Client Manchester City Football Club

Project Project Taverna

Drg Title Landscape General Arrangement

Created on	Created by	Approved by
09-01-26	CB	SPL

Scale	Size	Workstage
1:250	A2	Planning

Drg No. 3679.3-PLA-XX-XX-DR-L-0001
Suitability S2
Revision P05

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FOR GUIDANCE PURPOSES ONLY

N

Tarmac surfacing to tie into existing tarmac surfacing

Approximate Site Boundary

IGE Ground Investigation (April 2026)

- Trial Pits
- CBR Tests and Trial Pits
- Dynamic Sample Boreholes
- Cable Percussion Logs

Site Features

- +61.79 Existing Levels (m AOD)
- +61.835 Proposed Levels (m AOD)
- Infilled Canal Edges (Measured)
- Infilled Canal Edges (Inferred)

DS301 DS302 DS303 DS304 DS306 DS307 DS308

TP301 / CBR01 TP302 / CBR02 TP303 / CBR03 TP304 / CBR04 TP305 / CBR05 TP306 / CBR06 TP307 / CBR07 TP308 / CBR08 TP309 TP310 TP311 TP312

CP301 CP302

+61.178 +61.310 +61.800 +61.94 +61.69 +61.825 +61.835 +61.867 +62.29 +62.83 +62.00 +63.70 +63.37 +61.85 +63.11 +63.12 +62.31 +62.03 +62.10

1:39.6 1:55.2 1:1.0 1:60.2 1:64.9 1:3.1 1:33.1 1:51.8 1:36.7 1:50.0 1:56.0 1:58.9 1:13.9 1:60.8 1:60.6 1:109.0 1:65.2 1:60.8 1:4.0 1:57.1 1:30.0 1:2.8

FFL +61.95

MAIN ENTRANCE

EVENT SPACE

BACK OF HOUSE

BUS STOP

SUB STATION

SPRINKLER HOUSE (EXISTING)

BIN STORE

Existing ivy green screen to sprinkler house perimeter

0 10 20 30 40 50 m

Rev	Drawn	Date	Description

Drawing Status: Information

Contract:

MCFC Project Taverna

For: Manchester City Football Club

Drawing Title:

Exploratory Hole Location Plan

IGE consulting

1st Floor, 15, Oxford Court, Manchester, M2 3WQ
Email: contact@igeconsulting.co.uk
Web: www.igeconsulting.co.uk
Tel: 0161 914 9170

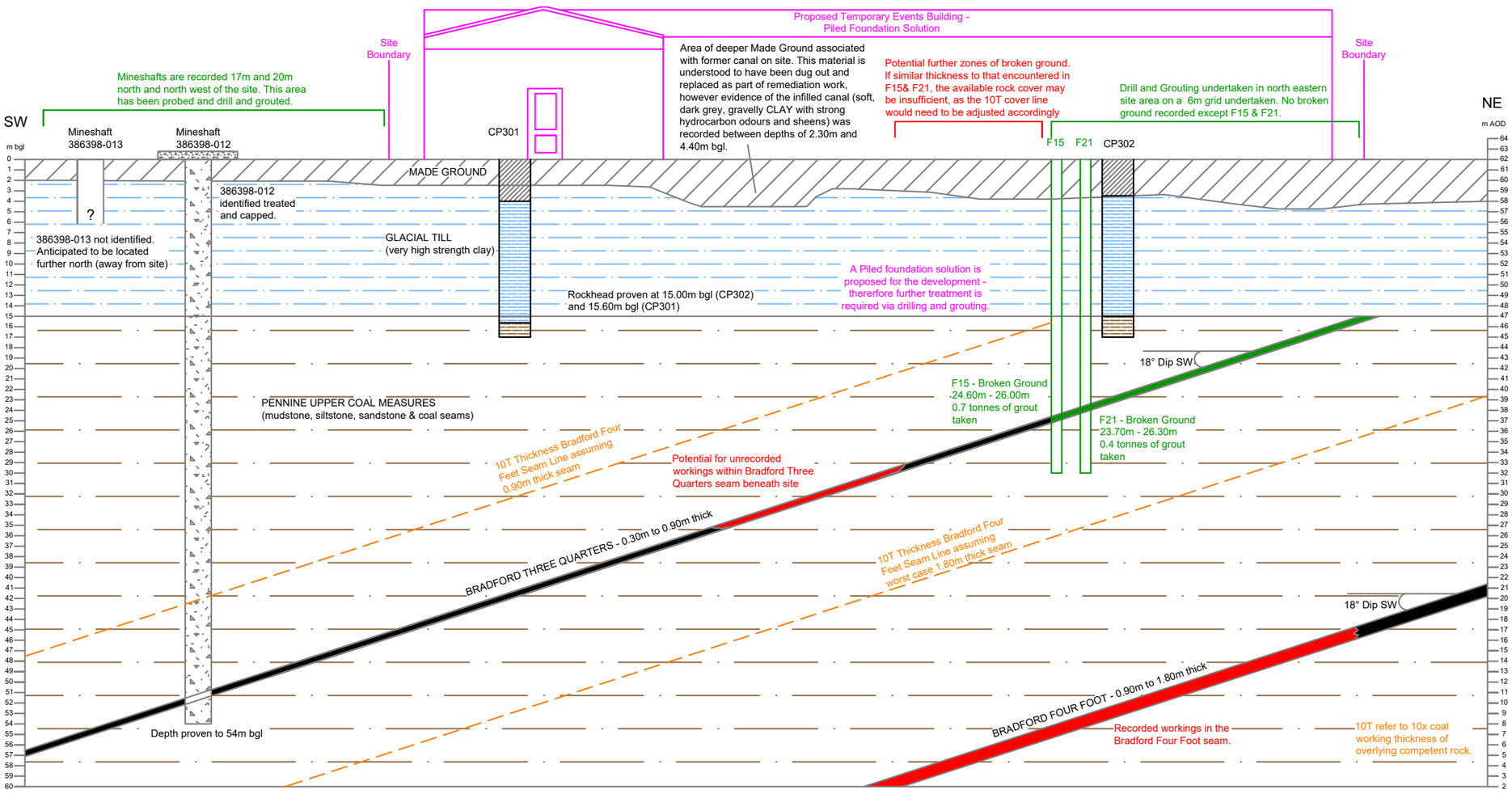
Scale: 1:300@A3	Date: April 2026
Drawn: LG	Checked: AE

Contract No.	Drawing No.	
4490	SI - 07	P1

Notes

1 This drawings is indicative and not to scale.

2 This drawing is to be read in conjunction with all relevant Architects and Service Engineers drawings.



Rev	Drawn	Date	Description
A	LG	MAY 2026	Updated following intrusive ground investigation

Drawing Status
INFORMATION

Contract
MCFC PROJECT TAVERNA

FOR: MANCHESTER CITY FOOTBALL CLUB

Drawing Title
REVISED GROUND MODEL

IGE consulting

1st Floor, 15, Oxford Court, Manchester, M2 3WQ
email: contact@igeconsulting.co.uk
web: www.igeconsulting.co.uk

Scale	Date	
NTS	April 2026	
Drawn	**Checked**	
AL	AE	
Contract No.	**Drawing No.**	
4490	SI - 05	P1

Notes

1 This drawings is indicative and not to scale.

2 This drawing is to be read in conjunction with all relevant Architects and Service Engineers drawings.

SOURCES

PATHWAYS

RECEPTORS

Sources
1. On site Made Ground
2. On site Historical Industrial Land Use
3. On site Historical Infilled Canal Arm
4. Off site Historical Industrial Land Use

Secondary Sources
5. Pooling beneath current and / or future foundations
6. Pooling in relative low points above low permeability deposits
7. Pooling within granular lenses within low permeability deposits

Ground Gas Sources
1. On site Made Ground
2. On site Historical Underground workings

Pathways To Human Health
A. Ingestion of dust and soil
B. Dermal contact with dust and soil
C. Inhalation (dust)
D. Inhalation (vapours)
E. Inhalation and oral backgrounds

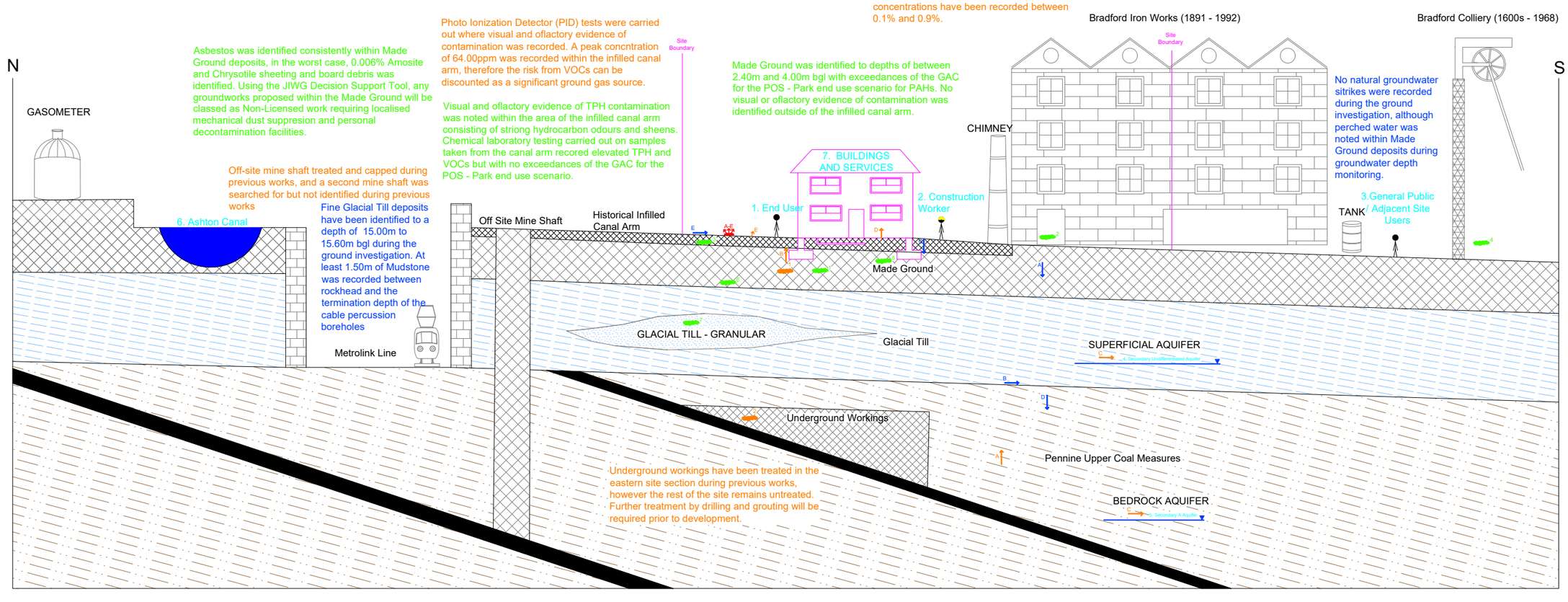
Pathways To Controlled Waters
A. Vertical migration athrough coarse Made Ground and coarse soils.
B. Lateral migration along low permeability natural soils & pooling at relative low points.
C. Vertical migration along future foundations and pooling at base.
D. Migration through porous bedrock
E. Overland flow

Ground Gas Pathways
A. Migration through fractures and fissures in bedrock
B. Preferential migration along foundations and service ducts
C. Migration within groundwater
D. Ingress through cavity walls and floors
E. Inhalation

Receptors
1. End user
2. Construction workers
3. General public / adjacent site users
4. Secondary Undifferentiated aquifer in superficial deposits
5. Secondary A aquifer aquifer in bedrock
6. Surface water - Off-site Ashton Canal
7. Buildings and services

Ground gas monitoring has recorded no steady flows or methane concentrations above instrument detection limits. Peak Carbon Dioxide concentrations have been recorded between 0.1% and 0.9%.

A single peak Carbon Monoxide concentration of 27ppm was recored at CP02 during the 1st ground gas monitoring visit. The 'Workplace Expsoure Limits' safety level as specified by the HSE is 30ppm for long term exposure which is greater than then recorded concentration in CP302.



Rev	Drawn	Date	Description
A	LG	MAY 2026	Revised following intrusive ground investigation

Drawing Status
INFORMATION

Contract
MCFC PROJECT TAVERNA

FOR: MANCHESTER CITY FOOTBALL CLUB

Drawing Title
REVISED CONCEPTUAL SITE MODEL

IGE consulting

1st Floor, 15, Oxford Court, Manchester, M2 3WQ
email: contact@igeconsulting.co.uk
web: www.igeconsulting.co.uk

Scale	Date
NTS	Feb 2026
Drawn LG	**Checked** AE

Contract No.	Drawing No.	
4490	SI-05	P1

APPENDIX 3

TRIAL PIT LOGS AND PHOTOGRAPHS

Trial Pit

TP301

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386902.40	398711.71	62.38	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.15)		Asphalt [MADE GROUND]
					62.23	0.15		
		0.30	ES, B			(0.30)		Dark grey very sandy slightly clayey very angular to subrounded fine to coarse GRAVEL of red brick, concrete, ceramic, metal, limestone and sandstone with medium cobble content. Cobbles are very angular of concrete [MADE GROUND]
					61.93	0.45		
		0.70	ES					*Orange geotextile across pit (0.40m)* *Brick obstruction in northern most 0.40m of pit (0.40 - 0.60m)*
								Dark grey very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subangular fine to coarse of red brick, concrete and sandstone. Cobbles are very angular of red brick and concrete [MADE GROUND]
						(2.55)		
		1.80	ES, B					
		2.70	ES, B					
					59.38	3.00		*End of Trial Pit at 3.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 165°
L = 3.30m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP301

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386902.40	398711.71	62.38	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 165°
L = 3.30m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP302

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386902.83	398736.62	61.87	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					61.72	(0.15) 0.15		Asphalt [MADE GROUND]
		0.60	ES, B					Dark grey very sandy slightly clayey very angular to subrounded fine to coarse GRAVEL of red brick, concrete, metal, plastic and clinker with medium cobble content. Cobbles are very angular to rounded of red brick and concrete [MADE GROUND] *Orange geotextile across pit (0.40m)*
		1.60	ES, B			(2.35)		
		2.70 2.70	HV ES, B	185 (kPa)	59.37	2.50		Stiff yellowish brown mottled light grey slightly gravelly slightly sandy CLAY. Gravel is subrounded to rounded fine to coarse of mudstone and sandstone [GLACIAL TILL]
					58.67	(0.70) 3.20		*End of Trial Pit at 3.20m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.20m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 130°
L = 3.80m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP302

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386902.83	398736.62	61.87	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.20m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 130°
L = 3.80m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP303

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386916.11	398739.39	61.95	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.30	ES, B					Dark greyish brown very sandy slightly clayey very angular to rounded fine to coarse GRAVEL of red brick, concrete, ceramic, metal, plastic, limestone, sandstone and mudstone with medium cobble content. Cobbles are very angular to subrounded of red brick and concrete [MADE GROUND]
								Orange geotextile across pit (0.35m)
								150mm plastic orange pipe orientated east to west across pit (0.45m)
		1.20	PID	0.20 (ppmv)				*Becoming dark bluish grey with a mild hydrocarbon odour and occasional coarse gravel sized pockets of firm light brown slightly gravelly slightly sandy CLAY (1.10m)*
		1.20	ES			(3.00)		
		2.10	ES					
		2.90	PID	2.10 (ppmv)				*Slight hydrocarbon sheen (2.80m)*
		2.90	ES		58.95	3.00		
	▽	3.20	PID	1.20 (ppmv)				Dark grey very gravelly clayey fine to coarse SAND with a mild hydrocarbon odour and sheen. Gravel is very angular to angular fine to coarse of red brick, concrete and glass [MADE GROUND]
						(1.20)		*No hydrocarbon odour from 3.50m bgl (3.50m)*
		4.20	PID	2.30 (ppmv)	57.75	4.20		Stiff light brown mottled light grey slightly gravelly sandy CLAY. Gravel is subrounded to rounded fine to medium of mudstone [GLACIAL TILL]
		4.30	ES					
		4.40	HV	207 (kPa)		(0.40)		
		4.50	ES, B					*Pit extended for delineation (4.20m)*
					57.35	4.60		*End of Trial Pit at 4.60m*

Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 3.10m bgl

Method, Plant, Stability, Dimensions
0.00 - 4.60m TP LiuGong 913FCR (13T)
Slight spalling from 0.00m to 1.00m in all faces of pit
Orientation: 90°
L = 6.50m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP303
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386916.11	398739.39	61.95	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor









Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 3.10m bgl

Method, Plant, Stability, Dimensions
0.00 - 4.60m TP LiuGong 913FCR (13T)
Slight spalling from 0.00m to 1.00m in all faces of pit
Orientation: 90°
L = 6.50m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP304

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386925.30	398717.45	62.12	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
								Dark brown very gravelly clayey fine to coarse SAND with medium cobble content and frequent cobble sized pockets of very stiff grey slightly gravelly slightly sandy CLAY. Gravel is very angular to rounded fine to coarse of red brick, concrete, clinker, plastic, metal, ceramic, limestone and sandstone. Cobbles are angular to subrounded of red brick and concrete [MADE GROUND]
		0.70	ES					
								Becoming dark bluish grey (1.30m)
		1.80	ES					
						(4.00)		
	▽							
		2.70	ES					*Mild hydrocarbon odour from 2.60m bgl (2.60m)*
		3.30	B					
					58.12	4.00		
		4.10	PID	12.00 (ppmv)				Soft dark grey slightly sandy gravelly CLAY with a mild hydrocarbon odour and sheen. Gravel is very angular to subangular fine to coarse of red brick, ceramic and glass [MADE GROUND]
		4.10	ES			(0.40)		
					57.72	4.40		Stiff light brown slightly gravelly slightly sandy CLAY. Gravel is subrounded to rounded fine to medium of mudstone [GLACIAL TILL]
		4.60	ES			(0.40)		
					57.32	4.80		*End of Trial Pit at 4.80m*

Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 2.30m bgl

Method, Plant, Stability, Dimensions
0.00 - 4.80m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 90°
L = 6.00m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP304

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386925.30	398717.45	62.12	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 2.30m bgl

Method, Plant, Stability, Dimensions
0.00 - 4.80m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 90°
L = 6.00m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP305

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386934.01	398742.41	62.05	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.50	ES			(2.40)		Dark brown very gravelly slightly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, glass, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular to angular of red brick and concrete [MADE GROUND] *Orange geotextile across pit (0.40m)*
		1.60	ES, B					
		2.60	HV	191 (kPa)	59.65	2.40		
		2.60	ES, B					Stiff light brown slightly gravelly slightly sandy CLAY. Gravel is subrounded to well rounded fine to medium of mudstone [GLACIAL TILL]
		3.10	HV	>205 (kPa)		(1.00)		*Becoming very stiff (3.00m)*
					58.65	3.40		*End of Trial Pit at 3.40m*

Remarks
Terminated at target depth. Moderate water ingress from east and west faces of pit at 0.80m bgl

Method, Plant, Stability, Dimensions
0.00 - 3.40m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 175°
L = 3.00m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP305

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386934.01	398742.41	62.05	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. Moderate water ingress from east and west faces of pit at 0.80m bgl

Method, Plant, Stability, Dimensions
0.00 - 3.40m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 175°
L = 3.00m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP306

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386945.81	398744.81	62.03	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.30	ES			(0.90)		Dark brown very sandy clayey very angular to rounded fine to coarse GRAVEL of red brick, concrete, metal, plastic, glass, ceramic and sandstone with medium cobble content. Cobbles are very angular to angular of red brick and concrete [MADE GROUND] *200mm plastic pipe orientated north to south across pit (0.50m)*
		1.20	ES, B		61.13	0.90		Dark brown very gravelly clayey fine to coarse SAND with medium cobble content and occasional cobble sized pockets of stiff dark grey slightly gravelly sandy CLAY. Gravel is very angular to subrounded fine to coarse of red brick, concrete, wood, metal, plastic, ceramic, limestone and sandstone. Cobbles are very angular to rounded of red brick and concrete [MADE GROUND]
		2.50 2.50	HV ES, B	>205 (kPa)	59.73	(1.40) 2.30		Stiff locally very stiff light brown mottled bluish grey slightly gravelly slightly sandy CLAY with occasional rootlets along bluish grey mottling. Gravel is subrounded to well rounded fine to medium of mudstone, sandstone and coal [GLACIAL TILL]
					59.13	(0.60) 2.90		*End of Trial Pit at 2.90m*

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 2.90m TP LiuGong 913FCR (13T)
Slight spalling from 0.00m to 0.90m in east and west faces of pit
Orientation: 165°
L = 3.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP306

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386945.81	398744.81	62.03	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions **Logger**

0.00 - 2.90m TP LiuGong 913FCR (13T) LG
Slight spalling from 0.00m to 0.90m in east and west faces of pit
Orientation: 165°

L = 3.00m

W = 0.60m

Checked By: LM

Trial Pit

TP307

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386938.50	398717.76	62.13	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.40	ES, B			(0.70)		Dark brown very sandy clayey very angular to rounded fine to coarse GRAVEL of red brick, concrete, ceramic, limestone and sandstone. Cobbles are very angular to angular of red brick [MADE GROUND]
								Orange geotextile across pit (0.50m)
					61.43	0.70		Dark brown very gravelly slightly clayey fine to coarse SAND with medium cobble content and occasional cobble sized pockets of very stiff brown slightly gravelly slightly sandy CLAY. Gravel is very angular to subangular fine to coarse of red brick, concrete, limestone and sandstone. Cobbles are very angular to subangular of red brick and concrete [MADE GROUND]
		0.90	ES, B					
		2.00	B			(2.40)		
		3.00	ES, B					
					59.03	3.10		*End of Trial Pit at 3.10m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.10m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 355°
L = 4.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP307

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386938.50	398717.76	62.13	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.10m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 355°
L = 4.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP308

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386952.59	398722.62	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.30)		Beige sandy silty angular to subrounded fine to coarse GRAVEL of limestone [MADE GROUND]
					61.72	0.30		
		0.60	ES					Dark brown gravelly very clayey fine to coarse SAND with medium cobble content and occasional cobble sized pockets of very stiff brown slightly gravelly slightly sandy CLAY. Gravel is very angular to subrounded fine to coarse of red brick, concrete, limestone and sandstone. Cobbles are very angular to angular of red brick and concrete [MADE GROUND]
						(2.30)		
		1.70	ES, B					
					59.42	2.60		
		2.70	ES			(0.20)		Stiff light brown slightly gravelly slightly sandy CLAY. Gravel is subrounded to well rounded fine to medium of mudstone [GLACIAL TILL]
					59.22	2.80		*End of Trial Pit at 2.80m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 2.80m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 265°
L = 2.80m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP308

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386952.59	398722.62	62.02	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 2.80m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 265°
L = 2.80m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP309

Sheet 1 of 2

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386922.09	398726.76	62.11	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					62.01	(0.10) 0.10		Dark grey very sandy slightly silty very angular to angular fine to coarse GRAVEL of sandstone [MADE GROUND]
		0.50	ES			(1.60)		Dark brown very sandy clayey very angular to rounded fine to coarse GRAVEL of red brick, concrete, metal, plastic, wood, clinker, limestone, sandstone and mudstone with medium cobble content. Cobbles are very angular to subrounded of red brick and concrete [MADE GROUND]
					60.41	1.70		
		1.90	B			(0.50)		Dark brown gravelly very clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subangular fine to coarse of red brick and clinker. Cobbles are very angular of red brick [MADE GROUND]
	▽				59.91	2.20		
		2.40	ES			(0.50)		Dark grey very sandy silty very angular to subrounded fine to coarse GRAVEL of red brick, concrete, clinker and sandstone with low cobble content and a strong hydrocarbon odour and sheen. Cobbles are very angular of red brick [MADE GROUND] *Slight hydrocarbon odour from 2.30m bgl (2.30m)*
					59.41	2.70		
		2.90 2.90	PID ES	24.30 (ppmv)		(1.30)		Soft black slightly sandy gravelly CLAY with a strong hydrocarbon odour and sheen. Gravel is very angular to angular fine to coarse of red brick, glass, metal, plastic and ceramic [MADE GROUND]
		3.60 3.60	PID ES	64.00 (ppmv)				
					58.11	4.00		
		4.20	ES			(1.10)		Very stiff light brown mottled light grey slightly gravelly slightly sandy CLAY. Gravel is subrounded to rounded fine to medium of mudstone [GLACIAL TILL]
								Continued on next page

Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 3.10m bgl

Method, Plant, Stability, Dimensions
0.00 - 5.10m TP LiuGong 913FCR (13T)
Slight spalling from 0.00m to 0.90m in north and south faces of pit
Orientation: 65°
L = 6.50m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP309

Sheet 2 of 2

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386922.09	398726.76	62.11	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
					57.01	5.10		As previous page.
								End of Trial Pit at 5.10m

5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0

Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 3.10m bgl

Method, Plant, Stability, Dimensions

0.00 - 5.10m TP LiuGong 913FCR (13T)
Slight spalling from 0.00m to 0.90m in north and south faces of pit
Orientation: 65°
L = 6.50m
W = 1.20m

Logger
LG

Checked By: LM

Trial Pit

TP309

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386922.09	398726.76	62.11	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-01	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. Moderate water ingress from north and south faces of pit at 3.10m bgl

Method, Plant, Stability, Dimensions **Logger**

0.00 - 5.10m TP LiuGong 913FCR (13T) LG
Slight spalling from 0.00m to 0.90m in north and south faces of pit
Orientation: 65°

L = 6.50m

W = 1.20m

Checked By: LM

Trial Pit

TP310

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386937.46	398733.98	62.12	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.40	ES			(2.20)		Dark brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, metal, plastic, glass, limestone and sandstone. Cobbles are very angular to subrounded of red brick and concrete [MADE GROUND]
	▽	1.50	ES, B					
		2.40	HV	182 (kPa)	59.92	2.20		Stiff light brown mottled light grey slightly gravelly sandy CLAY. Gravel is subangular to well rounded fine to medium of mudstone, sandstone and coal [GLACIAL TILL]
		2.40	ES, B			(0.80)		
		2.90	HV	189 (kPa)				
					59.12	3.00		*End of Trial Pit at 3.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated at target depth. Moderate water ingress from east face of pit at 0.70m bgl

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 15°
L = 3.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP310
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386937.46	398733.98	62.12	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. Moderate water ingress from east face of pit at 0.70m bgl

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 15°
L = 3.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP311

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386932.87	398726.39	62.11	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.30	ES, B					Dark brown very gravelly slightly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, metal, plastic, clinker and limestone. Cobbles are very angular to subrounded of red brick and concrete [MADE GROUND]
								Orange geotextile across pit (0.40m)
								Becoming clayey with occasional cobble sized pieces of very stiff slightly gravelly slightly sandy CLAY (1.00m)
		1.30	ES			(2.40)		
								Becoming gravelly (1.50m)
		2.30	ES, B					
					59.71	2.40		*End of Trial Pit at 2.40m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 2.40m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 265°
L = 2.40m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP311

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386932.87	398726.39	62.11	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated due to hard digging. No water strike

Method, Plant, Stability, Dimensions
0.00 - 2.40m TP LiuGong 913FCR (13T)
Stable during excavation
Orientation: 265°
L = 2.40m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP312

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386919.19	398715.61	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(2.60)		Dark brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, clinker, metal, plastic and limestone. Cobbles are very angular to rounded of red brick and metal [MADE GROUND]
		2.40	ES					*Slight hydrocarbon odour from 2.40m bgl (2.40m)*
					59.42	2.60		
		2.80	ES			(0.40)		Stiff light brown slightly gravelly slightly sandy CLAY. Gravel is subrounded fine to medium of mudstone [GLACIAL TILL]
					59.02	3.00		*End of Trial Pit at 3.00m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Occasional moderate collapses in east face of pit
Orientation: 10°
L = 3.00m
W = 0.60m

Logger
LG

Checked By: LM

Trial Pit

TP312

PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	386919.19	398715.61	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-02	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor







Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions
0.00 - 3.00m TP LiuGong 913FCR (13T)
Occasional moderate collapses in east face of pit
Orientation: 10°
L = 3.00m
W = 0.60m

Logger
LG

Checked By: LM

APPENDIX 4

DYNAMIC SAMPLE LOGS AND PHOTOGRAPHS

Dynamic Sampler

DS301

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386893.12	398738.85	61.55	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					61.40	(0.15) 0.15		Asphalt [MADE GROUND]
					61.30	(0.10) 0.25		Beige sandy silty angular to subangular fine to coarse GRAVEL of limestone [MADE GROUND]
		0.40	ES					Dark grey gravelly very clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subangular fine to coarse of red brick. Cobbles are very angular of red brick [MADE GROUND]
		1.20	SPT(C)	N=50 for 200mm (4,14/18,16,16 for 50mm)		(1.30)		
					60.00	1.55		*End of Borehole at 1.55m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.30m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.55m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS301

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386893.12	398738.85	61.55	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (C)		Dry	RP05	69	N=50 for 200mm (4,14/18,16,16 for 50mm)

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		

Remarks

Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.30m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.55m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS301
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386893.12	398738.85	61.55	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.30m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.55m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS302

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386914.70	398724.86	62.12	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
					62.02	(0.10) 0.10		Asphalt [MADE GROUND]
						(0.20)		Beige sandy silty angular to subangular fine to coarse GRAVEL of limestone [MADE GROUND]
					61.82	0.30		Dark grey very gravelly clayey fine to coarse SAND with low cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
						(1.16)		*Becoming gravelly and very clayey (0.90m)*
		1.00	ES					
		1.20	SPT(C)	N=50 for 135mm (9,16/27,23 for 60mm)				
					60.66	1.46		*End of Borehole at 1.46m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.35m bgl, base at 1.37m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 0.80m	IP	Insulated Hand Tools	LG
0.80 - 1.46m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS302

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386914.70	398724.86	62.12	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (C)		Dry	RP05	69	N=50 for 135mm (9,16/27,23 for 60mm)

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		

Depth Related Remarks

Top Depth (m)	Base Depth (m)	Remarks
0.80	1.20	87mm - 100% recovoery

Remarks

Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.35m bgl, base at 1.37m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 0.80m	IP	Insulated Hand Tools	LG
0.80 - 1.46m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS302
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386914.70	398724.86	62.12	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.35m bgl, base at 1.37m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 0.80m	IP	Insulated Hand Tools	LG
0.80 - 1.46m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS303

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386915.48	398742.23	61.94	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(1.61)		Dark grey very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
		1.20	SPT(C)	N=50 for 255mm (1,0/12,10,19,9 for 30mm)				
					60.33	1.61		*End of Borehole at 1.61m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.12m bgl, base at 1.21m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.61m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS303

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386915.48	398742.23	61.94	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (C)		Dry	RP05	69	N=50 for 255mm (1,0/12,10,19,9 for 30mm)

Remarks

Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.12m bgl, base at 1.21m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.61m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS303
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386915.48	398742.23	61.94	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; water at 1.12m bgl, base at 1.21m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.61m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS304

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386920.41	398730.67	62.05	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(1.41)		Dark grey very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
		1.20	SPT(C)	N=50 for 115mm (19,6/31,19 for 40mm)				
					60.64	1.41		*End of Borehole at 1.41m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.16m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.41m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS304

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386920.41	398730.67	62.05	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (C)		Dry	RP05	69	N=50 for 115mm (19,6/31,19 for 40mm)

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.16m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.41m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS304
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386920.41	398730.67	62.05	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-30	2026-03-30

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.16m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.41m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS305

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386935.30	398723.22	62.10	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.90)		Light greyish brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
					61.20	0.90		*End of Borehole at 0.90m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an obstruction. No water strike

Method, Plant, Stability, Dimensions
0.00 - 0.90m IP Insulated Hand Tools

Logger
LG

Checked By: LM

Dynamic Sampler

DS305
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386935.30	398723.22	62.10	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor



Remarks
Terminated due to an obstruction. No water strike

Method, Plant, Stability, Dimensions
0.00 - 0.90m IP Insulated Hand Tools

Logger
LG

Checked By: LM

Dynamic Sampler

DS306

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386929.59	398730.59	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.40	ES			(1.47)		Dark greyish brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
		1.20	SPT(C)	N=50 for 150mm (17,8/21,29)				
					60.55	1.47		*End of Borehole at 1.47m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 0.90m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.47m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS306

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386929.59	398730.59	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (C)		Dry	RP05	69	N=50 for 150mm (17,8/21,29)

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		

Remarks

Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 0.90m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.47m	DS	Global Geo	LG

Checked By: LM

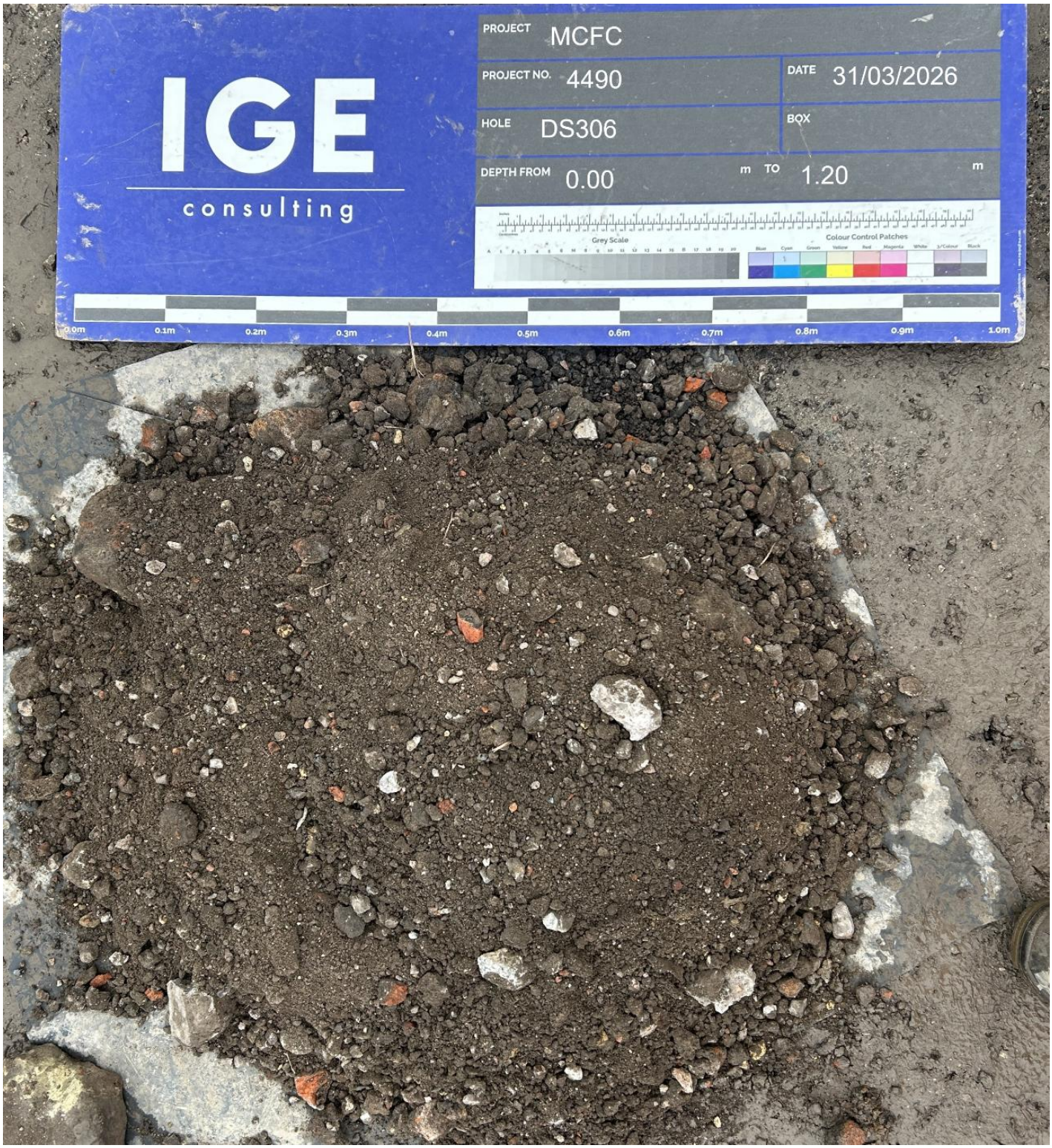
Dynamic Sampler

DS306
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386929.59	398730.59	62.02	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 0.90m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 1.47m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS307

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386927.53	398714.35	62.06	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.50	ES			(1.80)		Dark greyish brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
		1.50	ES					
		2.00	SPT(C)	N=45 (7,5/8,8,17,12)	60.26	1.80		Very stiff dark greyish brown slightly sandy gravelly CLAY with medium cobble content. Gravel is subangular to subrounded fine to coarse of red brick, concrete and limestone. Cobbles are very angular of red brick [MADE GROUND]
		2.50	ES			(1.58)		
		3.00	SPT(C)	N=50 for 230mm (9,8/7,18,22,3 for 5mm)				
					58.68	3.38		*End of Borehole at 3.38m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.65m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 3.38m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS307

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386927.53	398714.35	62.06	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
2.00 (C)		Dry	RP05	69	N=45 (7,5/8,8,17,12)
3.00 (C)		Dry	RP05	69	N=50 for 230mm (9,8/7,18,22,3 for 5mm)

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	ES		
	ES		
	ES		

Depth Related Remarks

Top Depth (m)	Base Depth (m)	Remarks
2.00	3.00	67mm - 100% recovery

Remarks

Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.65m bgl

Method, Plant, Stability, Dimensions

			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 3.38m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS307
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386927.53	398714.35	62.06	1:25
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.65m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 3.38m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS307
PHOTO PAGE

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386927.53	398714.35	62.06	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	



Remarks
Terminated due to an SPT refusal. No water strike. Borehole dipped upon completion; borehole is dry, base at 1.65m bgl

Method, Plant, Stability, Dimensions			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 3.38m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS308

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386948.44	398717.19	62.07	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
						(2.19)		Dark greyish brown very gravelly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, plastic, metal, limestone and sandstone. Cobbles are very angular of red brick [MADE GROUND]
		2.00	SPT(C)	N=50 for 105mm (21,4/37,13 for 30mm)				
					59.88	2.19		*End of Borehole at 2.19m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Terminated due to an SPT refusal. No water strike

Method, Plant, Stability, Dimensions

			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 2.19m	DS	Global Geo	LG

Checked By: LM

Dynamic Sampler

DS308

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
DS	386948.44	398717.19	62.07	1:25

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-03-31

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
2.00 (C)		Dry	RP05	69	N=50 for 105mm (21,4/37,13 for 30mm)

Remarks
Terminated due to an SPT refusal. No water strike

Method, Plant, Stability, Dimensions

			Logger
0.00 - 2.00m	IP	LiuGong 913FCR (13T)	LG
2.00 - 2.19m	DS	Global Geo	LG

Checked By: LM

APPENDIX 5

CABLE PERCUSSION BOREHOLE LOGS

Borehole Log

CP301

Sheet 1 of 2

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386903.39	398719.27	62.10	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-01	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.00-0.50	B		62.00	(0.10) 0.10		Asphalt [MADE GROUND]
		0.50-1.00	B			(1.90)		Dark brown very gravelly clayey fine to coarse SAND. Gravel is very angular to subrounded fine to coarse of red brick, ceramic, limestone and sandstone [MADE GROUND]
		1.20 1.20-1.65	SPT D	N=26 (1,2/1,3,7,15)				
		2.00 2.00-2.45	SPT D, B	N=7 (1,1/2,1,2,2)	60.10	2.00 (1.00)		Stiff brown slightly gravelly sandy CLAY. Gravel is very angular to subrounded fine to coarse of red brick, concrete, ceramic, limestone and sandstone [MADE GROUND]
		3.00 3.00-3.45	SPT D, B	N=20 (2,3/3,5,6,6)	59.10	3.00		Very stiff light brown mottled light grey slightly gravelly slightly sandy CLAY. Gravel is subangular to well rounded fine to medium of mudstone, sandstone and coal [GLACIAL TILL]
		4.00-4.45	U100	Blows: 30, Recovery: 100%				
		5.00 5.00-5.45	SPT D, B	N=21 (3,3/4,4,6,7)				
		6.00-6.45	U100	Blows: 31, Recovery: 100%		(12.80)		
		7.50 7.50-7.95	SPT D, B	N=13 (2,2/3,3,3,4)				
		9.00-9.45	U100	Blows: 25, Recovery: 100%				

Continued on next page

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.91m	CP	Dando 2000	LG

Checked By: LM

Created using Pebble Geo

Borehole Log

CP301

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386903.39	398719.27	62.10	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-01	2026-04-02

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
								As previous page.
		10.50 10.50-10.95	SPT D, B	N=31 (5,6/7,7,8,9)				
		12.00-12.45	U100	Blows: 37, Recovery: 100%				
		13.50 13.50-13.95	SPT D, B	N=34 (6,6/7,8,9,10)				
		15.00-15.45	U100	Blows: 50, Recovery: 90%				
		16.00-16.50	B		46.30	15.80		Weathered MUDSTONE. Recovered as: Very stiff grey slightly gravelly CLAY. Gravel is very angular to subrounded fine to coarse [PENNINE UPPER COAL MEASURES]
		16.50	SPT	N=50 for 275mm (12,13/13,14,13,10 for 50mm)		(1.11)		
		16.50-16.91	D		45.19	16.91		*End of Borehole at 16.91m*

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.91m	CP	Dando 2000	LG

Checked By: LM

Borehole Log

CP301

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386903.39	398719.27	62.10	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-04-01	2026-04-02

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

Hole Diameter

Base Depth (m)	Hole Diameter (mm)	Remarks
3.00	200	
16.91	150	

Casing Diameter

Base Depth (m)	Casing Diameter (mm)	Remarks
3.00	200	
9.00	150	

Drilling Progress

Depth (m)	Casing Depth (m)	Water Level (m)	Date and Time	Remarks
0.00	0.00	Dry	2026-04-01T10:00	Start of borehole
0.00	0.00	Dry	2026-04-02T09:00	End of borehole
16.91	9.00	Dry	2026-04-01T16:30	End of shift
16.91	9.00	Dry	2026-04-02T08:00	Start of shift

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (S)	1.20	Dry	AR3734	69	N=26 (1,2/1,3,7,15)
2.00 (S)	2.00	Dry	AR3734	69	N=7 (1,1/2,1,2,2)
3.00 (S)	3.00	Dry	AR3734	69	N=20 (2,3/3,5,6,6)
5.00 (S)	5.00	Dry	AR3734	69	N=21 (3,3/4,4,6,7)
7.50 (S)	7.50	Dry	AR3734	69	N=13 (2,2/3,3,3,4)
10.50 (S)	9.00	Dry	AR3734	69	N=31 (5,6/7,7,8,9)
13.50 (S)	9.00	Dry	AR3734	69	N=34 (6,6/7,8,9,10)
16.50 (S)	9.00	Dry	AR3734	69	N=50 for 275mm (12,13/13,14,13,10 for 50mm)

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	B		
	B		
	D		
	D		
	B		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	B		
	D		

Remarks
Terminated at target depth. No water strike

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.91m	CP	Dando 2000	LG

Checked By: LM

Borehole Log

CP302

Sheet 1 of 2

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386946.09	398730.23	62.05	1:50
Project Name		**Project No.**	**Start Date**	**End Date**
MCFC		4490	2026-03-31	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		0.00-0.50	B					Dark greyish brown gravelly slightly clayey fine to coarse SAND with medium cobble content. Gravel is very angular to subrounded fine to coarse of red brick, concrete, metal, clinker, limestone and sandstone [MADE GROUND]
		0.50-1.00	B					*Becoming grey very silty no longer clayey (0.50m)*
		1.20	SPT	N=50 for 255mm (9,12/13,15,15,7 for 30mm)				
		1.20-1.65	D, B			(3.00)		
		2.00	SPT	N=50 for 145mm (15,10/25,25 for 70mm)				
		2.00-2.45	D, B					
		3.00-3.45	U100	Blows: 26, Recovery: 80%	59.05	3.00		
						(1.00)		Stiff brown slightly gravelly slightly sandy CLAY. Gravel is very angular to well rounded fine to coarse of red brick and mudstone [MADE GROUND]
		4.00	SPT	N=12 (1,2/3,3,3,3)	58.05	4.00		
		4.00-4.45	D, B					Stiff greyish brown slightly gravelly slightly sandy CLAY. Gravel is subrounded to rounded fine to coarse of mudstone and sandstone [GLACIAL TILL]
		5.00-5.45	U100	Blows: 22, Recovery: 100%				
		6.00	SPT	N=12 (2,2/3,3,3,3)				
		6.00-6.45	D, B					
						(11.00)		
		7.50-7.95	U100	Blows: 29, Recovery: 100%				
		9.00	SPT	N=24 (3,4/5,6,6,7)				
		9.00-9.45	D, B					

Continued on next page

Remarks
Terminated at target depth

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.83m	CP	Dando 2000	LG

Checked By: LM

Borehole Log

CP302

Sheet 2 of 2

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386946.09	398730.23	62.05	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Type/ Ref	Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Description
		10.50-10.95	U100	Blows: 34, Recovery: 100%				
		12.00	SPT	N=24 (3,4/4,6,7,7)				*Becoming very stiff (12.00m)*
		12.00-12.45	D, B					
		13.50-13.95	U100	Blows: 18, Recovery: 100%				
		15.00	SPT	N=50 for 295mm (12,10/12,13,13,12 for 70mm)	47.05	15.00		Weathered MUDSTONE. Recovered as: Very stiff grey slightly gravelly CLAY. Gravel is very angular to angular fine to coarse [PENNINE UPPER COAL MEASURES]
		15.00-15.45	D, B					
						(1.83)		
		16.50	SPT	N=50 for 180mm (10,15/16,24,8 for 30mm)				
		16.50-16.83	D		45.22	16.83		*End of Borehole at 16.83m*

Remarks
Terminated at target depth

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.83m	CP	Dando 2000	LG

Checked By: LM

Borehole Log

CP302

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386946.09	398730.23	62.05	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-04-01

Client	Consultant	Contractor
Manchester City Football Club	IGE Consulting	

Hole Diameter

Base Depth (m)	Hole Diameter (mm)	Remarks
3.00	200	
16.83	150	

Casing Diameter

Base Depth (m)	Casing Diameter (mm)	Remarks
3.00	200	
10.50	150	

Water Strike - General

Struck (m)	Seal Depth (m)	Casing Depth (m)	Date and Time	Remarks
0.80	1.50		2026-03-31	

Water Strike - Details

Struck (m)	Rose To (m)	Time (mins)	Remarks
0.80	0.50	5	

Drilling Progress

Depth (m)	Casing Depth (m)	Water Level (m)	Date and Time	Remarks
0.00	0.00	Dry	2026-03-31T09:00	Start of borehole
0.00	0.00	Dry	2026-03-31T09:00	End of borehole
16.83	10.50	Dry	2026-03-31T16:30	End of shift
16.83	10.50	Dry	2026-03-31T07:30	Start of shift

SPT - Details

Top Depth (m) (Type)	Casing Depth (m)	Water Depth (m)	Hammer Serial No.	Energy Ratio (%)	Results
1.20 (S)	1.20	1.00	AR3734	69	N=50 for 255mm (9,12/13,15,15,7 for 30mm)
2.00 (S)	2.00	Dry	AR3734	69	N=50 for 145mm (15,10/25,25 for 70mm)
4.00 (S)	3.00	Dry	AR3734	69	N=12 (1,2/3,3,3,3)
6.00 (S)	6.00	Dry	AR3734	69	N=12 (2,2/3,3,3,3)
9.00 (S)	9.00	Dry	AR3734	69	N=24 (3,4/5,6,6,7)
12.00 (S)	10.50	Dry	AR3734	69	N=24 (3,4/4,6,7,7)
15.00 (S)	10.50	Dry	AR3734	69	N=50 for 295mm (12,10/12,13,13,12 for 70mm)
16.50 (S)	10.50	Dry	AR3734	69	N=50 for 180mm (10,15/16,24,8 for 30mm)

Continued on next page

Remarks
Terminated at target depth

Method, Plant, Stability, Dimensions			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.83m	CP	Dando 2000	LG

Checked By: LM

Borehole Log

CP302

SUPPLEMENTARY INFO

Hole Type	Easting	Northing	Ground Level (m)	Scale
IP+CP	386946.09	398730.23	62.05	1:50

Project Name	Project No.	Start Date	End Date
MCFC	4490	2026-03-31	2026-04-01

Client
Manchester City Football Club

Consultant
IGE Consulting

Contractor

Sample Details

Sample ID	Type	Water Level (m)	Remarks
	B		
	B		
	D		
	B		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	U100		
	D		
	B		
	D		

Remarks
Terminated at target depth

Method, Plant, Stability, Dimensions

			Logger
0.00 - 1.20m	IP	Insulated Hand Tools	LG
1.20 - 16.83m	CP	Dando 2000	LG

Checked By: LM

APPENDIX 6

CALIFORNIA BEARING RATIO TEST RESULTS

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CONSTRUCTION TESTING

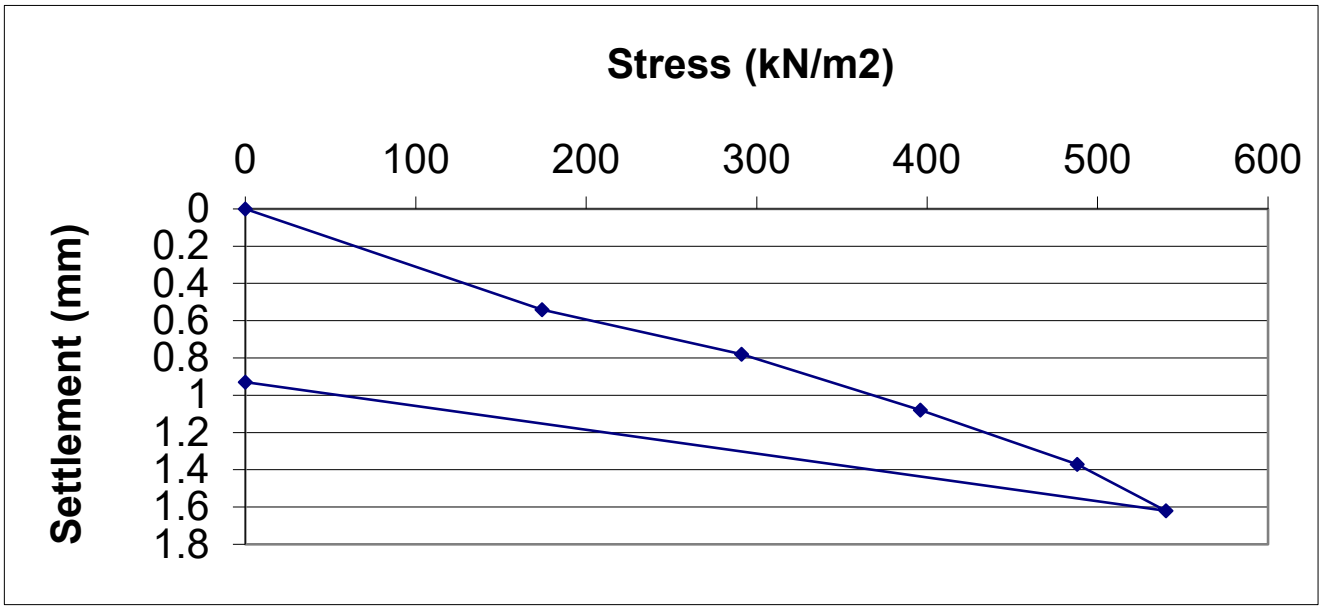
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-01	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	6F5		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	1		
Location*:	CBR 1		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Overcast, Windy, Showers		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-01

Stress (kN/m^2)	Settlement (mm)
0	0
174	0.54
291	0.78
396	1.08
488	1.37
540	1.62
0	0.93



K Value (kN/m^2/mm)	159
Estimated CBR value	63%

Comments/Deviations:

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* Information supplied client.

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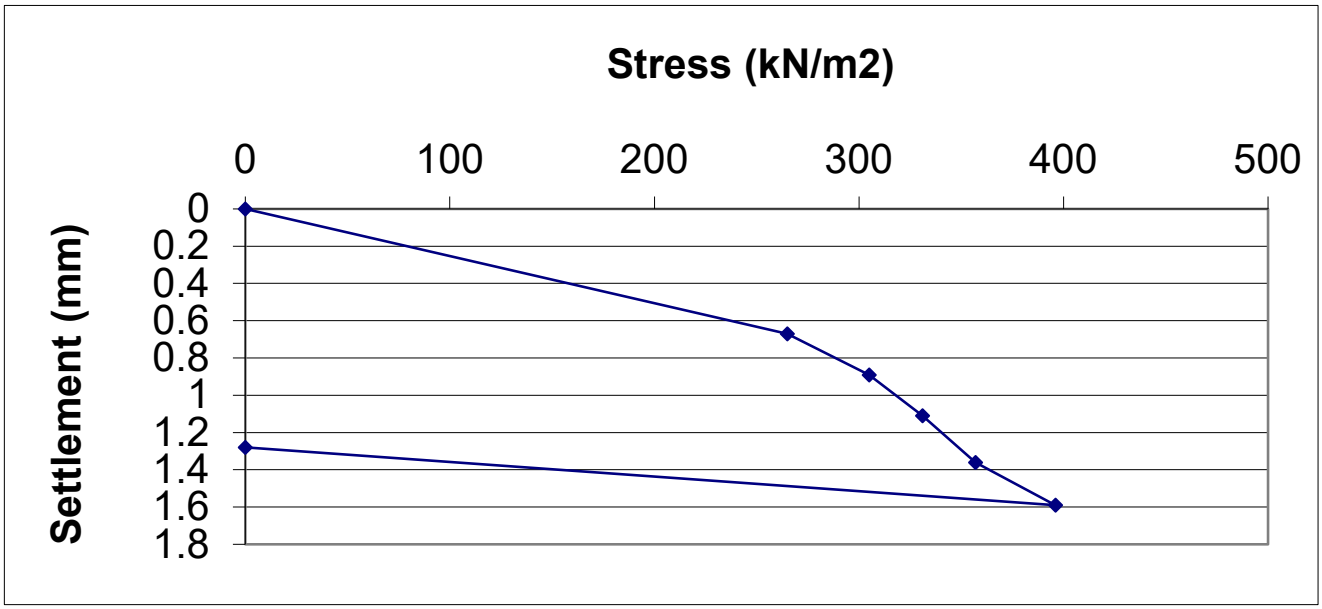
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-02	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Brick / Brown Stony Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	2		
Location*:	CBR 1		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Raining, Overcast, Windy		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-02

Stress (kN/m^2)	Settlement (mm)
0	0
265	0.67
305	0.89
331	1.11
357	1.36
396	1.59
0	1.28



K Value (kN/m^2/mm)	122.1
Estimated CBR value	40%

Comments/Deviations:

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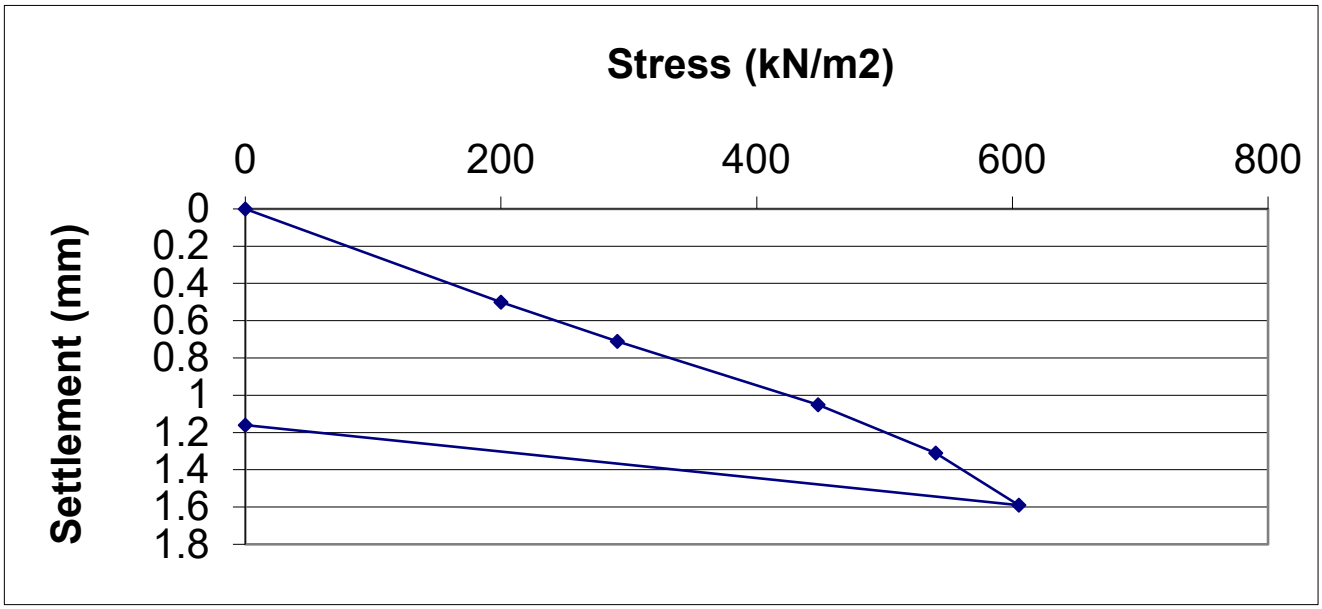
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-03	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Stony Brown Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	3		
Location*:	CBR 2		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Raining, Windy		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-03

Stress (kN/m^2)	Settlement (mm)
0	0
200	0.5
291	0.71
448	1.05
540	1.31
605	1.59
0	1.16



K Value (kN/m^2/mm)	183.3
Estimated CBR value	81%

Comments/Deviations:

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Sign [redacted]

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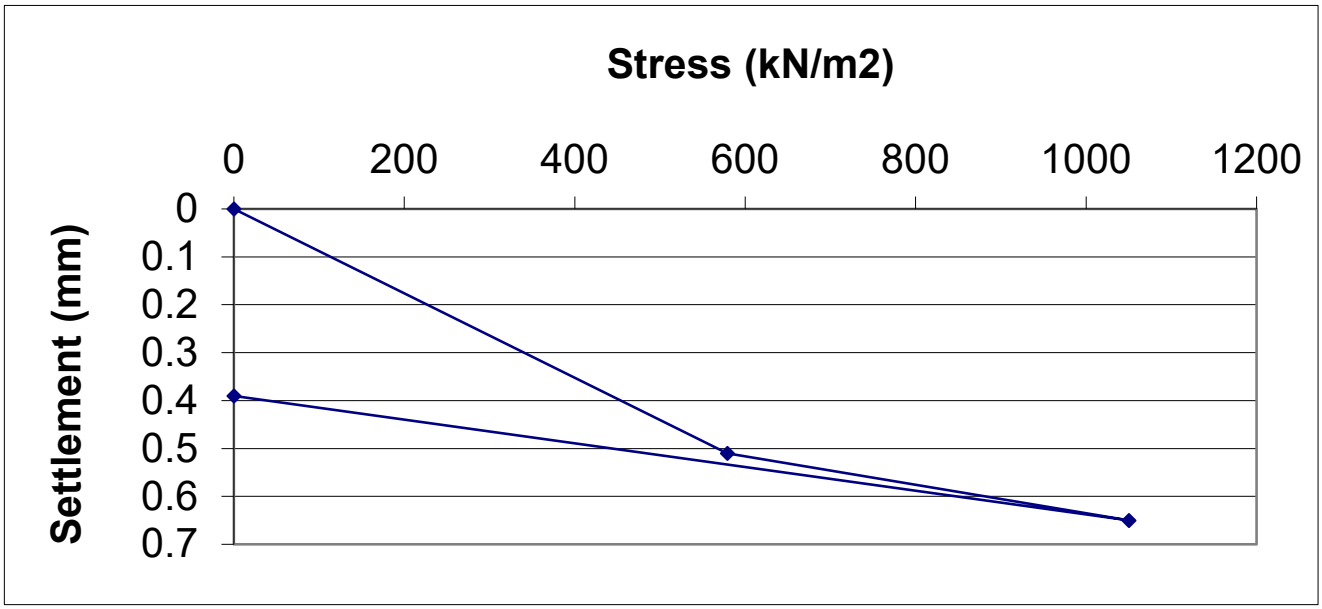
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-04	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Rock / Brick and Brown Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	4		
Location*:	CBR 2		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Raining, Windy		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:	Test ended @1050kN/m2 due to reaching maximum capacity of the Jack		

Test Report No.: TD26-I-04-A-04

Stress (kN/m^2)	Settlement (mm)
0	0
579	0.51
1050	0.65
0	0.39



K Value (kN/m^2/mm)	371
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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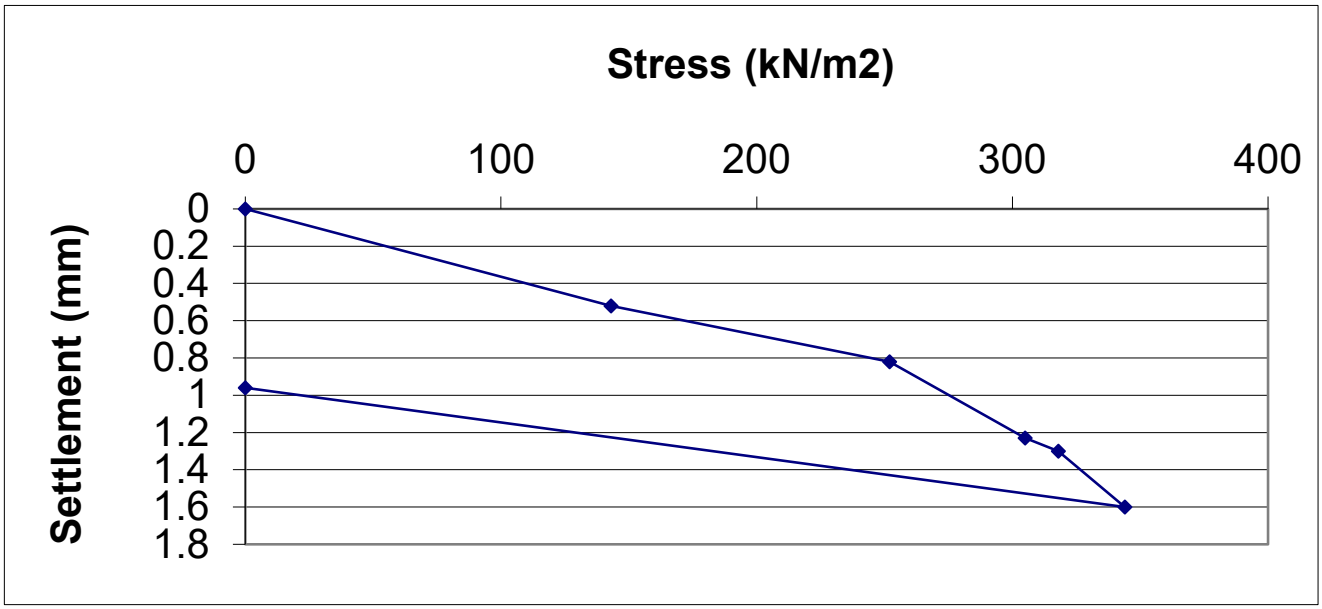
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-05	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Stony Gravel Brown Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	5		
Location*:	CBR 3		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Raining, Windy		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-05

Stress (kN/m^2)	Settlement (mm)
0	0
143	0.52
252	0.82
305	1.23
318	1.30
344	1.60
0	0.96



K Value (kN/m^2/mm)	109.1
Estimated CBR value	33%

Comments/Deviations:

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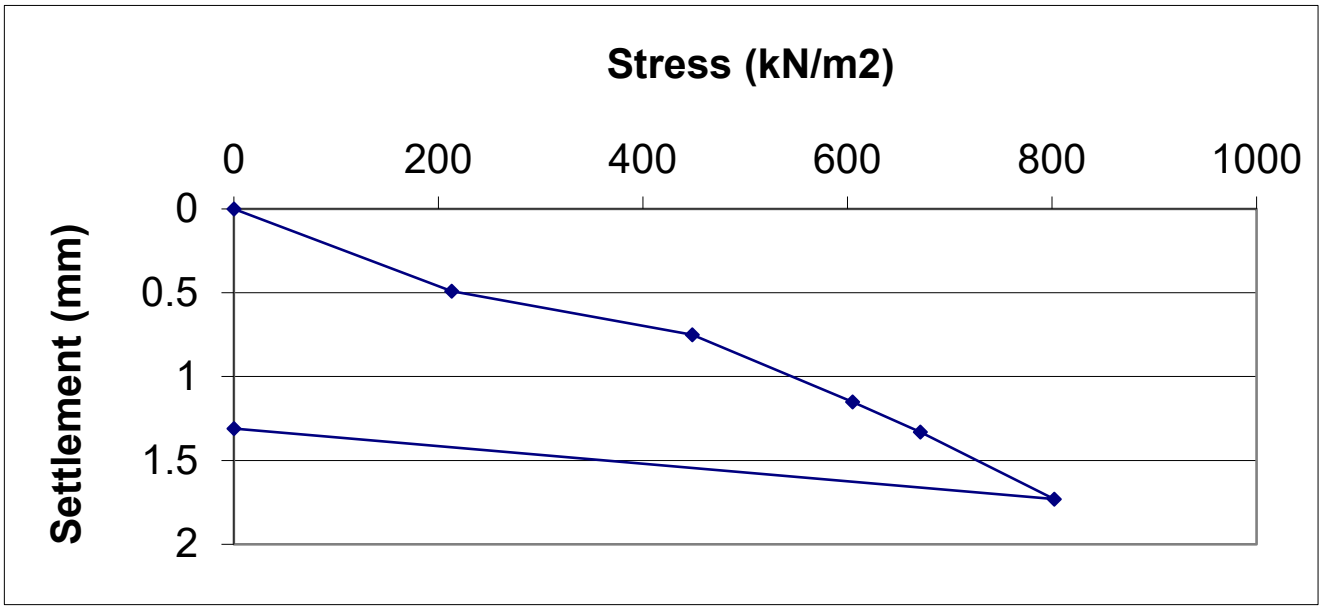
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-06	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Brick / Concrete Gravely Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	6		
Location*:	CBR 3		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	30/03/2026		
Weather Conditions:	Windy, Showers		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-06

Stress (kN/m^2)	Settlement (mm)
0	0
213	0.49
448	0.75
605	1.15
671	1.33
802	1.73
0	1.31



K Value (kN/m^2/mm)	226.8
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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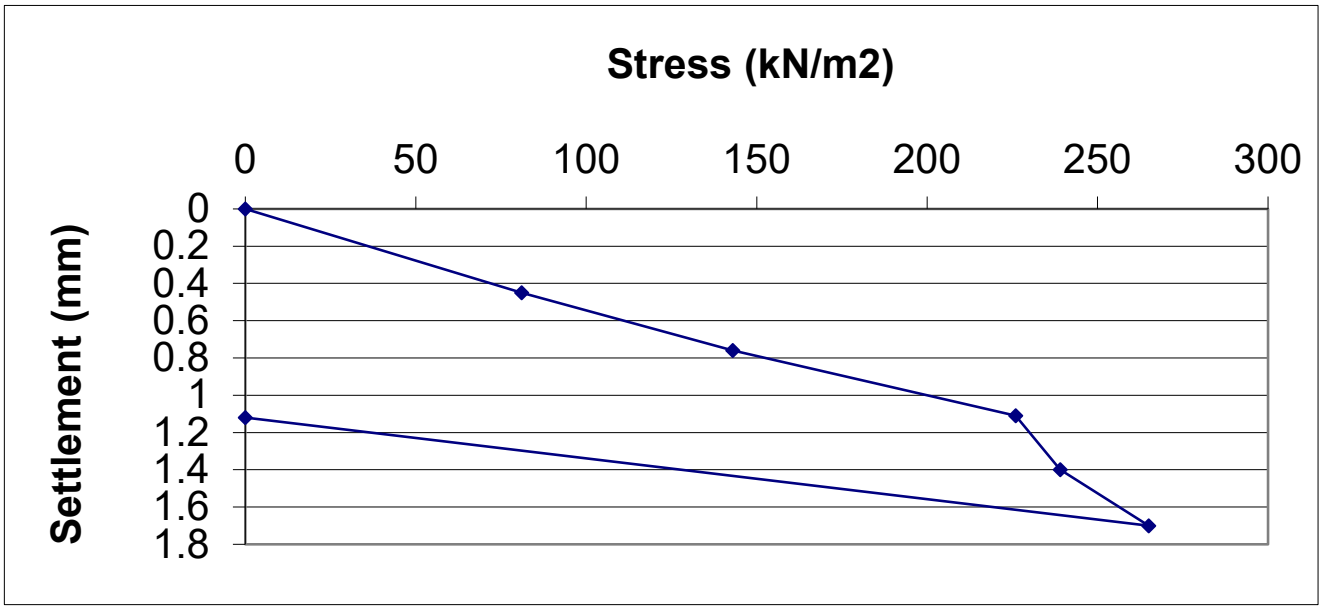
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-07	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Stoney Gravely Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	1		
Location*:	CBR 4		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast, Showers		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-07

Stress (kN/m^2)	Settlement (mm)
0	0
81	0.45
143	0.76
226	1.11
239	1.40
265	1.70
0	1.12



K Value (kN/m^2/mm)	82.1
Estimated CBR value	20%

Comments/Deviations:

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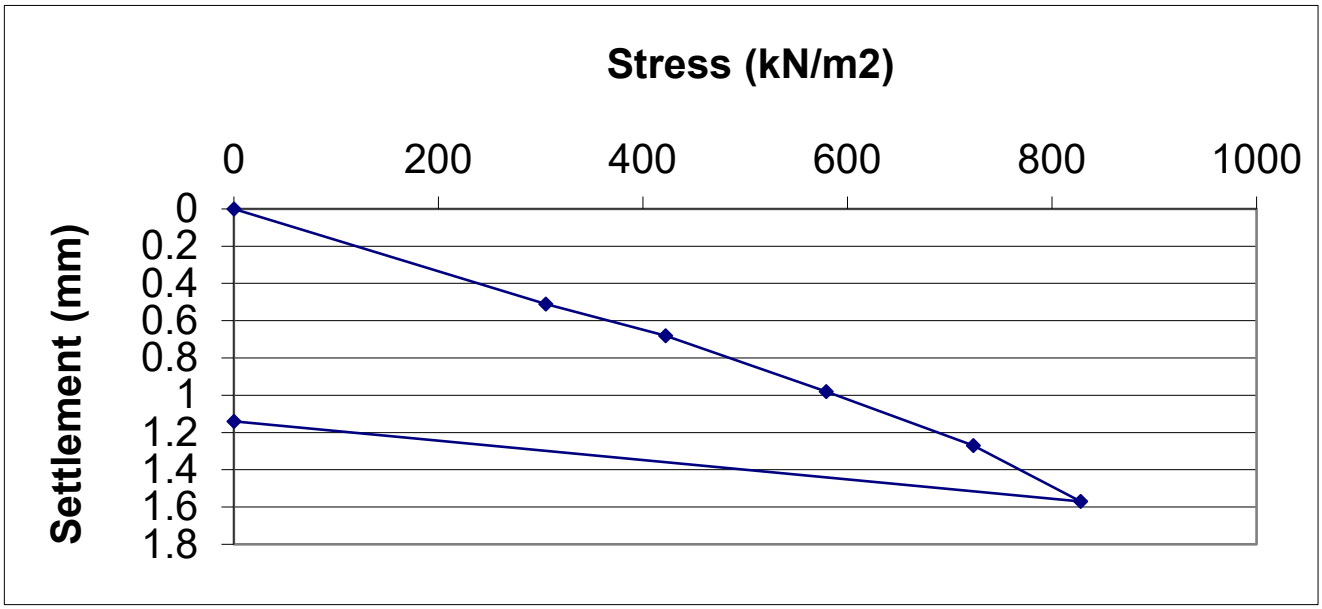
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-09	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Stone and Stony Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	2		
Location*:	CBR 4		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-09

Stress (kN/m^2)	Settlement (mm)
0	0
305	0.51
422	0.68
579	0.98
723	1.27
828	1.57
0	1.14



K Value (kN/m^2/mm)	252
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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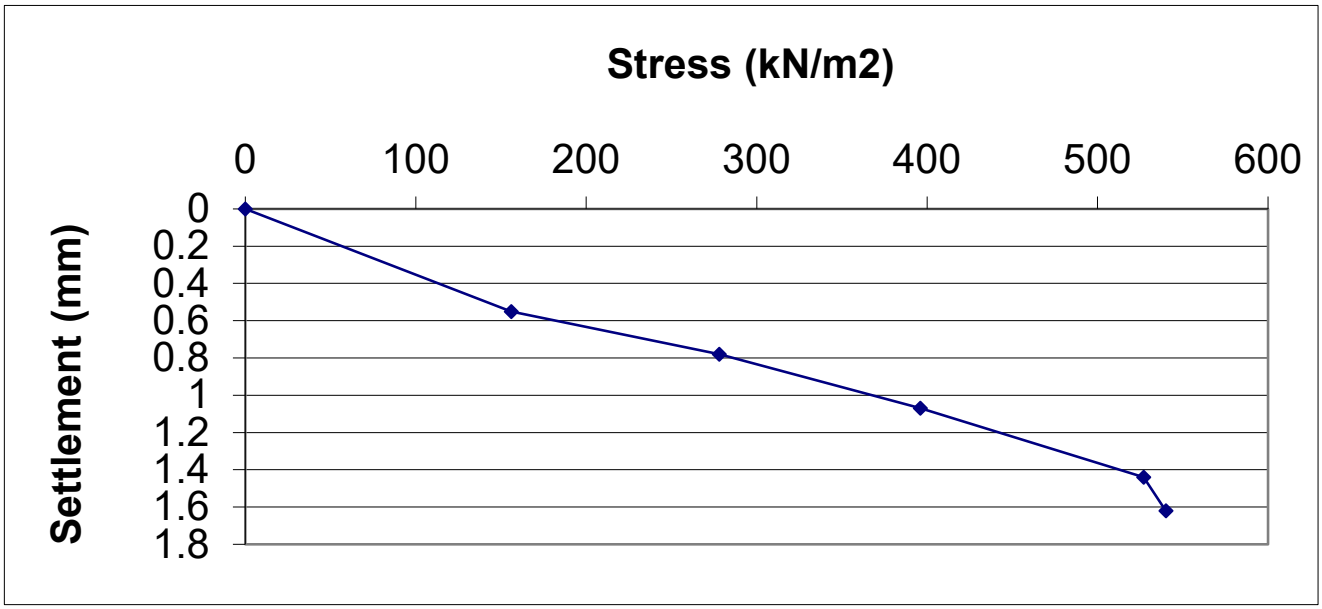
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-10	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Rock/ Brick		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	3		
Location*:	CBR 5		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:	No rebound recorded due to side wall rock hitting datum bar		

Test Report No.: TD26-I-04-A-10

Stress (kN/m^2)	Settlement (mm)
0	0
156	0.55
278	0.78
396	1.07
527	1.44
540	1.62



K Value (kN/m^2/mm)	162.4
Estimated CBR value	65%

Comments/Deviations:

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Signed [redacted]

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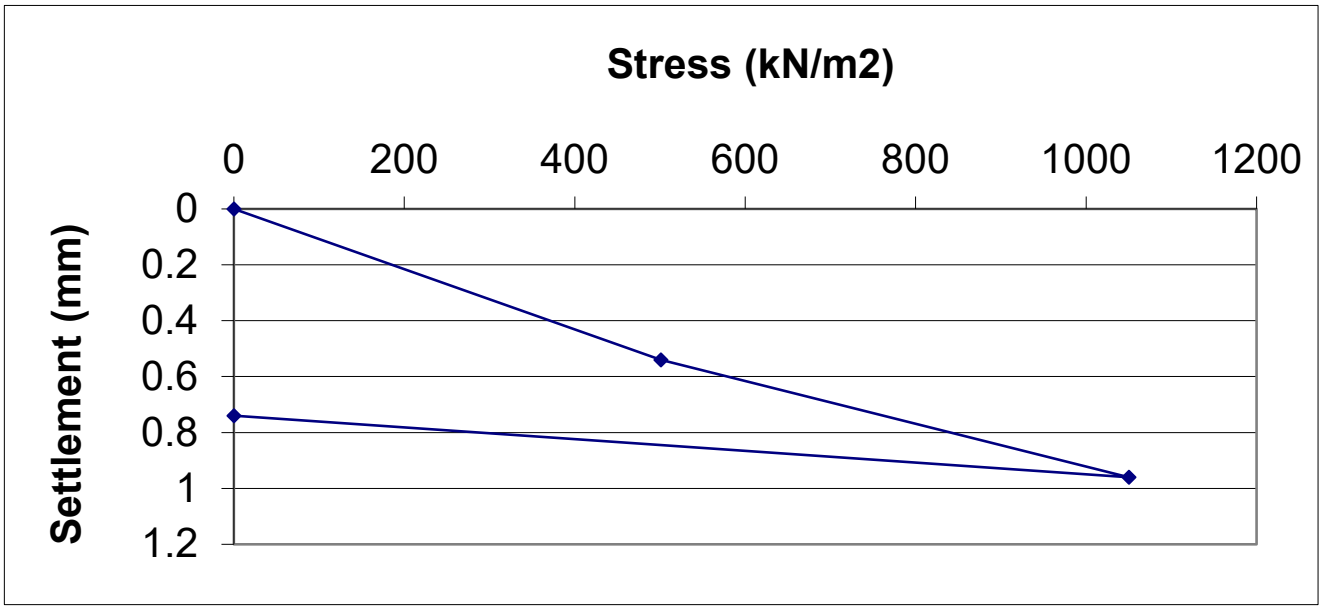
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-08	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Stony Gravely Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	4		
Location*:	CBR 5		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:	Test ended @1050kN/m2 due to reaching maximum capacity of the jack		

Test Report No.: TD26-I-04-A-08

Stress (kN/m^2)	Settlement (mm)
0	0
501	0.54
1050	0.96
0	0.74



K Value (kN/m^2/mm)	371
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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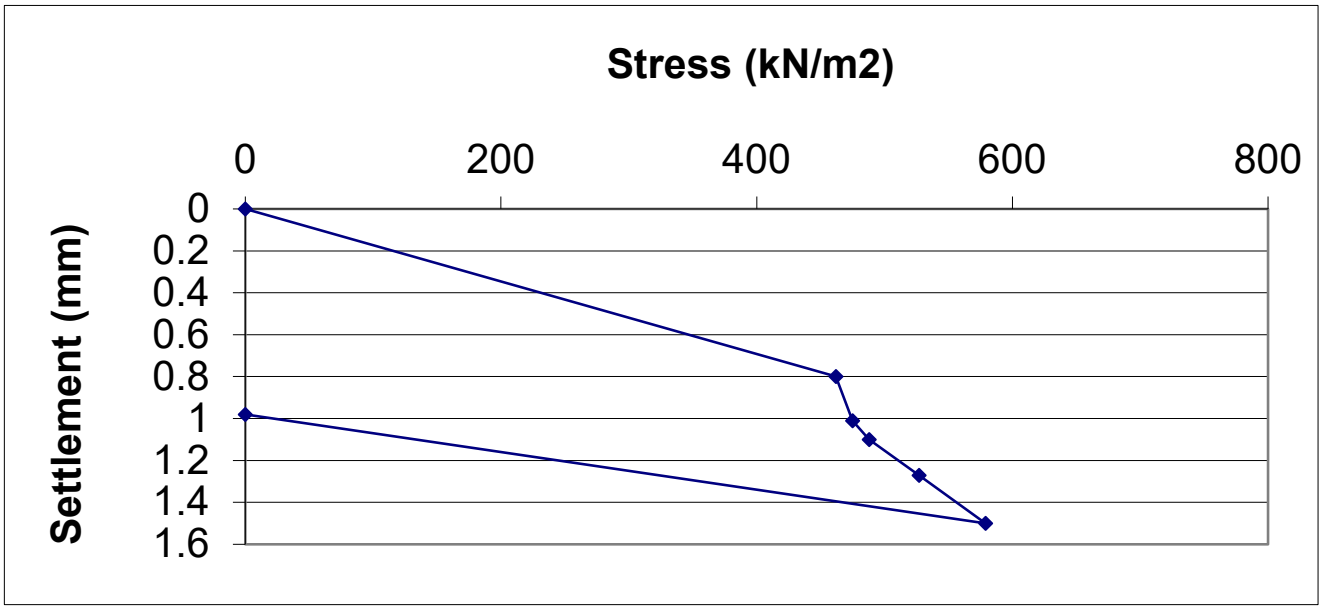
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-11	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Stony Gravely Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	5		
Location*:	CBR 6		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-11

Stress (kN/m^2)	Settlement (mm)
0	0
462	0.8
475	1.01
488	1.10
527	1.27
579	1.50
0	0.98



K Value (kN/m^2/mm)	184.6
Estimated CBR value	82%

Comments/Deviations:

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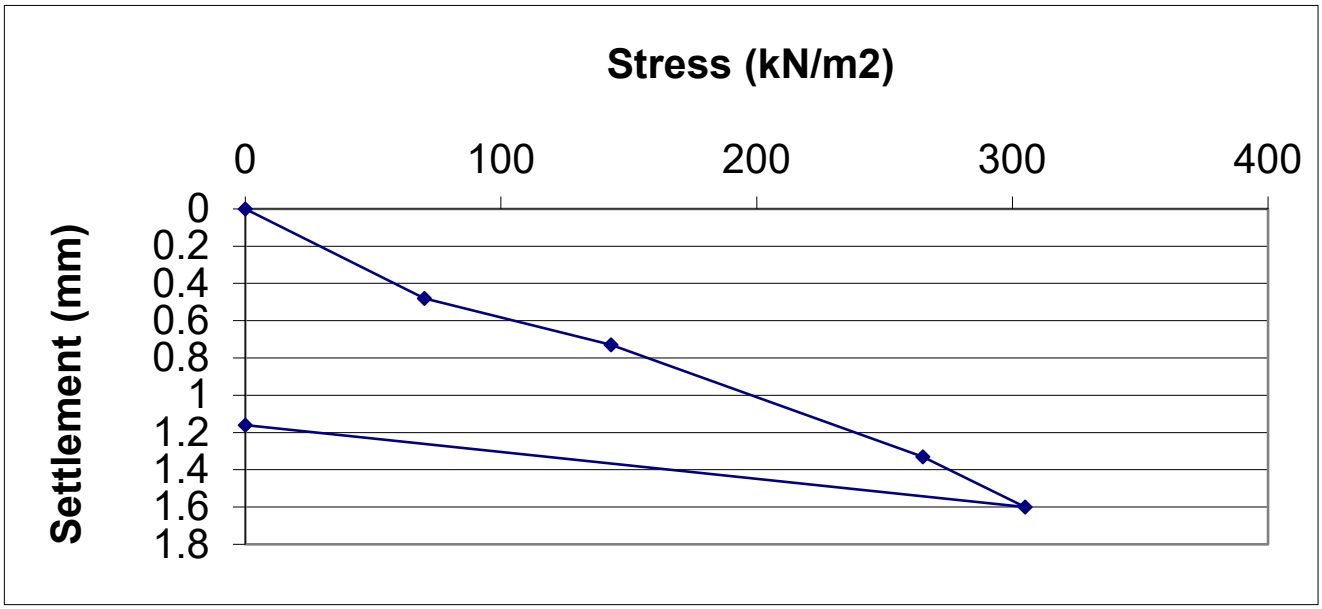
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-12	Report Date:	02/04/2026.
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Brick / Gravel		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	6		
Location*:	CBR 6		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-12

Stress (kN/m^2)	Settlement (mm)
0	0
70	0.48
143	0.73
265	1.33
305	1.60
0	1.16



K Value (kN/m^2/mm)	87.9
Estimated CBR value	23%

Comments/Deviations:

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Results relate only to the location tested.

* Information supplied by client.

Sign [redacted]

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CONSTRUCTION TESTING

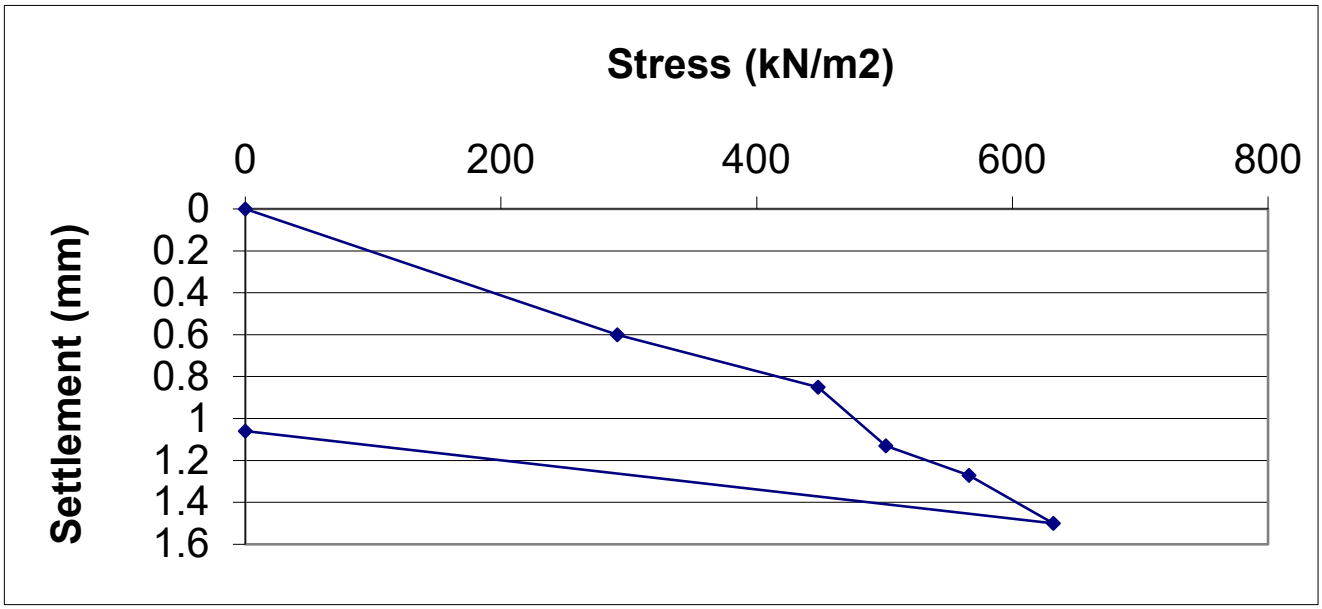
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-13	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Brick and Gravel		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	7		
Location*:	CBR 7		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-13

Stress (kN/m^2)	Settlement (mm)
0	0
291	0.6
448	0.85
501	1.13
566	1.27
632	1.50
0	1.06



K Value (kN/m^2/mm)	196.7
Estimated CBR value	91%

Comments/Deviations:

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Signed [redacted]

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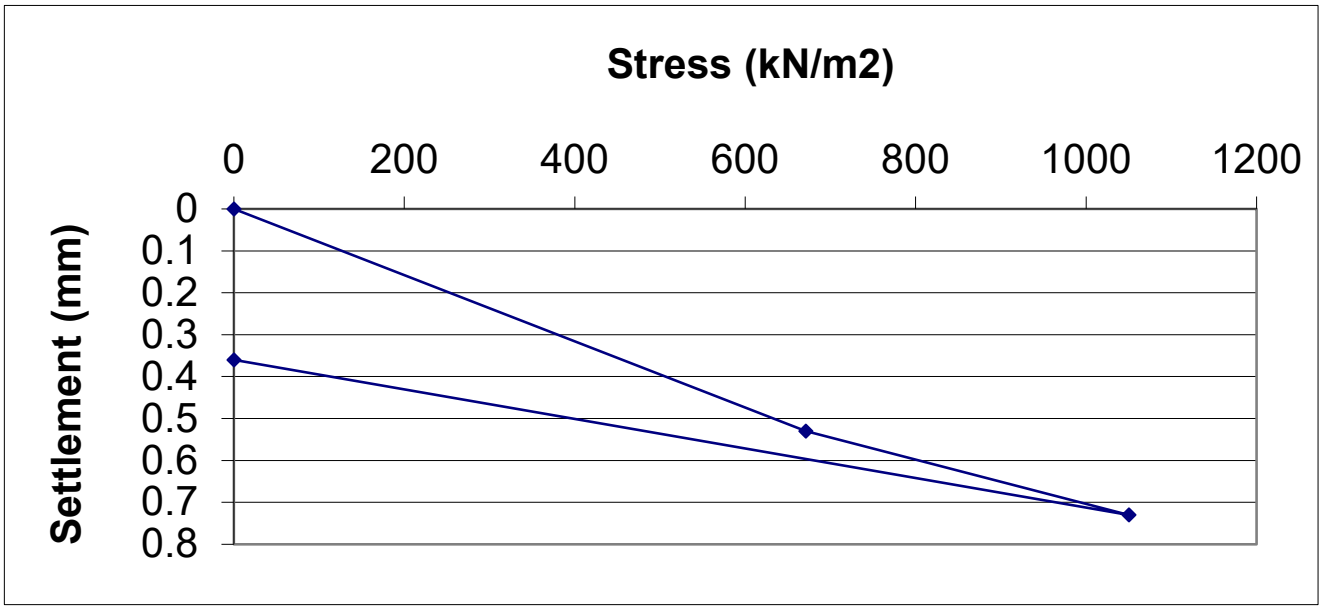
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-14	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Stone and Gravely Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	8		
Location*:	CBR 7		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:	Test ended @1050kN/,2 due to reaching maximum capacity of the Jack		

Test Report No.: TD26-I-04-A-14

Stress (kN/m^2)	Settlement (mm)
0	0
671	0.53
1050	0.73
0	0.36



K Value (kN/m^2/mm)	371
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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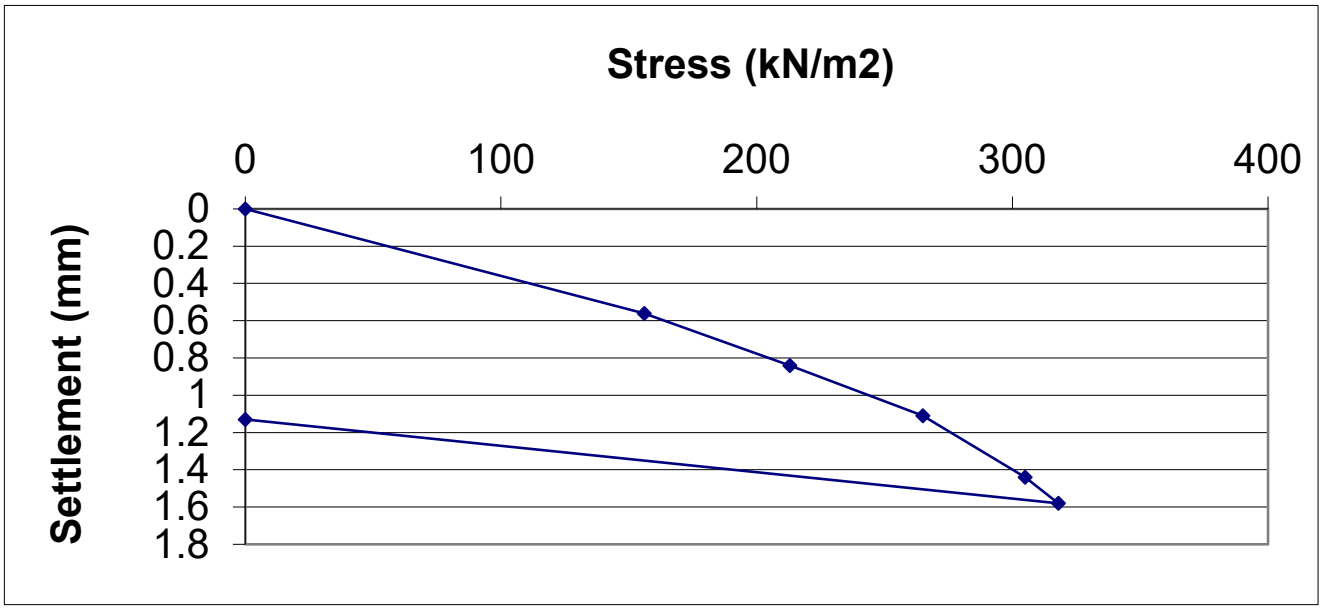
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-15	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Brown Stony Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	9		
Location*:	CBR 8		
Test Level:	-0.5 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-15

Stress (kN/m^2)	Settlement (mm)
0	0
156	0.56
213	0.84
265	1.11
305	1.44
318	1.58
0	1.13



K Value (kN/m^2/mm)	99.6
Estimated CBR value	28%

Comments/Deviations:

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Signed [redacted]

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CONSTRUCTION TESTING

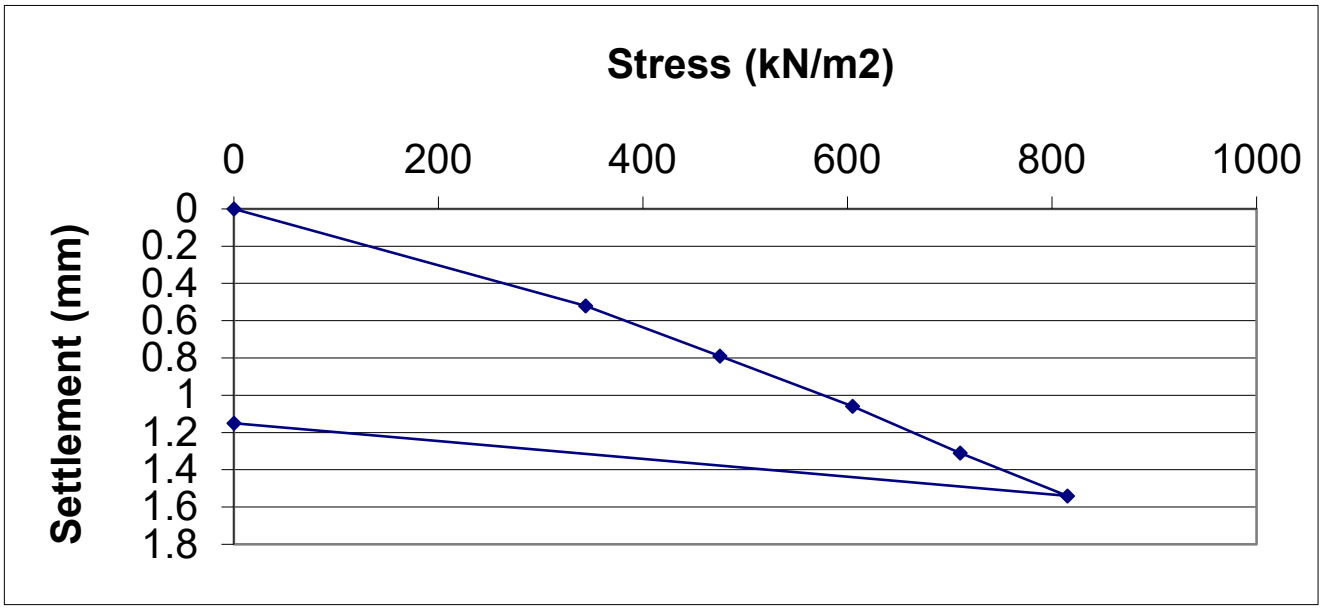
TEST REPORT

Plate Loading Test

Test Report No.:	TD26-I-04-A-16	Report Date:	02/04/2026
Client:	IGE Consulting		
Address:	Bartle House, Oxford Court, Manchester, M2 3WQ		
Contact:	Luke Griffith		
Site:	Etihad Campus, Manchester		
Test Requested:	**Plate Loading Test to obtain Approximate CBR value**		
Test Method:	Design Guidance for Road Pavement Foundations (Draft HD25) Interim Advice Note 73/06 Revision 1 (2009)		
Material*:	Crushed Brick Stony Clay		
Supplier/Source*:	Client / Site Won		
Moisture Content %:	N/R		
Test Number:	10		
Location*:	CBR 8		
Test Level:	-1.0 BGL		
Plate Size mm:	300		
Date Tested:	31/03/2026		
Weather Conditions:	Overcast		
Tested By:	Ste Dodd		
Kentledge Type:	Excavator		
Comments:			

Test Report No.: TD26-I-04-A-16

Stress (kN/m^2)	Settlement (mm)
0	0
344	0.52
475	0.79
605	1.06
710	1.31
815	1.54
0	1.15



K Value (kN/m^2/mm)	242
Estimated CBR value	Exceeds 100%

Comments/Deviations:

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* Information supplied client.

Signe [redacted]	A. Hayes (Site Section Manager)

APPENDIX 7

GEOTECHNICAL LABORATORY TEST RESULTS

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client IGE Consulting Ltd

Address Office 16
Bartle House
Oxford Court
Manchester
M2 3WQ

Contract MCFC

Job Number MRN 26041/26
Date of Issue 22 April 2026
Page 1 of 23

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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ANDREW HOUSE, HADFIELD STREET,
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TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

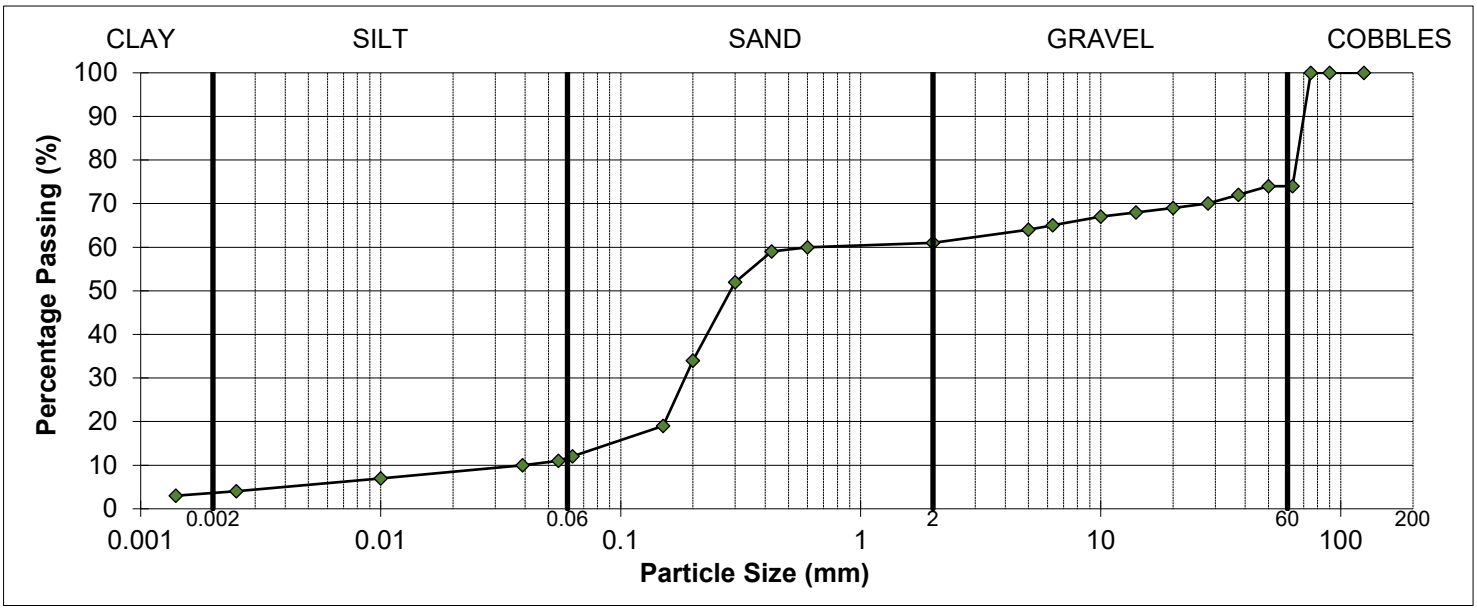
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP02 1.2-1.65m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073206	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown clayey very gravelly SAND		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	17.9

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	61	
90	100		0.6	60	
75	100		0.425	59	
63	74		0.3	52	
50	74		0.2	34	
37.5	72		0.15	19	
28	70		0.063	12	
20	69		0.055	11	
14	68		0.039	10	
10	67		0.01	7	
6.3	65		0.0025	4	
5	64		0.0014	3	



SOIL FRACTIONS			
GRAVEL	13%	SILT	8%
SAND	49%	CLAY	4%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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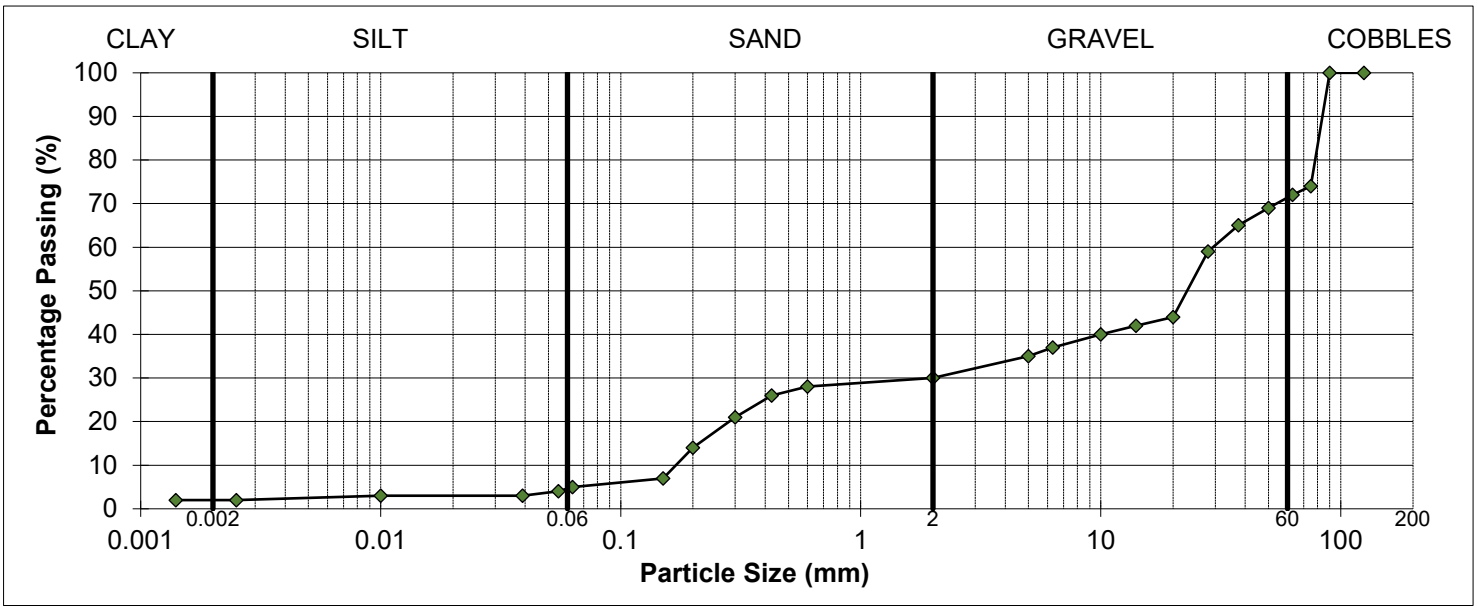
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP302 1.6m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073207	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown clayey very sandy GRAVEL		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	18.3

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	30	
90	100		0.6	28	
75	74		0.425	26	
63	72		0.3	21	
50	69		0.2	14	
37.5	65		0.15	7	
28	59		0.063	5	
20	44		0.055	4	
14	42		0.039	3	
10	40		0.01	3	
6.3	37		0.0025	2	
5	35		0.0014	2	



SOIL FRACTIONS			
GRAVEL	42%	SILT	3%
SAND	25%	CLAY	2%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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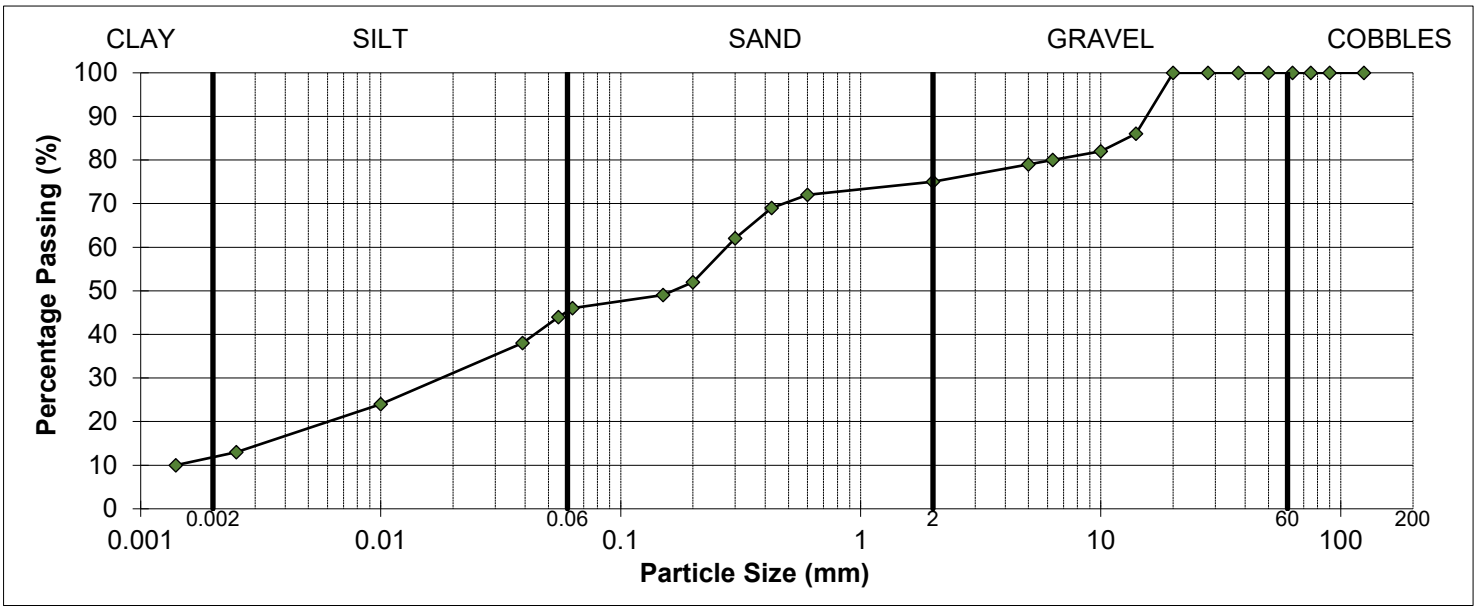
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP302 2.7m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073208	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	15.7

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	75	
90	100		0.6	72	
75	100		0.425	69	
63	100		0.3	62	
50	100		0.2	52	
37.5	100		0.15	49	
28	100		0.063	46	
20	100		0.055	44	
14	86		0.039	38	
10	82		0.01	24	
6.3	80		0.0025	13	
5	79		0.0014	10	



SOIL FRACTIONS			
GRAVEL	25%	SILT	34%
SAND	29%	CLAY	12%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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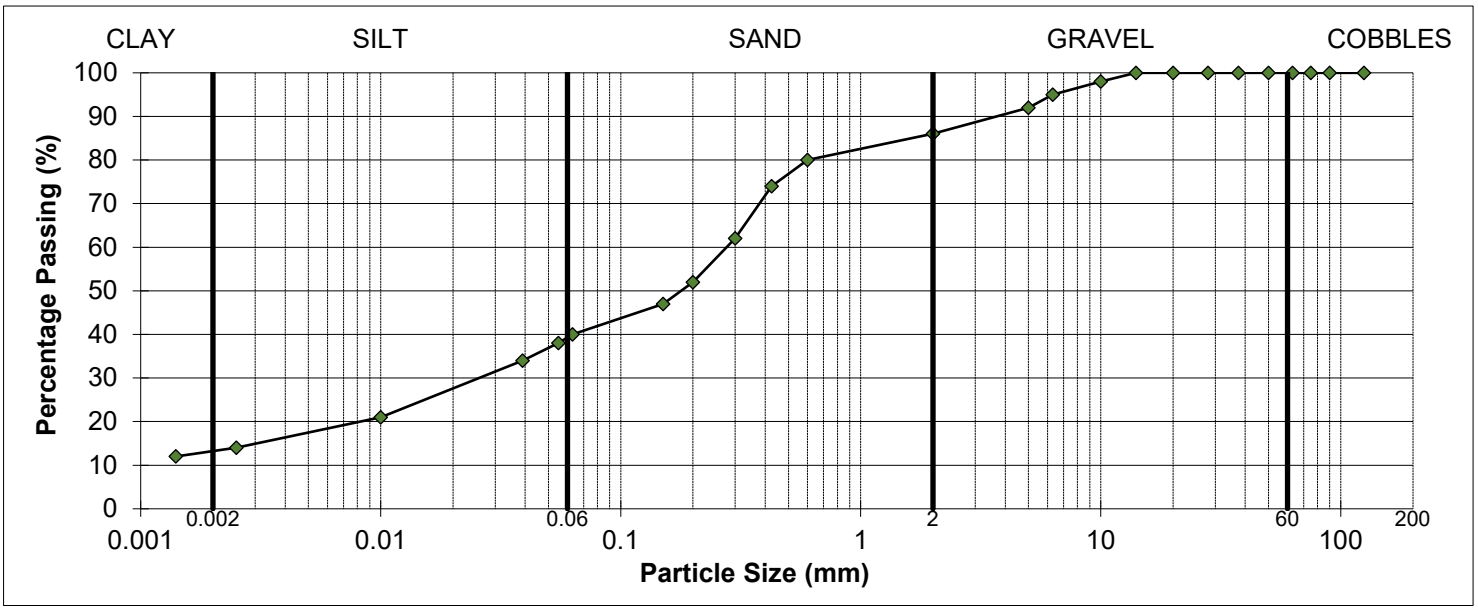
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP303 4.5m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073209	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	16.7

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	86	
90	100		0.6	80	
75	100		0.425	74	
63	100		0.3	62	
50	100		0.2	52	
37.5	100		0.15	47	
28	100		0.063	40	
20	100		0.055	38	
14	100		0.039	34	
10	98		0.01	21	
6.3	95		0.0025	14	
5	92		0.0014	12	



SOIL FRACTIONS			
GRAVEL	14%	SILT	27%
SAND	46%	CLAY	13%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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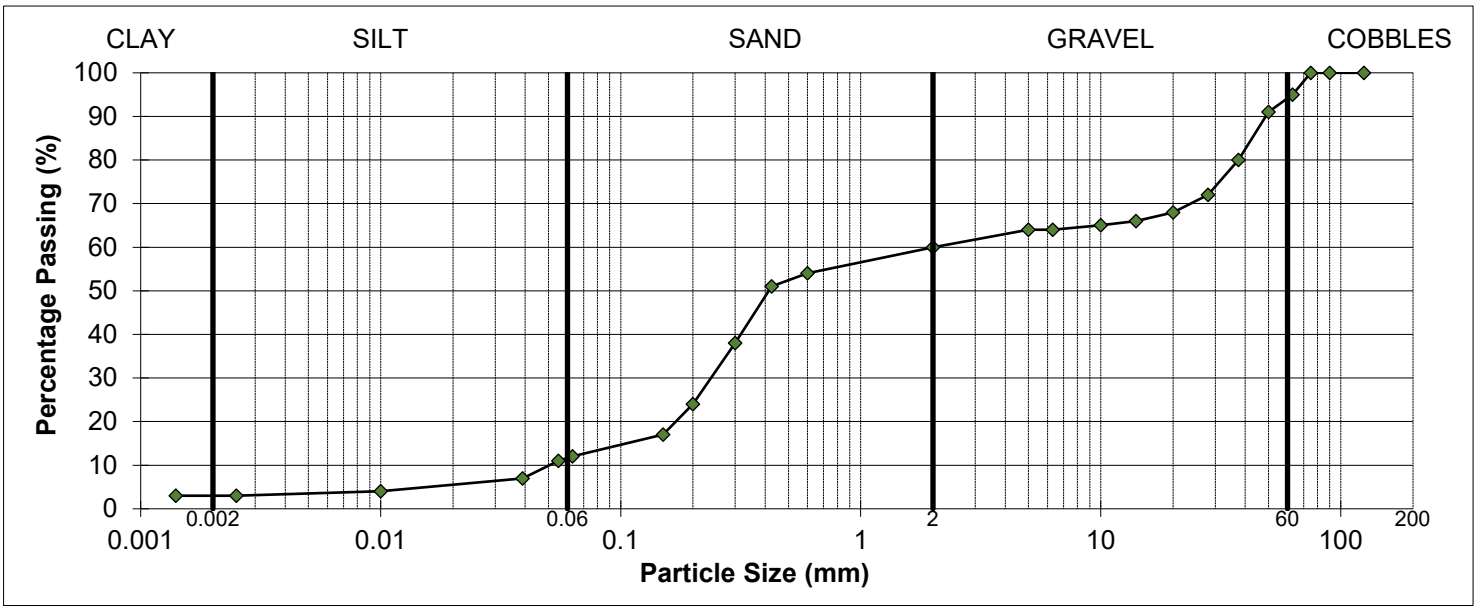
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP305 1.6m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073210	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown clayey very gravelly SAND		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	17.1

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	60	
90	100		0.6	54	
75	100		0.425	51	
63	95		0.3	38	
50	91		0.2	24	
37.5	80		0.15	17	
28	72		0.063	12	
20	68		0.055	11	
14	66		0.039	7	
10	65		0.01	4	
6.3	64		0.0025	3	
5	64		0.0014	3	



SOIL FRACTIONS			
GRAVEL	35%	SILT	9%
SAND	48%	CLAY	3%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
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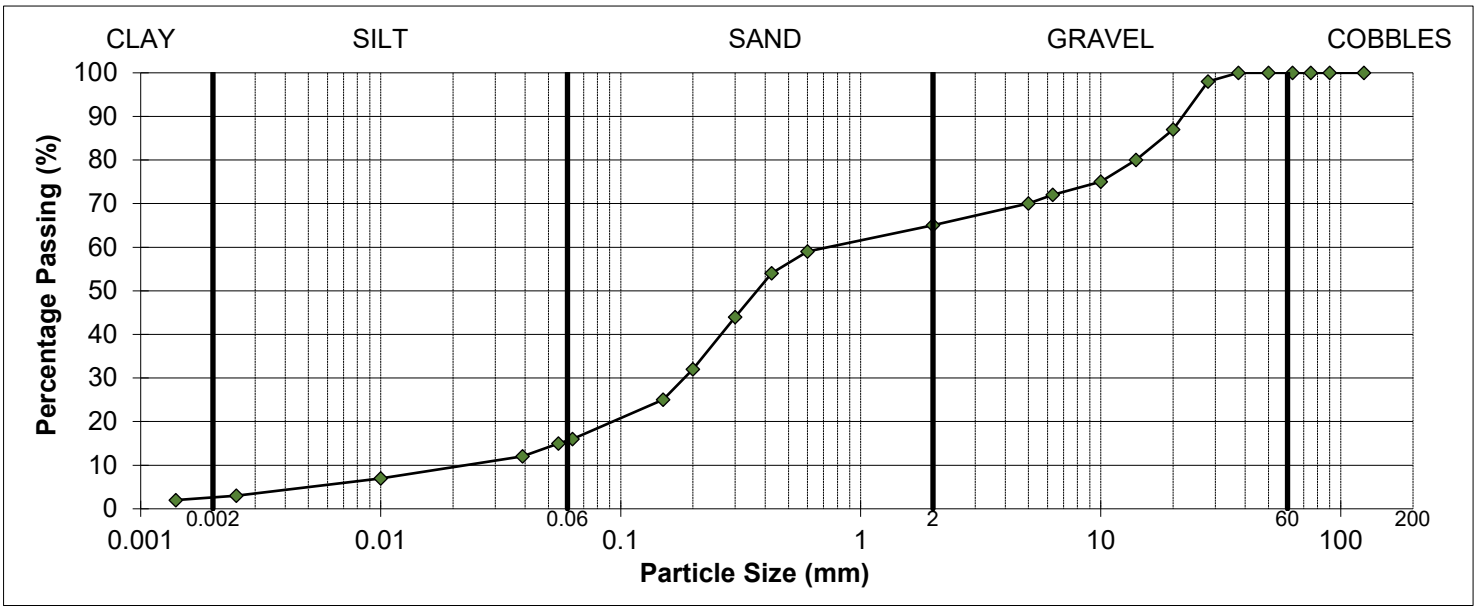
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP307 2.0m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073212	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown clayey very gravelly SAND		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	20.2

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	65	
90	100		0.6	59	
75	100		0.425	54	
63	100		0.3	44	
50	100		0.2	32	
37.5	100		0.15	25	
28	98		0.063	16	
20	87		0.055	15	
14	80		0.039	12	
10	75		0.01	7	
6.3	72		0.0025	3	
5	70		0.0014	2	



SOIL FRACTIONS			
GRAVEL	35%	SILT	13%
SAND	49%	CLAY	3%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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PARTICLE SIZE DISTRIBUTION

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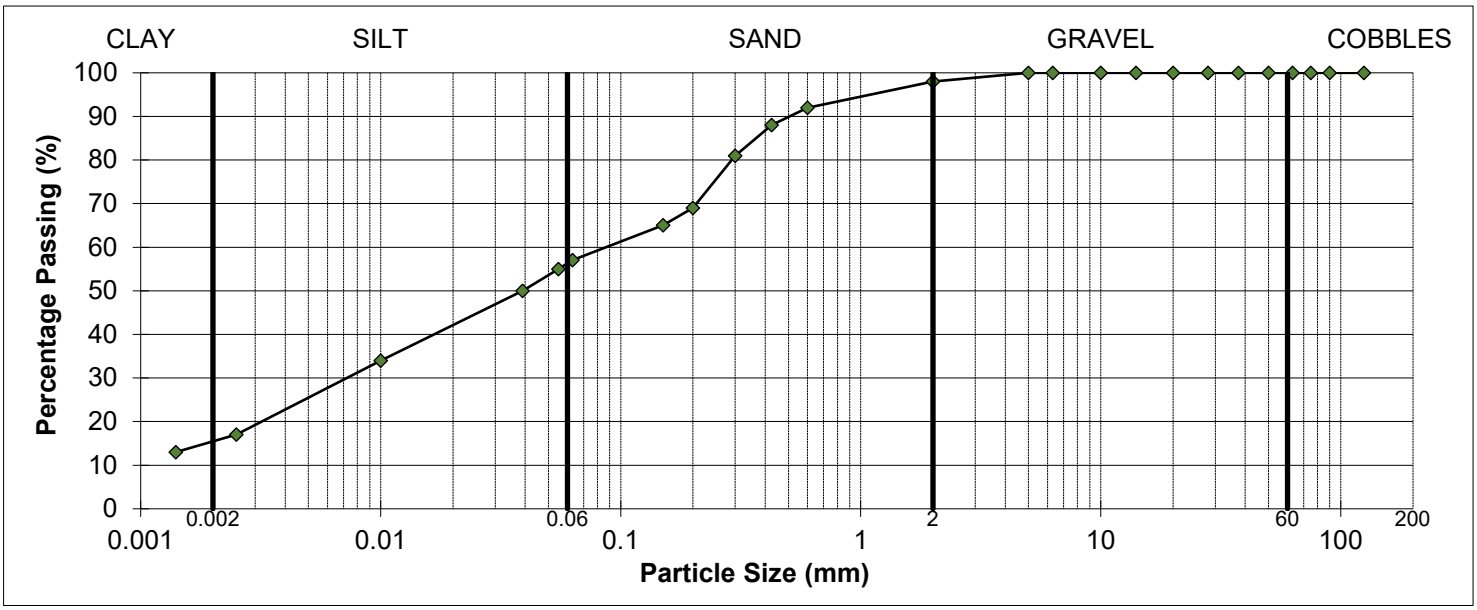
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP310 2.4m	DATE SAMPLED	01-Apr-26
LAB SAMPLE No	6073214	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	AS RECEIVED WATER CONTENT (%)	23.5

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	98	
90	100		0.6	92	
75	100		0.425	88	
63	100		0.3	81	
50	100		0.2	69	
37.5	100		0.15	65	
28	100		0.063	57	
20	100		0.055	55	
14	100		0.039	50	
10	100		0.01	34	
6.3	100		0.0025	17	
5	100		0.0014	13	



SOIL FRACTIONS			
GRAVEL	2%	SILT	42%
SAND	41%	CLAY	15%

REMARKS

SIGNED [redacted]

NAME [redacted]vies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

MURRAY RIX

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TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

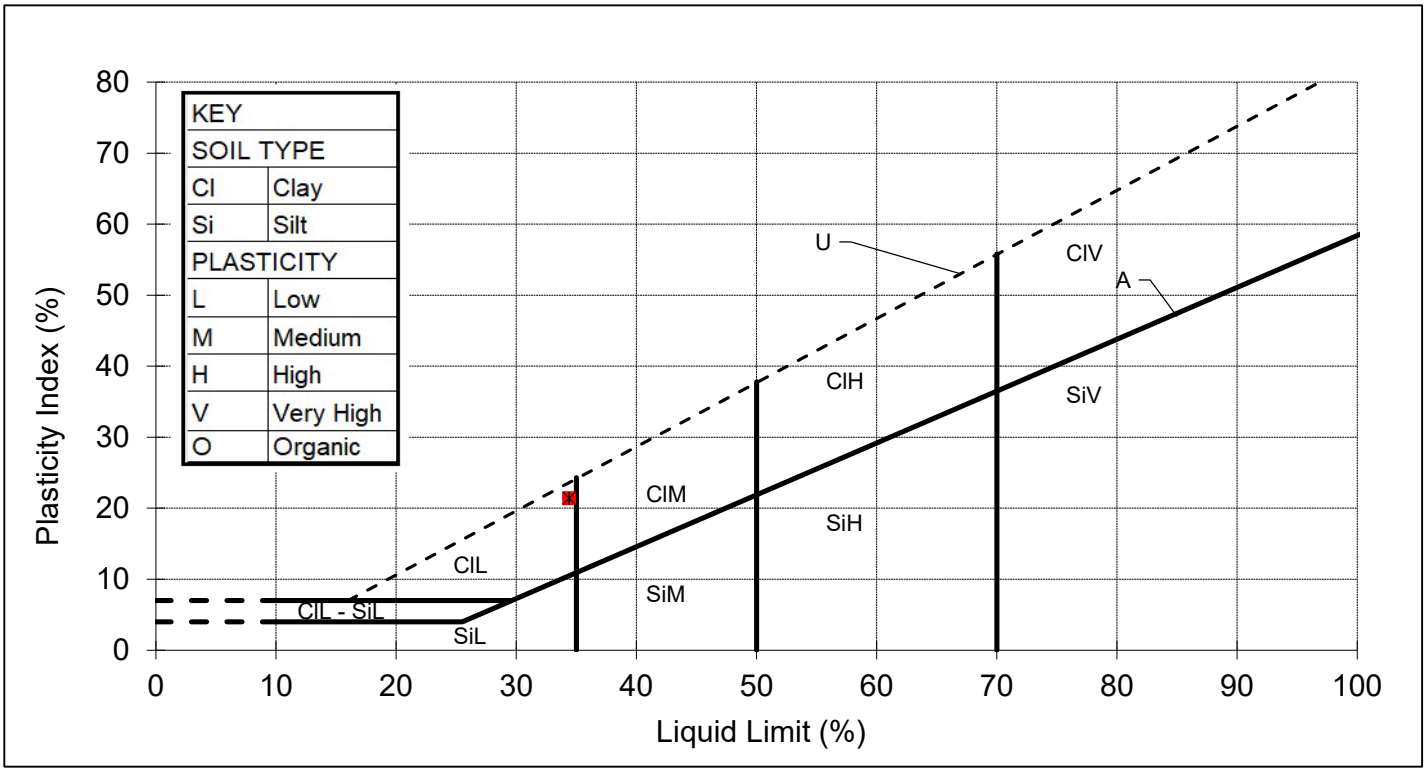
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 4.0-4.45m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073201	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.5	34.2	1.008	
Determination 2 (avg)	19.5	34.1		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.1	34	13	21	86



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

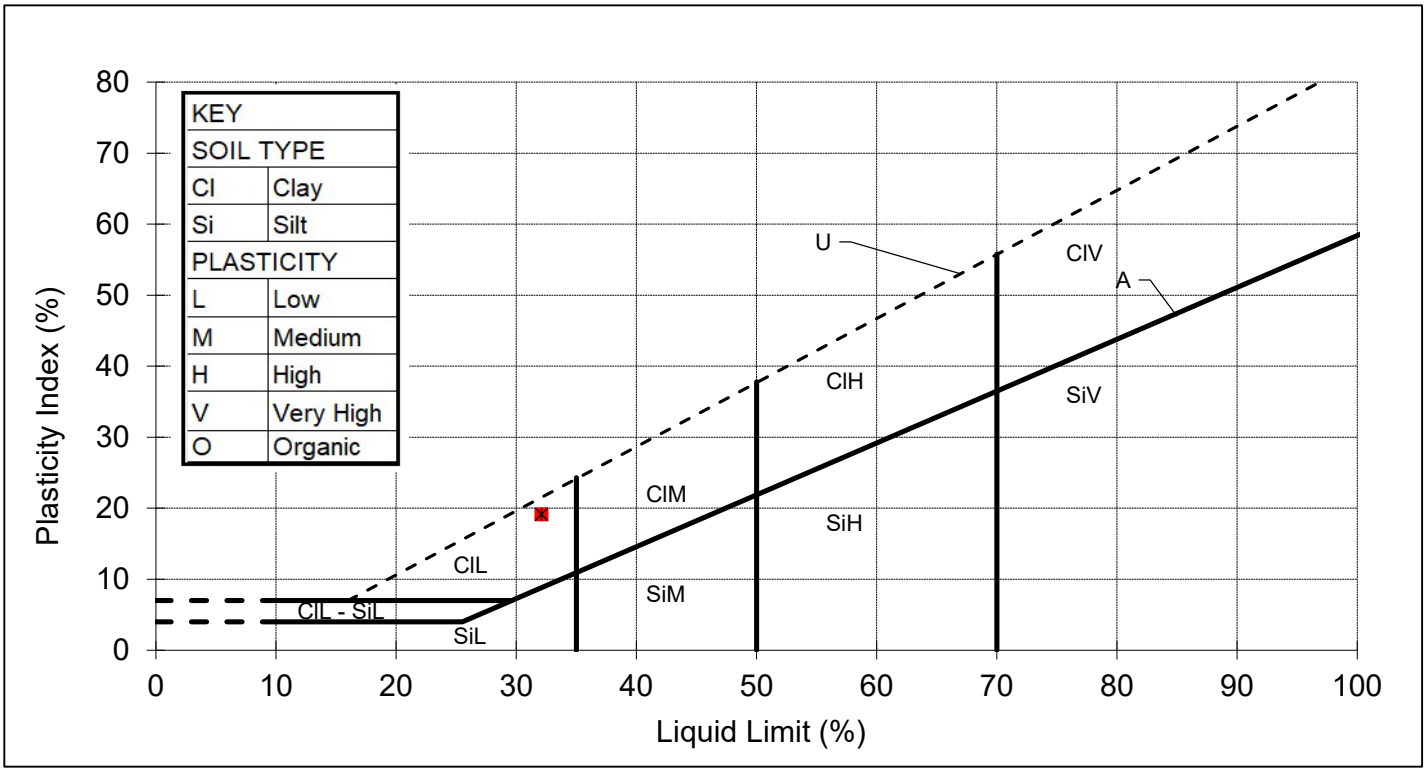
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 9.0-9.45m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073202	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.0	32.2	1.000	
Determination 2 (avg)	20.0	32.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.2	32	13	19	91



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
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TEST CERTIFICATE

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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

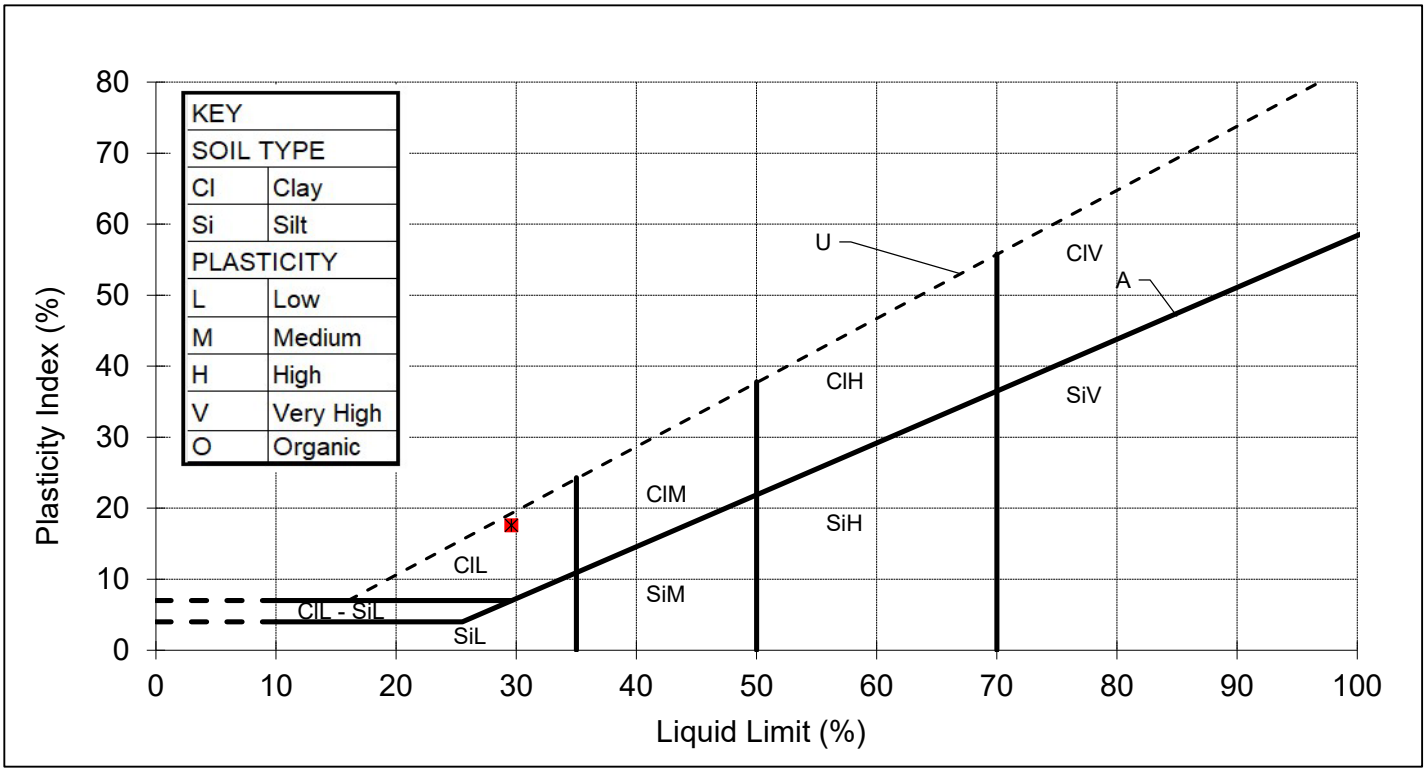
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 12.0-12.45m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073203	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.1	29.6	1.002	
Determination 2 (avg)	19.7	29.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
10.3	30	12	18	82



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
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TEST CERTIFICATE

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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

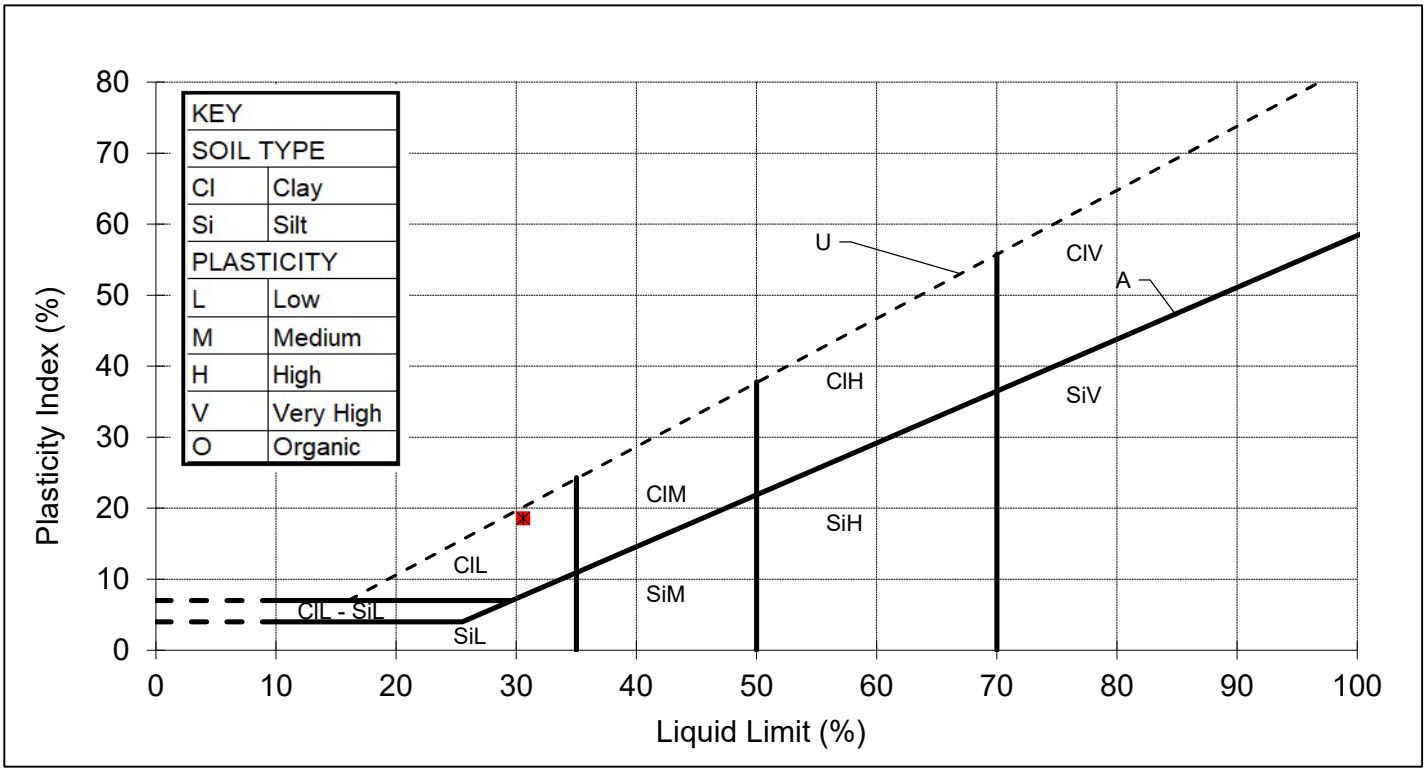
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP302 7.0-7.45m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073204	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	18.5	29.9	1.023	
Determination 2 (avg)	18.5	29.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.8	31	12	19	90



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) (Director / Head of Laboratory) DATE 22-Apr-26

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TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

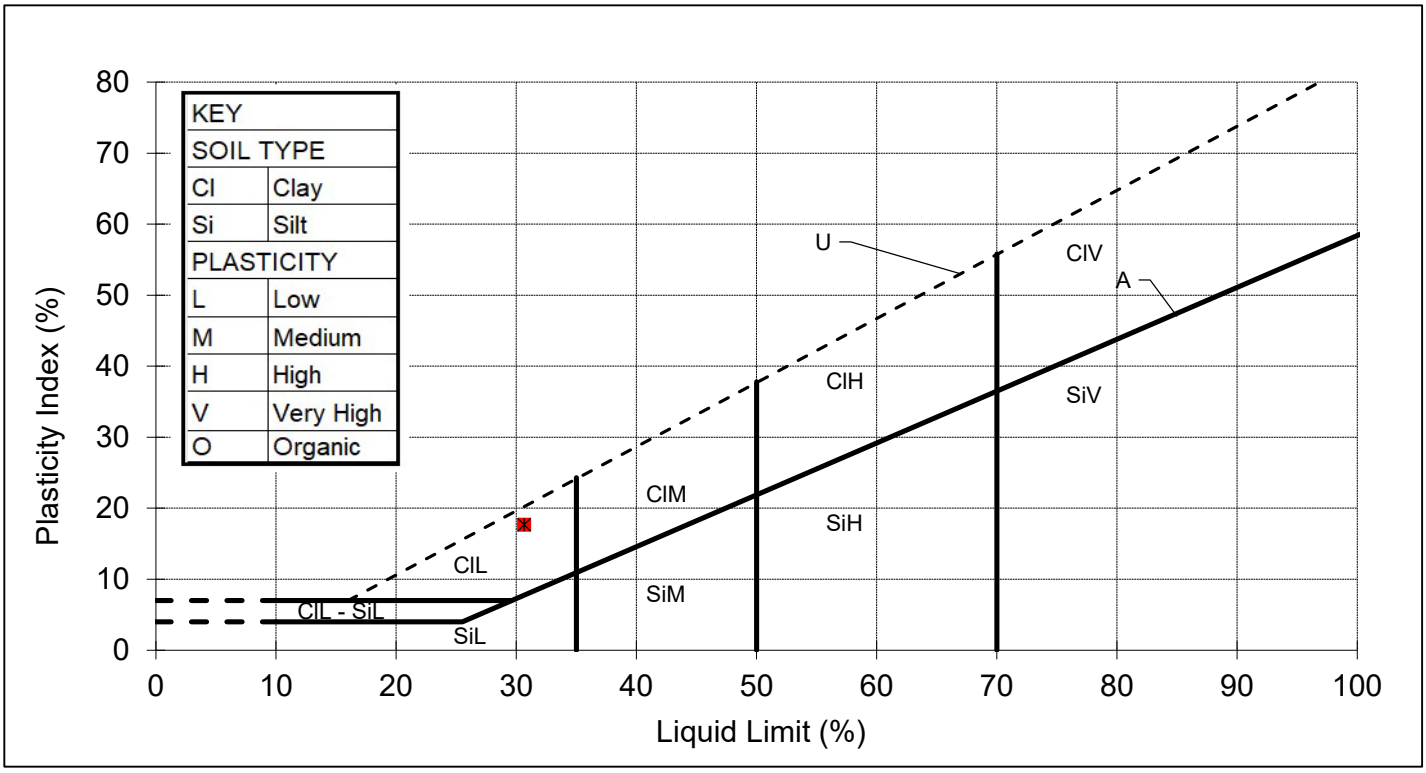
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP302 13.5-13.95m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073205	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	21.1	31.1	0.983	
Determination 2 (avg)	21.1	31.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
12.9	31	13	18	87



REMARKS

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TEST CERTIFICATE

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PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

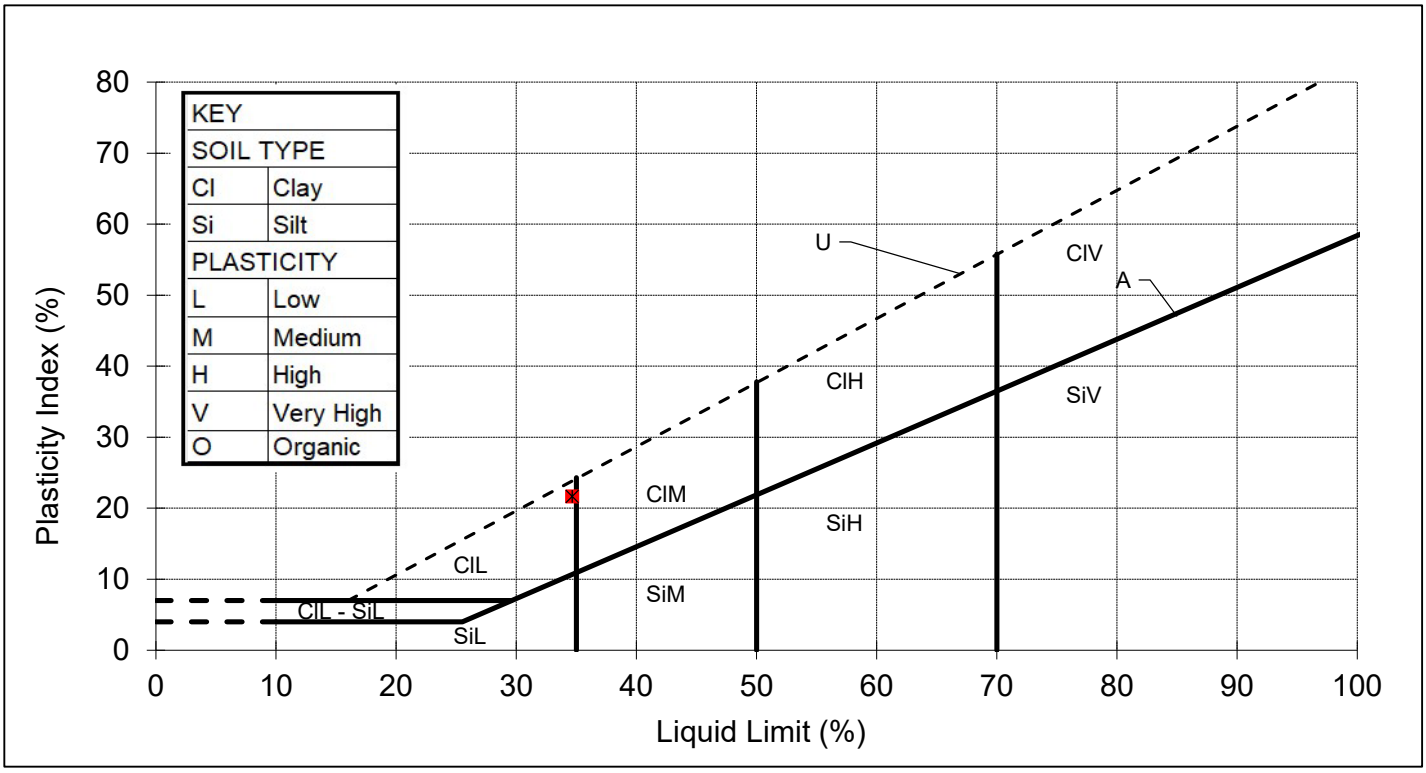
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP302 2.7m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073208	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.2	34.2	1.012	
Determination 2 (avg)	19.2	34.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15.7	35	13	22	69



REMARKS

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UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

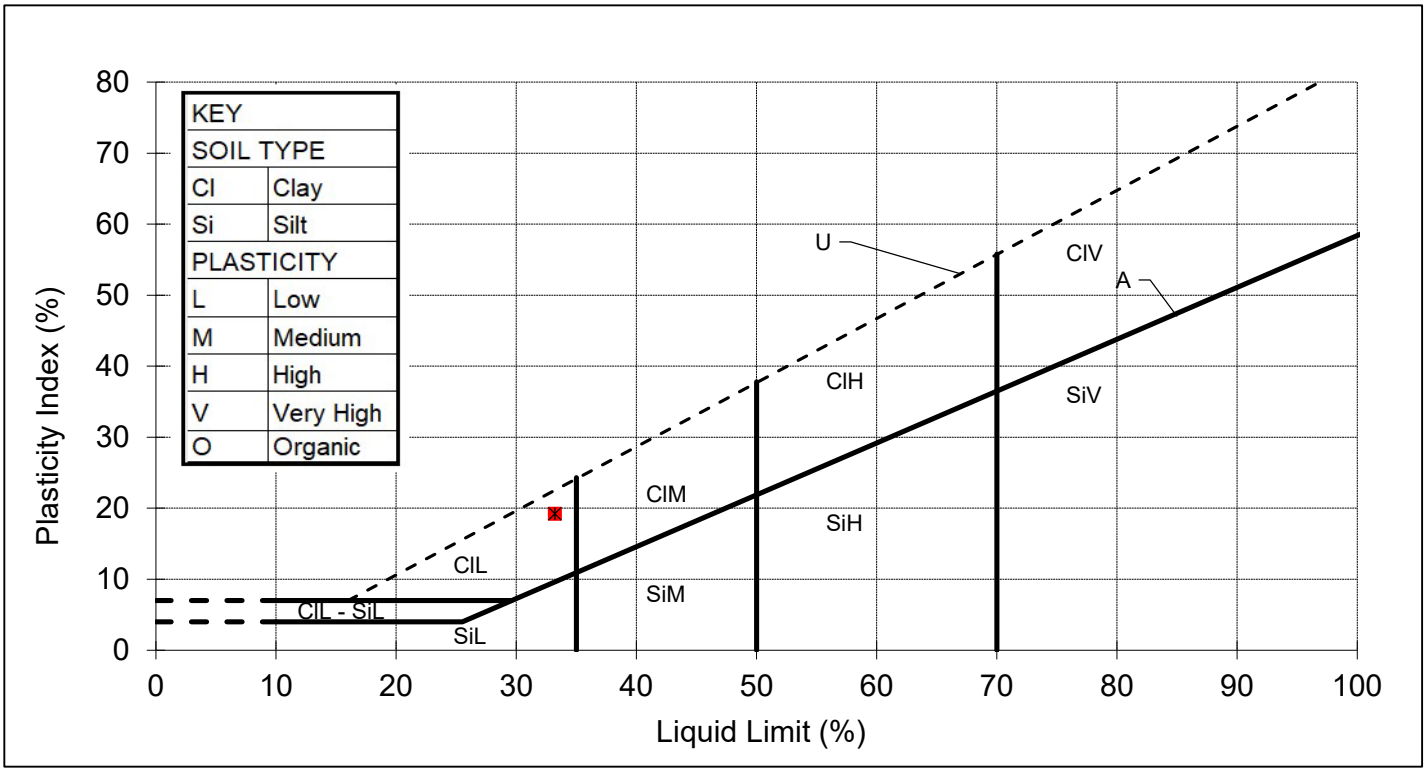
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP303 4.5m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073209	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.9	33.2	1.002	
Determination 2 (avg)	19.9	33.1		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16.7	33	14	19	74



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
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TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

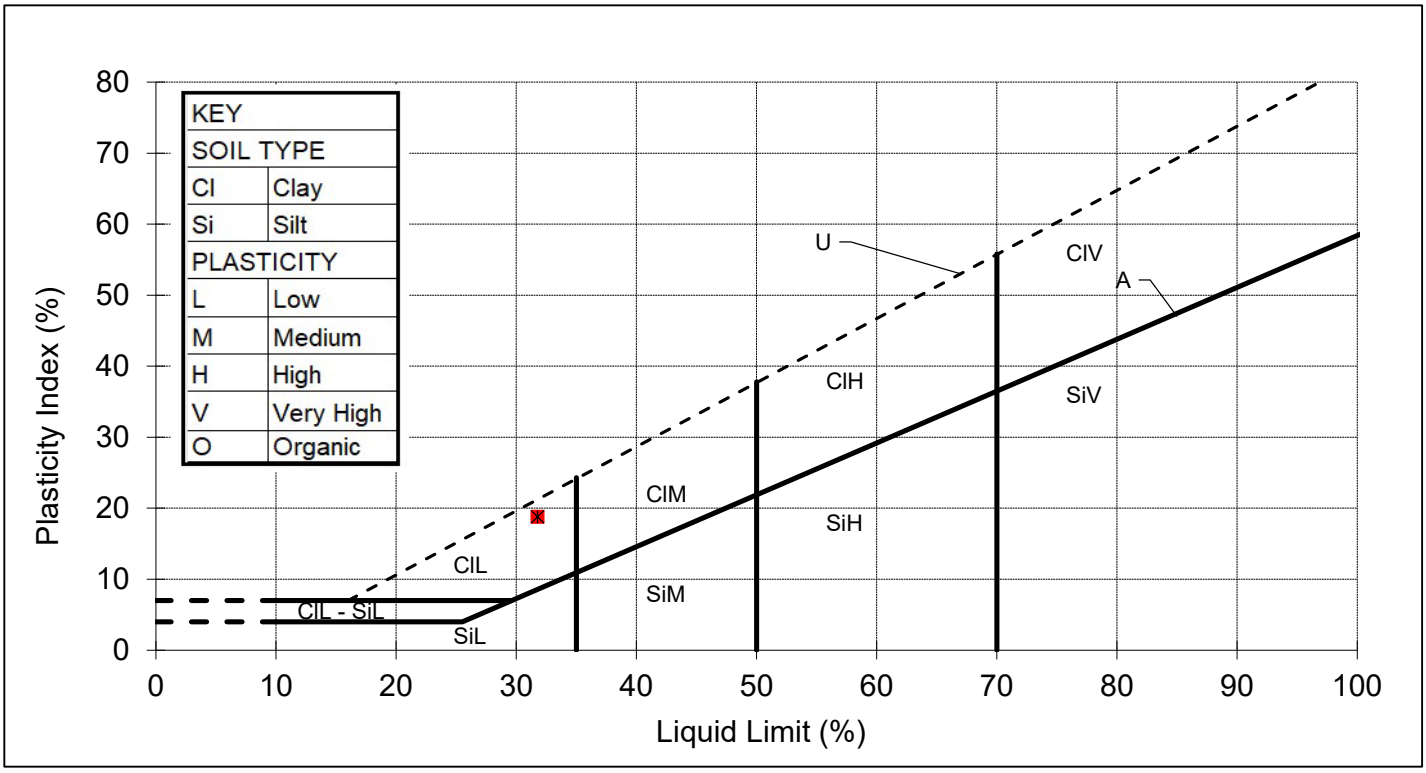
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP305 2.6m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073211	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.8	32.2	0.988	
Determination 2 (avg)	20.7	32.1		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.5	32	13	19	81



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
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TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

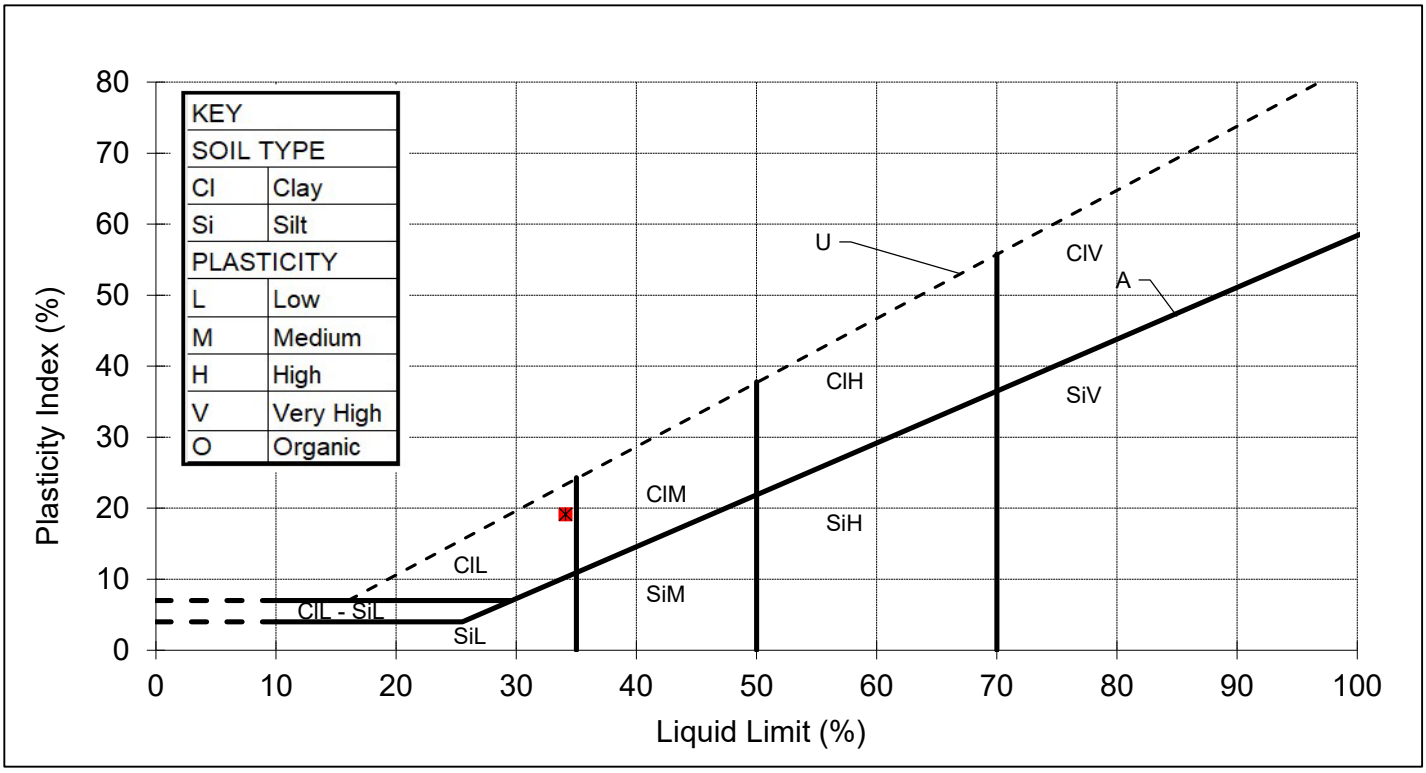
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP309 4.2m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073213	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.1	35.1	0.972	
Determination 2 (avg)	21.8	35.1		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21.3	34	15	19	79



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A1:2021 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

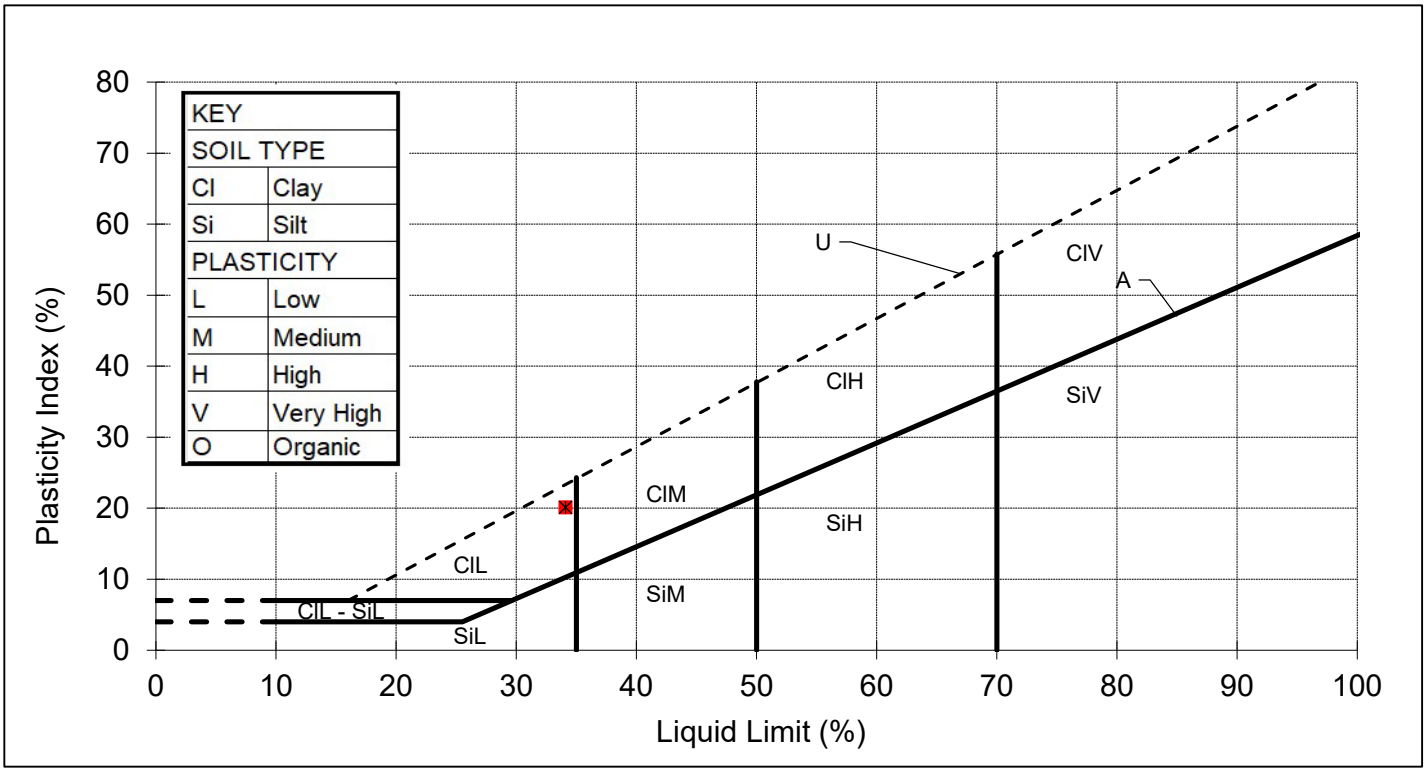
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	TP310 2.4m	DATE SAMPLED	01-Apr-26
SAMPLE No.	6073214	DATE RECEIVED	08-Apr-26
DATE TESTED	14-Apr-26	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
PRE TREATMENT	As received	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Water Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	17.2	32.8	1.038	
Determination 2 (avg)	17.5	32.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23.5	34	14	20	88



REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) DATE 22-Apr-26
(Director / Head of Laboratory)

MURRAY RIX

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UKAS TESTING 1580

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

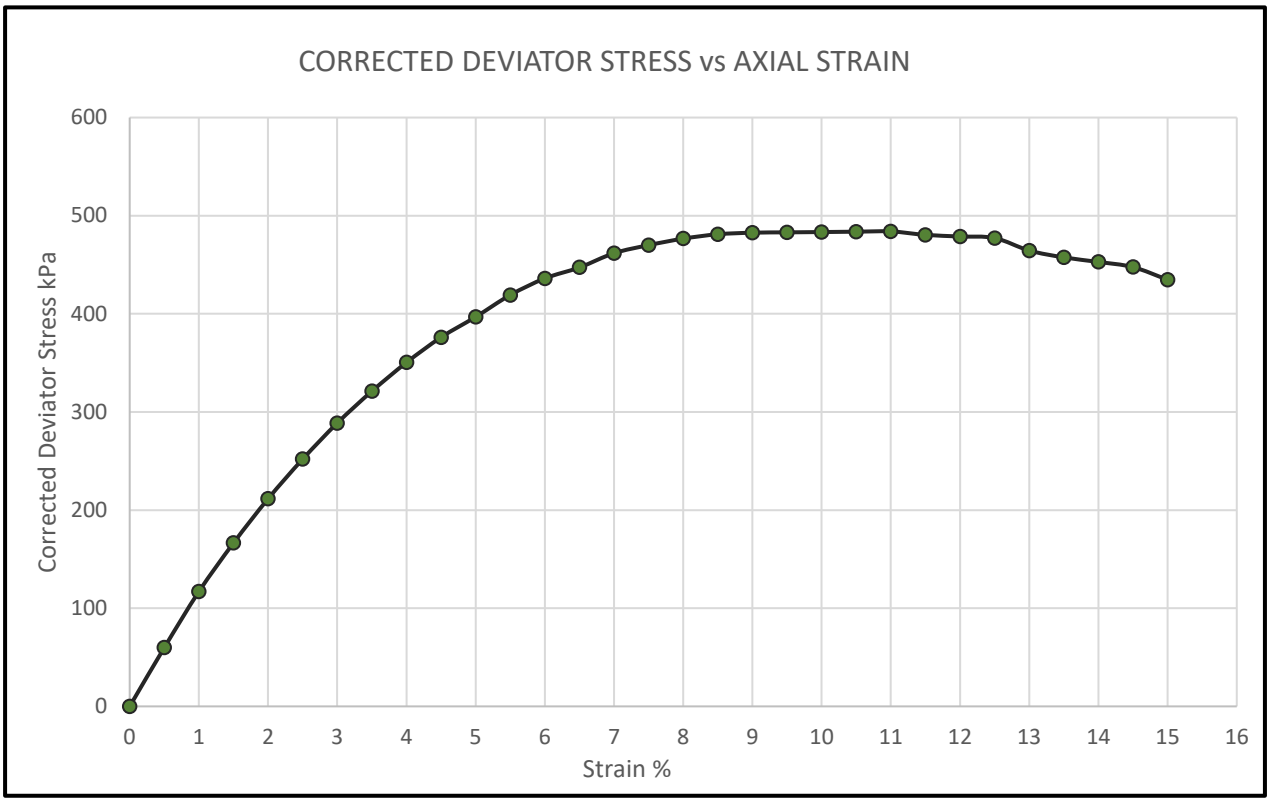
BS EN ISO 17892-8:2018

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 4.0-4.45m	**DATE SAMPLED**	01-Apr-26
LAB SAMPLE No.	6073201	**DATE RECEIVED**	08-Apr-26
DATE TESTED	14-Apr-26	**SAMPLED BY**	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

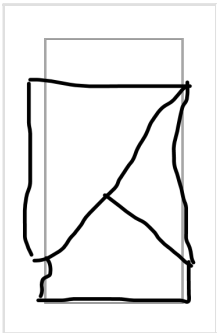
INITIAL CONDITIONS

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	55
	Sample Orientation	Vertical	Specimen Condition	Undisturbed
	Specimen Length (mm)	203	Specimen Water Content (%)	12.1
	Specimen Diameter (mm)	102	Specimen Bulk Density (Mg/m3)	2.26
	Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	2.02
	Membrane Correction	3.40		



TEST TYPE
SINGLE STAGE

SKETCH OF SPECIMEN AT FAILURE



COMPLEX_SHEAR

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
80	11.0	2.0	484	242

Remarks/Abnormalities

Name O.P. Davies BA (Hons)
(Director / Head of Laboratory)

Signed [redacted]

Date 22 April 2026

MURRAY RIX

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UKAS TESTING 1580

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

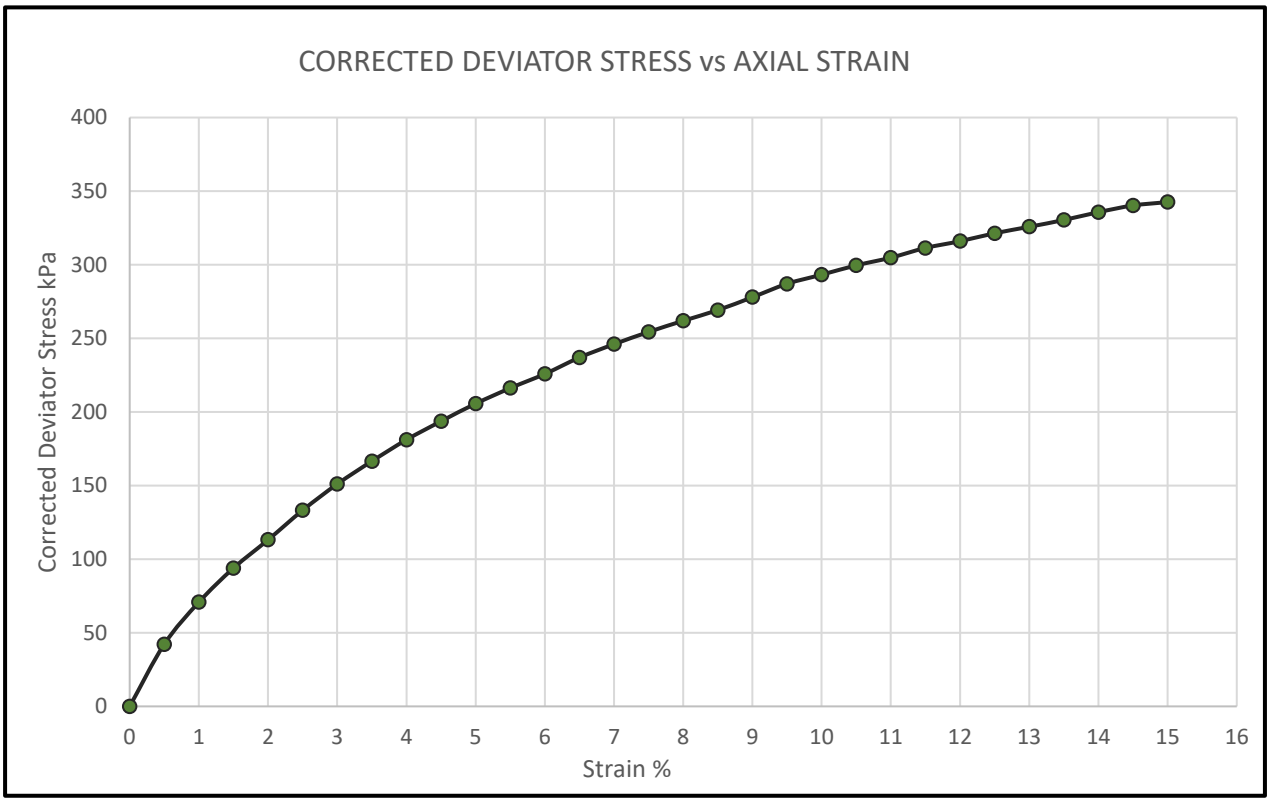
BS EN ISO 17892-8:2018

CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 9.0-9.45m	**DATE SAMPLED**	01-Apr-26
LAB SAMPLE No.	6073202	**DATE RECEIVED**	08-Apr-26
DATE TESTED	14-Apr-26	**SAMPLED BY**	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

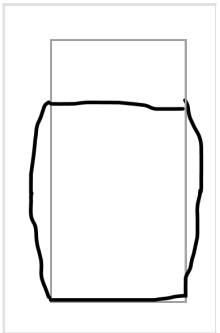
INITIAL CONDITIONS

Specimen Location	Sample Length (mm)	450	Specimen depth from top of Sample (mm)	61
	Sample Orientation	Vertical	Specimen Condition	Undisturbed
	Specimen Length (mm)	203	Specimen Water Content (%)	12.2
	Specimen Diameter (mm)	103	Specimen Bulk Density (Mg/m3)	2.25
	Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	2.01
	Membrane Correction	3.40		



TEST TYPE
SINGLE STAGE

SKETCH OF SPECIMEN AT FAILURE



PLASTIC

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
180	15.0	2.0	343	171

Remarks/Abnormalities

Name O.P. Davies BA (Hons)
(Director / Head of Laboratory)

Signed [redacted]

Date 22 April 2026

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
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UKAS TESTING 1580

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

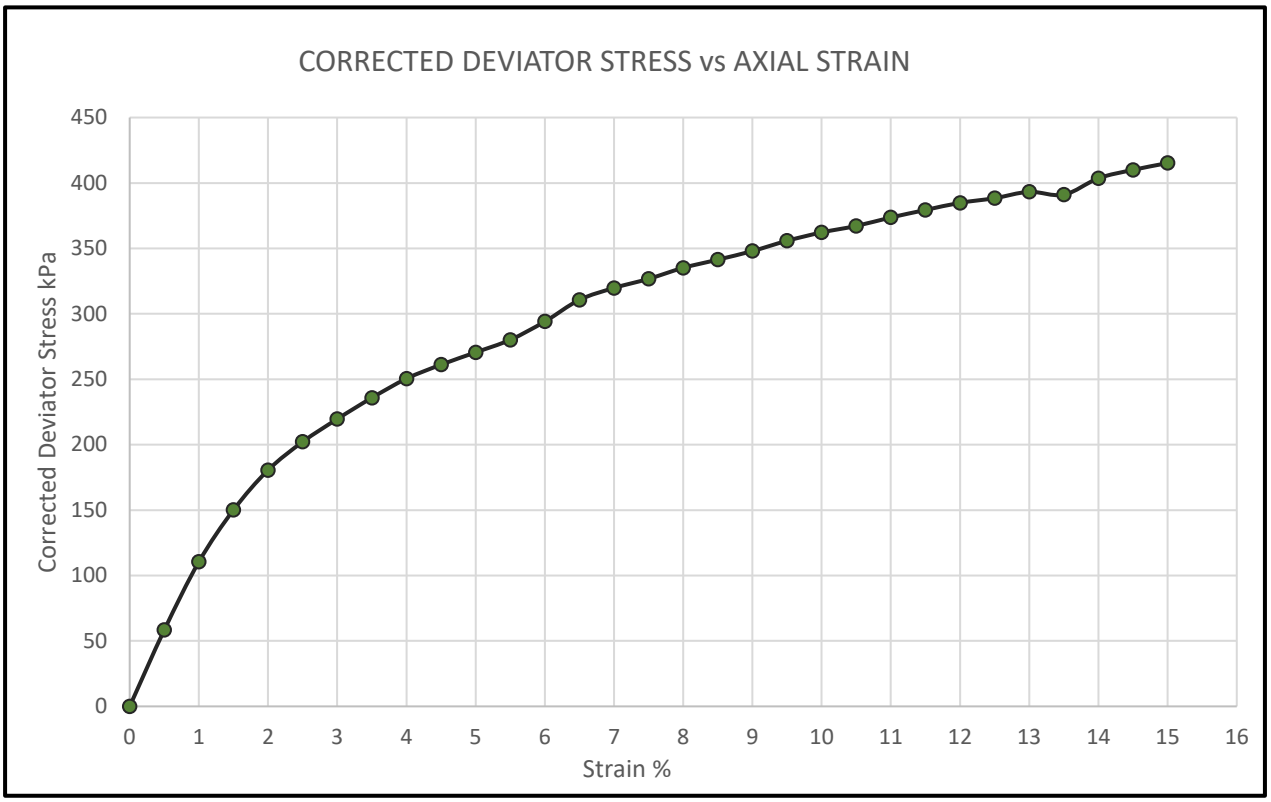
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP301 12.0-12.45m	**DATE SAMPLED**	01-Apr-26
LAB SAMPLE No.	6073203	**DATE RECEIVED**	08-Apr-26
DATE TESTED	14-Apr-26	**SAMPLED BY**	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

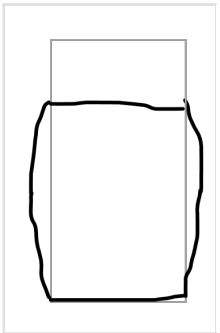
Specimen Location 

Sample Length (mm)	450	Specimen depth from top of Sample (mm)	34
Sample Orientation	Vertical	Specimen Condition	Undisturbed
Specimen Length (mm)	202	Specimen Water Content (%)	10.3
Specimen Diameter (mm)	102	Specimen Bulk Density (Mg/m3)	2.24
Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	2.03
Membrane Correction	3.40		



TEST TYPE
SINGLE STAGE

SKETCH OF SPECIMEN AT FAILURE



PLASTIC

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
240	15.0	2.0	415	208

Remarks/Abnormalities

Name O.P. Davies BA (Hons)
(Director / Head of Laboratory)

Signed [redacted]

Date 22 April 2026

MURRAY RIX

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TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

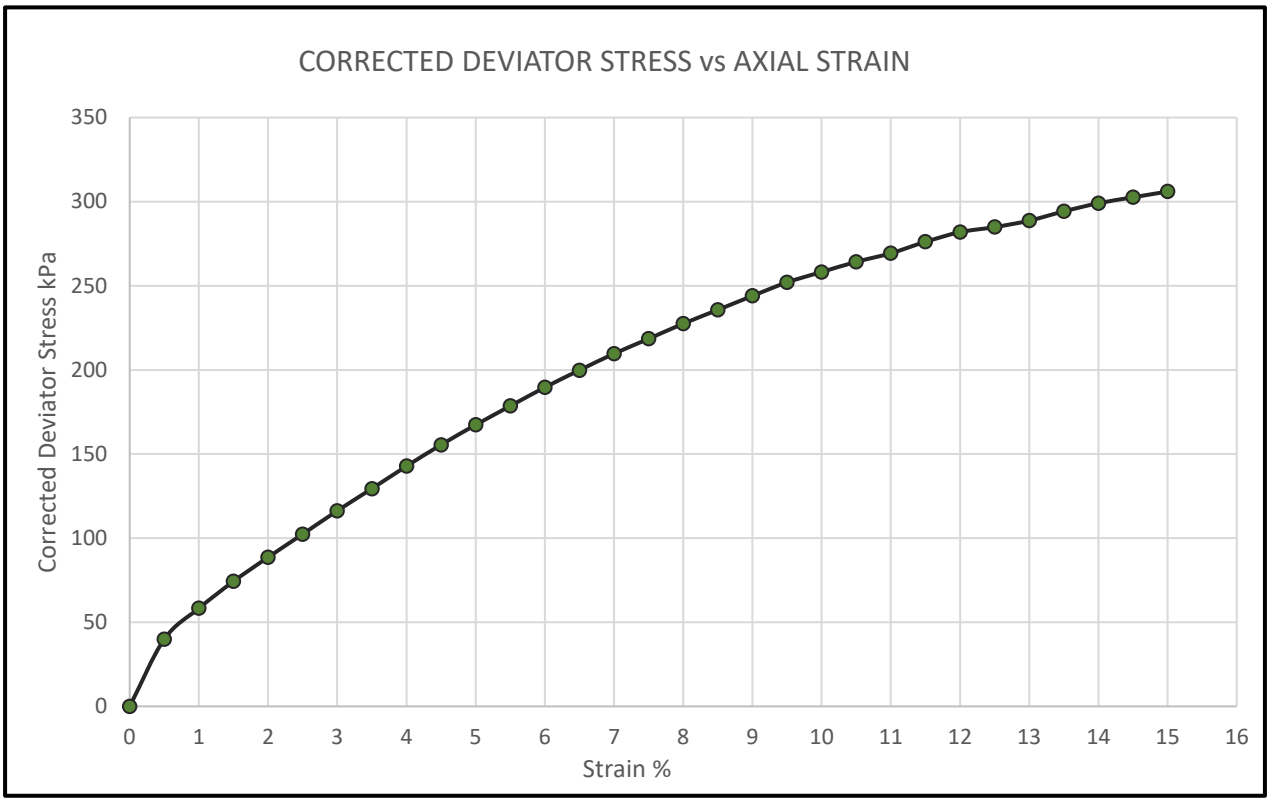
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP302 7.0-7.45m	**DATE SAMPLED**	01-Apr-26
LAB SAMPLE No.	6073204	**DATE RECEIVED**	08-Apr-26
DATE TESTED	14-Apr-26	**SAMPLED BY**	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

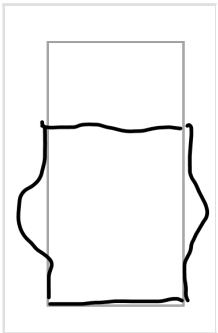
Specimen Location 

Sample Length (mm)	450	Specimen depth from top of Sample (mm)	96
Sample Orientation	Vertical	Specimen Condition	Undisturbed
Specimen Length (mm)	202	Specimen Water Content (%)	12.8
Specimen Diameter (mm)	102	Specimen Bulk Density (Mg/m3)	2.21
Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.96
Membrane Correction	3.40		



TEST TYPE
SINGLE STAGE

SKETCH OF SPECIMEN AT FAILURE



BULGING

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
140	15.0	2.0	306	153

Remarks/Abnormalities

Name O.P. Davies BA (Hons)
(Director / Head of Laboratory)

Signed [redacted]

Date 22 April 2026

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

BS EN ISO 17892-8:2018

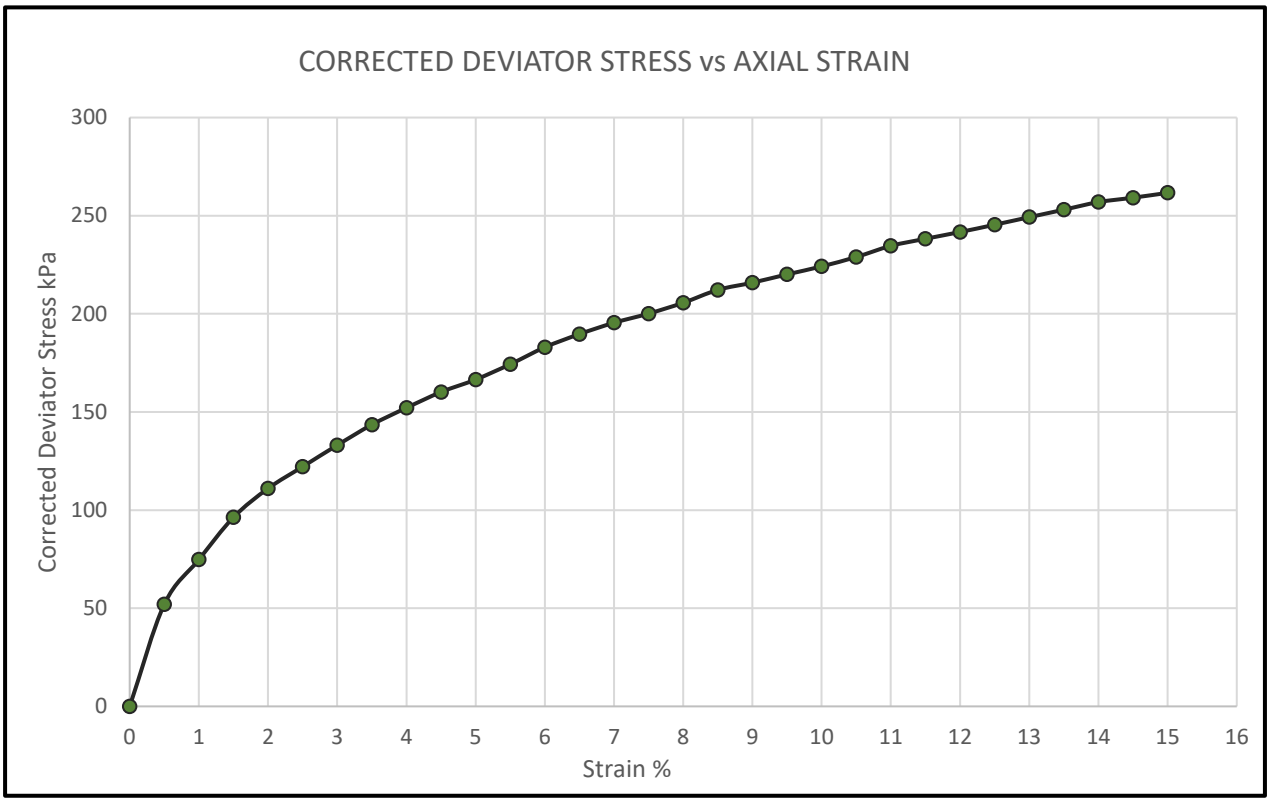
CLIENT	IGE Consulting Ltd
SITE	MCFC
JOB NUMBER	MRN 26041/26

SAMPLE LABEL	CP302 13.5-13.95m	**DATE SAMPLED**	01-Apr-26
LAB SAMPLE No.	6073205	**DATE RECEIVED**	08-Apr-26
DATE TESTED	14-Apr-26	**SAMPLED BY**	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

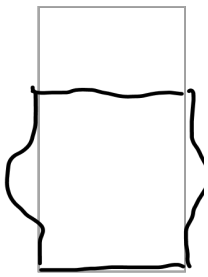
Specimen Location 

Sample Length (mm)	450	Specimen depth from top of Sample (mm)	62
Sample Orientation	Vertical	Specimen Condition	Undisturbed
Specimen Length (mm)	203	Specimen Water Content (%)	12.9
Specimen Diameter (mm)	102	Specimen Bulk Density (Mg/m3)	2.17
Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.92
Membrane Correction	3.40		



TEST TYPE
SINGLE STAGE

SKETCH OF SPECIMEN AT FAILURE



BULGING

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
270	15.0	2.0	262	131

Remarks/Abnormalities

Name O.P. Davies BA (Hons)
(Director / Head of Laboratory)

Signed [redacted]

Date 22 April 2026

APPENDIX 8

CHEMICAL LABORATORY TEST RESULTS

IGE Consulting
Office 11
Bartle House
Oxford Court
Manchester
M2 3WQ

t: [redacted]

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: info-i2analytical@normecgroup.com

Analytical Report Number : 26-017499

Project / Site name:	MCFC Entertainment	**Samples received on:**	02/04/2026
Your job number:	4490	**Samples instructed on/ Analysis started on:**	07/04/2026
Your order number:		**Analysis completed by:**	15/04/2026
Report Issue Number:	1	**Report issued on:**	15/04/2026
Samples Analysed:	12 soil samples		

[redacted]

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

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

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879892	879893	879894	879895	879896
Sample Reference				TP303	TP303	TP309	TP304	TP301
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.20	4.50	2.90	2.70	0.30
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Mass of stone >10mm	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	38.7
Moisture Content	%	0.01	NONE	14	13	21	12	7.3
Total mass of sample received	kg	0.1	NONE	0.6	0.4	0.8	0.6	0.8
Whole Sample Crushed	N/A	N/A	NONE	-	-	-	-	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	-	Detected	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	KMC	-	KMC	KMC	KMC
Analysis completed	N/A	N/A	N/A	15/04/2026	-	15/04/2026	15/04/2026	15/04/2026
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	Not-detected
Amosite detected	Type	N/A	ISO 17025	Detected	-	Detected	Detected	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	Detected	Detected	Detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	0.002	0.006	0.001
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	Loose Fibres, Loose Fibrous Debris	Sheeting/Board Debris, Loose Fibres	Loose Fibres, Loose Fibrous Debris

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	9.6	7.7	9.5	9.5	11.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.7	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	%	0.005	MCERTS	0.232	0.022	-	0.283	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1100	59	840	1200	480
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	540	29.6	419	585	239
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	24	13	-	53	-
Total Sulphur	mg/kg	50	MCERTS	1100	1900	-	1700	-
Total Sulphur	%	0.005	MCERTS	0.106	0.186	-	0.174	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	8.3	1.8	-	11	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	0.55	0.12	-	0.73	-
Organic Matter (automated)	%	0.1	MCERTS	3.3	1.3	2.8	3.5	2.9
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.9	0.8	1.6	2	1.7
Nitrate as NO_3 (Water Soluble) (2:1)	mg/kg	0.9	NONE	< 0.90	< 0.90	-	< 0.90	-
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	0.9	N/A	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879892	879893	879894	879895	879896
Sample Reference				TP303	TP303	TP309	TP304	TP301
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.20	4.50	2.90	2.70	0.30
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.6	< 0.05	4.5	2.6	1.4
Acenaphthylene	mg/kg	0.05	MCERTS	0.12	< 0.05	0.54	0.25	0.22
Acenaphthene	mg/kg	0.05	MCERTS	1.3	< 0.05	4	1.5	0.7
Fluorene	mg/kg	0.05	MCERTS	1.1	< 0.05	2.8	1.2	0.41
Phenanthrene	mg/kg	0.05	MCERTS	7.1	0.14	12	7.6	6.3
Anthracene	mg/kg	0.05	MCERTS	1.8	< 0.05	3.3	1.8	1.4
Fluoranthene	mg/kg	0.05	MCERTS	9.5	0.1	11	8.9	7.8
Pyrene	mg/kg	0.05	MCERTS	8.9	0.09	12	8.7	7.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	4.5	0.07	6.3	4.5	3.8
Chrysene	mg/kg	0.05	MCERTS	4.5	0.07	5.6	4.1	3.8
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	5.4	0.09	5.5	4.9	4.4
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.1	< 0.05	2.2	2	1.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.7	< 0.05	5.7	4.4	4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	2.2	< 0.05	2.2	2	1.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.44	< 0.05	0.5	0.42	0.36
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	2.5	< 0.05	2.5	2.4	2.1
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	57.7	< 0.80 ##	80.8	57.2	47.8
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	8.9	24	22	12
Barium (aqua regia extractable)	mg/kg	1	MCERTS	210	150	240	720	200
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.1	1.4	1.2	0.88
Boron (water soluble)	mg/kg	0.2	MCERTS	3.2	0.8	3.9	3.6	4.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.8	< 0.2	0.8	0.9	0.7
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	27	68	67	38
Copper (aqua regia extractable)	mg/kg	1	MCERTS	69	26	110	94	63
Lead (aqua regia extractable)	mg/kg	1	MCERTS	160	12	190	180	93
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	36	33	34	33	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	1.2	1.3
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	44	29	42	46	31
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	350	63	290	360	220
Magnesium (leachate equivalent)	mg/l	2.5	NONE	3.4	6.2	-	3.1	-
Magnesium (water soluble)	mg/kg	5	NONE	6.8	12	-	6.2	-

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879892	879893	879894	879895	879896
Sample Reference				TP303	TP303	TP309	TP304	TP301
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.20	4.50	2.90	2.70	0.30
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	6	-	5.9	5.5	13
TPHCWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	19	-	20	19	46
TPHCWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	110	-	130	120	280
TPHCWG - Aliphatic >EC35 - EC44 $_{EH_CU_1D_AL}$	mg/kg	8.4	NONE	60	-	46	66	110
TPHCWG - Aliphatic >EC5 - EC35 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	140	-	160	150	340
TPHCWG - Aliphatic >EC5 - EC44 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	200	-	200	210	450
TPHCWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	-	0.016	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	-	0.012	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.02	MCERTS	< 0.020	-	0.044	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	1	-	1.1	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	12	-	18	5.1	7.7
TPHCWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	51	-	59	31	48
TPHCWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	120	-	150	140	220
TPHCWG - Aromatic >EC35 - EC44 $_{EH_CU_1D_AR}$	mg/kg	8.4	NONE	55	-	58	72	110
TPHCWG - Aromatic >EC5 - EC35 $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	180	-	220	180	270
TPHCWG - Aromatic >EC5 - EC44 $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	240	-	280	250	380
TPH Total >EC6 - EC40 $_{EH_CU+HS_1D_TOTAL}$	mg/kg	10	NONE	-	< 10	-	-	-
Petroleum Range Organics (EC6 - EC10) $_{HS_1D_TOTAL}$	mg/kg	1	ISO 17025	-	< 1.0	-	-	-
TPH (EC10 - EC40) $_{EH_CU_1D_TOTAL}$	mg/kg	10	MCERTS	-	< 10	-	-	-
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	-	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	-	15	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	-	10	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	-	12	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	-	12	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	-	8.5	< 5.0	< 5.0

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

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879897	879898	879899	879900	879901
Sample Reference				DS302	TP309	TP302	TP302	DS307
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.00	4.20	0.60	2.70	1.50
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Mass of stone >10mm	%	0.1	NONE	60.5	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	17	12	13	11
Total mass of sample received	kg	0.1	NONE	0.6	0.4	0.7	0.6	0.6
Whole Sample Crushed	N/A	N/A	NONE	Crushed	-	-	-	-
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	-	Detected	-	Detected
Asbestos Analyst ID	N/A	N/A	N/A	KMC	-	KMC	-	KMC
Analysis completed	N/A	N/A	N/A	15/04/2026	-	15/04/2026	-	15/04/2026
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	Detected	-	Detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	< 0.001	-	0.003
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	Loose Fibres	-	Bitumen, Loose Fibres
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	10.3	7.8	10.5	8.1	9.4
Total Cyanide	mg/kg	1	MCERTS	3.9	< 1.0	1.1	< 1.0	1.3
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	%	0.005	MCERTS	-	0.025	-	0.019	0.373
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1400	110	780	86	1800
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	702	54	389	43.2	914
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	13	-	15	110
Total Sulphur	mg/kg	50	MCERTS	-	140	-	1800	5100
Total Sulphur	%	0.005	MCERTS	-	0.014	-	0.184	0.509
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	-	12	-	4.3	19
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	0.76	-	0.29	1.29
Organic Matter (automated)	%	0.1	MCERTS	3.9	1.7	2.5	1.3	3.9
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.3	1	1.5	0.8	2.3
Nitrate as NO_3 (Water Soluble) (2:1)	mg/kg	0.9	NONE	-	< 0.90	-	< 0.90	< 0.90
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	0.9	N/A	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879897	879898	879899	879900	879901
Sample Reference				DS302	TP309	TP302	TP302	DS307
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.00	4.20	0.60	2.70	1.50
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	2	0.1	1.9	0.1	2.3
Acenaphthylene	mg/kg	0.05	MCERTS	0.32	< 0.05	0.16	< 0.05	0.28
Acenaphthene	mg/kg	0.05	MCERTS	1.8	< 0.05	1.1	0.12	1.6
Fluorene	mg/kg	0.05	MCERTS	1.8	< 0.05	0.94	0.11	1.2
Phenanthrene	mg/kg	0.05	MCERTS	11	0.2	5.9	0.68	7.3
Anthracene	mg/kg	0.05	MCERTS	2.9	< 0.05	1.5	0.24	3.3
Fluoranthene	mg/kg	0.05	MCERTS	13	0.17	7.4	1.1	8.7
Pyrene	mg/kg	0.05	MCERTS	13	0.18	7.2	1.1	9
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.6	0.12	3.7	0.56	4.3
Chrysene	mg/kg	0.05	MCERTS	6.5	0.13	3.8	0.57	4.5
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	7.6	0.13	4.4	0.5	5
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.7	< 0.05	1.7	0.23	2.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.8	0.1	3.9	0.41	4.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3	0.05	1.8	0.19	2.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.63	< 0.05	0.34	< 0.05	0.57
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.4	0.06	2	0.23	2.7
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	83.3	1.24	47.5	6.15	60.3
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	8	15	7.6	24
Barium (aqua regia extractable)	mg/kg	1	MCERTS	180	170	180	120	250
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	1.4	0.97	1	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	2.7	0.4	2.9	0.3	4.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5	< 0.2	0.7	< 0.2	1
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	33	29	25	74
Copper (aqua regia extractable)	mg/kg	1	MCERTS	200	31	65	26	160
Lead (aqua regia extractable)	mg/kg	1	MCERTS	110	14	130	14	210
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.4	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	40	23	32	60
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	37	34	40	28	41
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	190	73	270	58	390
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	6.7	-	5.6	3.6
Magnesium (water soluble)	mg/kg	5	NONE	-	13	-	11	7.2

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879897	879898	879899	879900	879901
Sample Reference				DS302	TP309	TP302	TP302	DS307
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				1.00	4.20	0.60	2.70	1.50
Date Sampled				02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	22	-	2.3	-	5.1
TPHCWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	43	-	12	-	28
TPHCWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	130	-	94	-	390
TPHCWG - Aliphatic >EC35 - EC44 $_{EH_CU_1D_AL}$	mg/kg	8.4	NONE	66	-	39	-	240
TPHCWG - Aliphatic >EC5 - EC35 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	200	-	110	-	420
TPHCWG - Aliphatic >EC5 - EC44 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	260	-	150	-	660
TPHCWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	0.018	-	< 0.010	-	0.012
TPHCWG - Aromatic >EC7 - EC8 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	-	< 0.010	-	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS_1D_AR}$	mg/kg	0.02	MCERTS	0.023	-	< 0.020	-	0.025
TPHCWG - Aromatic >EC10 - EC12 $_{EH_CU_1D_AR}$	mg/kg	1	MCERTS	2.4	-	< 1.0	-	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH_CU_1D_AR}$	mg/kg	2	MCERTS	22	-	5.1	-	8.8
TPHCWG - Aromatic >EC16 - EC21 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	96	-	34	-	54
TPHCWG - Aromatic >EC21 - EC35 $_{EH_CU_1D_AR}$	mg/kg	10	MCERTS	230	-	140	-	260
TPHCWG - Aromatic >EC35 - EC44 $_{EH_CU_1D_AR}$	mg/kg	8.4	NONE	92	-	68	-	200
TPHCWG - Aromatic >EC5 - EC35 $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	350	-	180	-	330
TPHCWG - Aromatic >EC5 - EC44 $_{EH_CU+HS_1D_AR}$	mg/kg	10	NONE	440	-	240	-	530
TPH Total >EC6 - EC40 $_{EH_CU+HS_1D_TOTAL}$	mg/kg	10	NONE	-	< 10	-	< 10	-
Petroleum Range Organics (EC6 - EC10) $_{HS_1D_TOTAL}$	mg/kg	1	ISO 17025	-	< 1.0	-	< 1.0	-
TPH (EC10 - EC40) $_{EH_CU_1D_TOTAL}$	mg/kg	10	MCERTS	-	< 10	-	< 10	-
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	< 5.0
Benzene	µg/kg	5	MCERTS	17	-	< 5.0	-	12
Toluene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	5.8
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	7.5
p & m-Xylene	µg/kg	8	MCERTS	9.5	-	< 8.0	-	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	-	< 5.0	-	< 5.0

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

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879902	879903
Sample Reference				DS306	DS304
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.40	0.50
Date Sampled				02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Mass of stone >10mm	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.3	7.8
Total mass of sample received	kg	0.1	NONE	0.7	0.7
Whole Sample Crushed	N/A	N/A	NONE	-	-

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	PKU	PKU
Analysis completed	N/A	N/A	N/A	15/04/2026	15/04/2026
Actinolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Amosite detected	Type	N/A	ISO 17025	Detected	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	< 0.001
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	Loose Fibres

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	10.1	10.3
Total Cyanide	mg/kg	1	MCERTS	1.4	1.5
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0
Total Sulphate as SO_4	%	0.005	MCERTS	-	-
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1100	880
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	532	438
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-
Total Sulphur	%	0.005	MCERTS	-	-
Ammoniacal Nitrogen as NH_4^+	mg/kg	0.5	MCERTS	-	-
Ammonium as NH_4^+ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-
Organic Matter (automated)	%	0.1	MCERTS	5	3.2
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.9	1.9
Nitrate as NO_3 (Water Soluble) (2:1)	mg/kg	0.9	NONE	-	-
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	0.9	N/A	< 0.90	< 0.90

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879902	879903
Sample Reference				DS306	DS304
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.40	0.50
Date Sampled				02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Speciated PAHs					
Naphthalene	mg/kg	0.05	MCERTS	8.6	3.4
Acenaphthylene	mg/kg	0.05	MCERTS	0.45	0.37
Acenaphthene	mg/kg	0.05	MCERTS	6.4	2.8
Fluorene	mg/kg	0.05	MCERTS	5.8	2.5
Phenanthrene	mg/kg	0.05	MCERTS	32	16
Anthracene	mg/kg	0.05	MCERTS	8.8	4.3
Fluoranthene	mg/kg	0.05	MCERTS	31	16
Pyrene	mg/kg	0.05	MCERTS	29	16
Benzo(a)anthracene	mg/kg	0.05	MCERTS	15	8
Chrysene	mg/kg	0.05	MCERTS	14	7.4
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	14	7.3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	7.7	4.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	14	7.6
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	6.4	3.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	1.6	1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	7.4	4
Total PAH					
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	200	104
Heavy Metals / Metalloids					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	14
Barium (aqua regia extractable)	mg/kg	1	MCERTS	220	150
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	0.81
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5	2.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.8	0.9
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	33	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	74	49
Lead (aqua regia extractable)	mg/kg	1	MCERTS	160	210
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	32	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	70	41
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	310	210
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-

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Analytical Report Number: 26-017499
Project / Site name: MCFC Entertainment

Lab Sample Number				879902	879903
Sample Reference				DS306	DS304
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.40	0.50
Date Sampled				02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		
Petroleum Hydrocarbons					
TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	2.5	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	18	12
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	41	23
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	200	120
TPHCWG - Aliphatic >EC35 - EC44 EH_CU_1D_AL	mg/kg	8.4	NONE	88	52
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	260	160
TPHCWG - Aliphatic >EC5 - EC44 EH_CU+HS_1D_AL	mg/kg	10	NONE	350	210
TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	0.012	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	0.032	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	4.2	1.1
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	33	18
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	140	83
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	480	210
TPHCWG - Aromatic >EC35 - EC44 EH_CU_1D_AR	mg/kg	8.4	NONE	240	97
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	660	310
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_1D_AR	mg/kg	10	NONE	900	400
TPH Total >EC6 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	-	-
Petroleum Range Organics (EC6 - EC10) HS_1D_TOTAL	mg/kg	1	ISO 17025	-	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	-
VOCs					
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	11	7.3
Toluene	µg/kg	5	MCERTS	6.8	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	12	< 8.0
o-Xylene	µg/kg	5	MCERTS	9.4	< 5.0

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

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Analytical Report Number: **26-017499**
Project / Site name: **MCFC Entertainment**
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample	Analysis completed	Analyst ID
879892	TP303	1.2	204	Loose Fibres	**Amosite & Chrysotile**	< 0.001	**< 0.001**	15/04/2026	KMC
879894	TP309	2.9	208	Loose Fibres, Loose Fibrous Debris	**Amosite & Chrysotile**	0.002	**0.002**	15/04/2026	KMC
879895	TP304	2.7	218	Sheeting/Board Debris, Loose Fibres	**Amosite & Chrysotile**	0.006	**0.006**	15/04/2026	KMC
879896	TP301	0.3	204	Loose Fibres, Loose Fibrous Debris	**Amosite & Chrysotile**	0.001	**0.001**	15/04/2026	KMC
879897	DS302	1	197	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	15/04/2026	KMC
879899	TP302	0.6	207	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**	15/04/2026	KMC
879901	DS307	1.5	225	Bitumen, Loose Fibres	**Amosite & Chrysotile**	0.003	**0.003**	15/04/2026	KMC
879902	DS306	0.4	229	Loose Fibres	**Amosite**	< 0.001	**< 0.001**	15/04/2026	PKU
879903	DS304	0.5	230	Loose Fibres	**Amosite**	< 0.001	**< 0.001**	15/04/2026	PKU

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

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Analytical Report Number : 26-017499
Project / Site name: MCFC Entertainment

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
879892	TP303	None Supplied	1.2	Brown clay and sand with gravel
879893	TP303	None Supplied	4.5	Brown clay with vegetation
879894	TP309	None Supplied	2.9	Brown clay and sand with gravel and vegetation
879895	TP304	None Supplied	2.7	Brown sand with gravel and vegetation
879896	TP301	None Supplied	0.3	Brown clay and sand with gravel and stones
879897	DS302	None Supplied	1	Brown clay and sand with gravel and stones
879898	TP309	None Supplied	4.2	Brown clay
879899	TP302	None Supplied	0.6	Brown clay and sand with gravel
879900	TP302	None Supplied	2.7	Brown clay
879901	DS307	None Supplied	1.5	Brown clay and sand with gravel and vegetation
879902	DS306	None Supplied	0.4	Brown sand with gravel and vegetation
879903	DS304	None Supplied	0.5	Brown clay and sand with gravel and brick

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Analytical Report Number : 26-017499
Project / Site name: MCFC Entertainment

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE

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Analytical Report Number : 26-017499
Project / Site name: MCFC Entertainment

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Hexavalent chromium in soil (low level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Water Soluble Nitrate (2:1) as NO3 in soil	Determination of nitrate as NO3 in soil by discrete method	In-house method by discrete analyzer based on TON as N, Total Oxidized Nitrogen (Vanadium Chloride reduction), Thermo Fisher Scientific, MANUAL 2015-0	L082B	W	NONE
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC-MS	In-house method	L129-PL	W	ISO 17025
Whole Sample Crushed	Either: Client specific preparation instructions - sample(s) crushed whole prior to analysis OR Sample unsuitable for standard preparation and therefore crushed whole prior to analysis	In house method, applicable to dry samples only	L019B	D	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

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Analytical Report Number : 26-017499
Project / Site name: MCFC Entertainment

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

##- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

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Analytical Report Number : 26-018094

Project / Site name:	MCFC	**Samples received on:**	07/04/2026
Your job number:	4490	**Samples instructed on/ Analysis started on:**	08/04/2026
Your order number:	4490 LG	**Analysis completed by:**	16/04/2026
Report Issue Number:	1	**Report issued on:**	17/04/2026
Samples Analysed:	6 soil samples		

[redacted]

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				882999	883000	883001	883002	883003
Sample Reference				TP303	TP309	TP304	TP305	TP306
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				2.90	3.60	4.10	2.60	1.20
Date Sampled				01/04/2026	01/04/2026	01/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Mass of stone >10mm	%	0.1	NONE	3.9	0.1	2.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	23	23	13	13
Total mass of sample received	kg	0.1	NONE	0.9	0.8	1	1	1

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Not-detected	Detected	-	Detected
Asbestos Analyst ID	N/A	N/A	N/A	KJK	KJK	KJK	-	KJK
Analysis completed	N/A	N/A	N/A	14/04/2026	14/04/2026	14/04/2026	-	14/04/2026
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Amosite detected	Type	N/A	ISO 17025	Not-detected	-	Detected	-	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	Detected	-	Detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Not-detected
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	< 0.001	-	< 0.001
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Asbestos Cement	-	Loose Fibres	-	Loose Fibres, Loose Fibrous Debris

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	9.2	8.7	9.1	8.5	9.9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	1.1	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1900	900	2000	320	1100
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	933	452	1020	158	530
Organic Matter (automated)	%	0.1	MCERTS	4.2	3.7	3.3	1.6	3
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.4	2.1	1.9	0.9	1.8
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	0.9	N/A	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90

Total Phenols

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

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				882999	883000	883001	883002	883003
Sample Reference				TP303	TP309	TP304	TP305	TP306
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				2.90	3.60	4.10	2.60	1.20
Date Sampled				01/04/2026	01/04/2026	01/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	3.8	32	3.7	0.06	2.7
Acenaphthylene	mg/kg	0.05	MCERTS	0.28	5.3	0.42	< 0.05	0.41
Acenaphthene	mg/kg	0.05	MCERTS	2.7	29	2.2	< 0.05	2
Fluorene	mg/kg	0.05	MCERTS	2.2	22	1.8	< 0.05	2
Phenanthrene	mg/kg	0.05	MCERTS	12	73	9.4	0.09	13
Anthracene	mg/kg	0.05	MCERTS	3.1	21	2.5	< 0.05	3.5
Fluoranthene	mg/kg	0.05	MCERTS	15	37	9.2	0.1	16
Pyrene	mg/kg	0.05	MCERTS	14	53	9.6	0.09	16
Benzo(a)anthracene	mg/kg	0.05	MCERTS	6.2	23	4.7	0.07	7.8
Chrysene	mg/kg	0.05	MCERTS	5.8	21	4.4	0.06	7.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	7.3	16	5	< 0.05	8.6
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	2.5	5.4	1.6	< 0.05	2.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6	18	4.4	< 0.05	7.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3	5.4	1.9	< 0.05	3.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.7	1.7	0.49	< 0.05	0.75
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.4	6.2	2.2	< 0.05	3.7
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	88	370	63.5	< 0.80	97.3
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	24	32	19	4.9	18
Barium (aqua regia extractable)	mg/kg	1	MCERTS	200	340	230	100	190
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.3	1.3	1.1	1.1
Boron (water soluble)	mg/kg	0.2	MCERTS	4.3	2.4	7.1	0.8	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.1	0.6	0.8	< 0.2	0.8
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	50	55	30	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	79	86	81	27	66
Lead (aqua regia extractable)	mg/kg	1	MCERTS	200	130	150	12	150
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	34	40	36	32	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	1.3
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	49	37	43	28	41
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	390	290	400	61	260
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010	0.02	< 0.010	-	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	1.3	8.4	1.4	-	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	11	29	5.3	-	3.4
TPHCWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	30	53	20	-	10
TPHCWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	230	330	98	-	71
TPHCWG - Aliphatic >EC35 - EC44 $_{EH_CU_1D_AL}$	mg/kg	8.4	NONE	130	130	57	-	35
TPHCWG - Aliphatic >EC5 - EC35 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	270	420	130	-	85
TPHCWG - Aliphatic >EC5 - EC44 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	400	550	180	-	120
TPHCWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010	0.017	0.013	-	< 0.010

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				882999	883000	883001	883002	883003
Sample Reference				TP303	TP309	TP304	TP305	TP306
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				2.90	3.60	4.10	2.60	1.20
Date Sampled				01/04/2026	01/04/2026	01/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	0.011	0.012	-	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	0.43	0.082	-	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	3.3	14	< 1.0	-	1.2
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	18	110	6	-	6.7
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	73	210	29	-	28
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	300	280	81	-	87
TPHCWG - Aromatic >EC35 - EC44 EH_CU_1D_AR	mg/kg	8.4	NONE	200	82	51	-	39
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	400	620	120	-	120
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_1D_AR	mg/kg	10	NONE	600	700	170	-	160
TPH Total >EC6 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	-	-	-	< 10	-
Petroleum Range Organics (EC6 - EC10) HS_1D_TOTAL	mg/kg	1	ISO 17025	-	-	-	< 1.0	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	-	-	< 10	-

VOCs

Chloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Chloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Bromomethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Vinyl Chloride	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Trichlorofluoromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,1-Dichloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Trans 1,2-dichloroethylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	< 5.0
1,1-Dichloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
2,2-Dichloropropane	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Chloroform	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,1,1-Trichloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2-Dichloroethane	µg/kg	7	MCERTS	< 7.0	< 7.0	< 7.0	-	-
1,1-Dichloropropene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Cis-1,2-dichloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	< 5.0	15	12	-	< 5.0
Carbontetrachloride	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2-Dichloropropane	µg/kg	6	MCERTS	< 6.0	< 6.0	< 6.0	-	-
Trichloroethene	µg/kg	10	MCERTS	< 10	< 10	< 10	-	-
Dibromomethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Bromodichloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Cis-1,3-dichloropropene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Trans-1,3-dichloropropene	µg/kg	10	MCERTS	< 10	< 10	< 10	-	-
Toluene	µg/kg	5	MCERTS	< 5.0	8.5	12	-	< 5.0
1,1,2-Trichloroethane	µg/kg	6	MCERTS	< 6.0	< 6.0	< 6.0	-	-
1,3-Dichloropropane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Dibromochloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Tetrachloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2-Dibromoethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Chlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-

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Your Order No: 4490 LG

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Sample Reference				TP303	TP309	TP304	TP305	TP306
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				2.90	3.60	4.10	2.60	1.20
Date Sampled				01/04/2026	01/04/2026	01/04/2026	02/04/2026	02/04/2026
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
1,1,1,2-Tetrachloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	190	25	-	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	36	20	-	< 8.0
Styrene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Bromoform	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
o-Xylene	µg/kg	5	MCERTS	< 5.0	85	17	-	< 5.0
Isopropylbenzene	µg/kg	5	MCERTS	< 5.0	59	< 5.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Bromobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
n-Propylbenzene	µg/kg	5	MCERTS	< 5.0	15	< 5.0	-	-
2-Chlorotoluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
4-Chlorotoluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,3,5-Trimethylbenzene	µg/kg	5	MCERTS	< 5.0	70	< 5.0	-	-
tert-Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2,4-Trimethylbenzene	µg/kg	5	MCERTS	< 5.0	450	32	-	-
sec-Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,3-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
p-Isopropyltoluene	µg/kg	5	MCERTS	< 5.0	43	< 5.0	-	-
1,4-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	-	-
1,2,4-Trichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
Hexachlorobutadiene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-
1,2,3-Trichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	-	-

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

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				883004
Sample Reference				TP308
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.70
Date Sampled				02/04/2026
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**	
Mass of stone >10mm	%	0.1	NONE	2.2
Moisture Content	%	0.01	NONE	14
Total mass of sample received	kg	0.1	NONE	0.9

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KJK
Analysis completed	N/A	N/A	N/A	14/04/2026
Actinolite detected	Type	N/A	ISO 17025	-
Amosite detected	Type	N/A	ISO 17025	-
Anthophyllite detected	Type	N/A	ISO 17025	-
Chrysotile detected	Type	N/A	ISO 17025	-
Crocidolite detected	Type	N/A	ISO 17025	-
Tremolite detected	Type	N/A	ISO 17025	-
Asbestos % by hand picking/weighing	%	0.001	ISO 17025	-
Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	-

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	10.1
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1300
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	630
Organic Matter (automated)	%	0.1	MCERTS	2.2
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.3
Water Soluble Nitrate (2:1) as NO_3 (leachate equivalent)	mg/l	0.9	N/A	< 0.90

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				883004
Sample Reference				TP308
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.70
Date Sampled				02/04/2026
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**	
Speciated PAHs				
Naphthalene	mg/kg	0.05	MCERTS	1.4
Acenaphthylene	mg/kg	0.05	MCERTS	0.26
Acenaphthene	mg/kg	0.05	MCERTS	1
Fluorene	mg/kg	0.05	MCERTS	1
Phenanthrene	mg/kg	0.05	MCERTS	6.5
Anthracene	mg/kg	0.05	MCERTS	1.9
Fluoranthene	mg/kg	0.05	MCERTS	7.1
Pyrene	mg/kg	0.05	MCERTS	6.9
Benzo(a)anthracene	mg/kg	0.05	MCERTS	3.3
Chrysene	mg/kg	0.05	MCERTS	3.1
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	1.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.39
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.7
Total PAH				
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	43.3
Heavy Metals / Metalloids				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	23
Barium (aqua regia extractable)	mg/kg	1	MCERTS	220
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	3.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35
Copper (aqua regia extractable)	mg/kg	1	MCERTS	82
Lead (aqua regia extractable)	mg/kg	1	MCERTS	160
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	39
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	48
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	300
Petroleum Hydrocarbons				
TPHCWG - Aliphatic >EC5 - EC6 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS_1D_AL}$	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH_CU_1D_AL}$	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH_CU_1D_AL}$	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 $_{EH_CU_1D_AL}$	mg/kg	8	MCERTS	100
TPHCWG - Aliphatic >EC35 - EC44 $_{EH_CU_1D_AL}$	mg/kg	8.4	NONE	49
TPHCWG - Aliphatic >EC5 - EC35 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	100
TPHCWG - Aliphatic >EC5 - EC44 $_{EH_CU+HS_1D_AL}$	mg/kg	10	NONE	150
TPHCWG - Aromatic >EC5 - EC7 $_{HS_1D_AR}$	mg/kg	0.01	MCERTS	< 0.010

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				883004
Sample Reference				TP308
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.70
Date Sampled				02/04/2026
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Test Limit of detection**	**Test Accreditation Status**	
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	3.8
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	33
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	120
TPHCWG - Aromatic >EC35 - EC44 EH_CU_1D_AR	mg/kg	8.4	NONE	61
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	160
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_1D_AR	mg/kg	10	NONE	220
TPH Total >EC6 - EC40 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	-
Petroleum Range Organics (EC6 - EC10) HS_1D_TOTAL	mg/kg	1	ISO 17025	-
TPH (EC10 - EC40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-

VOCs

Chloromethane	µg/kg	5	MCERTS	-
Chloroethane	µg/kg	5	MCERTS	-
Bromomethane	µg/kg	5	MCERTS	-
Vinyl Chloride	µg/kg	5	NONE	-
Trichlorofluoromethane	µg/kg	5	MCERTS	-
1,1-Dichloroethene	µg/kg	5	MCERTS	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	MCERTS	-
Trans 1,2-dichloroethylene	µg/kg	5	MCERTS	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0
1,1-Dichloroethane	µg/kg	5	MCERTS	-
2,2-Dichloropropane	µg/kg	5	NONE	-
Chloroform	µg/kg	5	MCERTS	-
1,1,1-Trichloroethane	µg/kg	5	MCERTS	-
1,2-Dichloroethane	µg/kg	7	MCERTS	-
1,1-Dichloropropene	µg/kg	5	MCERTS	-
Cis-1,2-dichloroethene	µg/kg	5	MCERTS	-
Benzene	µg/kg	5	MCERTS	< 5.0
Carbontetrachloride	µg/kg	5	MCERTS	-
1,2-Dichloropropane	µg/kg	6	MCERTS	-
Trichloroethene	µg/kg	10	MCERTS	-
Dibromomethane	µg/kg	5	MCERTS	-
Bromodichloromethane	µg/kg	5	MCERTS	-
Cis-1,3-dichloropropene	µg/kg	5	MCERTS	-
Trans-1,3-dichloropropene	µg/kg	10	MCERTS	-
Toluene	µg/kg	5	MCERTS	< 5.0
1,1,2-Trichloroethane	µg/kg	6	MCERTS	-
1,3-Dichloropropane	µg/kg	5	MCERTS	-
Dibromochloromethane	µg/kg	5	MCERTS	-
Tetrachloroethene	µg/kg	5	MCERTS	-
1,2-Dibromoethane	µg/kg	5	MCERTS	-
Chlorobenzene	µg/kg	5	MCERTS	-

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Analytical Report Number: 26-018094
Project / Site name: MCFC
Your Order No: 4490 LG

Lab Sample Number				883004
Sample Reference				TP308
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.70
Date Sampled				02/04/2026
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	
1,1,1,2-Tetrachloroethane	µg/kg	5	MCERTS	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
Styrene	µg/kg	5	MCERTS	-
Bromoform	µg/kg	5	MCERTS	-
o-Xylene	µg/kg	5	MCERTS	< 5.0
Isopropylbenzene	µg/kg	5	MCERTS	-
1,1,2,2-Tetrachloroethane	µg/kg	5	NONE	-
Bromobenzene	µg/kg	5	MCERTS	-
n-Propylbenzene	µg/kg	5	MCERTS	-
2-Chlorotoluene	µg/kg	5	MCERTS	-
4-Chlorotoluene	µg/kg	5	MCERTS	-
1,3,5-Trimethylbenzene	µg/kg	5	MCERTS	-
tert-Butylbenzene	µg/kg	5	MCERTS	-
1,2,4-Trimethylbenzene	µg/kg	5	MCERTS	-
sec-Butylbenzene	µg/kg	5	MCERTS	-
1,3-Dichlorobenzene	µg/kg	5	MCERTS	-
p-Isopropyltoluene	µg/kg	5	MCERTS	-
1,4-Dichlorobenzene	µg/kg	5	MCERTS	-
1,2-Dichlorobenzene	µg/kg	5	MCERTS	-
Butylbenzene	µg/kg	5	MCERTS	-
1,2-Dibromo-3-chloropropane	µg/kg	8	MCERTS	-
1,2,4-Trichlorobenzene	µg/kg	5	MCERTS	-
Hexachlorobutadiene	µg/kg	5	MCERTS	-
1,2,3-Trichlorobenzene	µg/kg	5	MCERTS	-

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

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UKAS TESTING
4041

Normec i2 Analytical

Analytical Report Number: **26-018094**
Project / Site name: **MCFC**
Your Order No: **4490 LG**

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample	Analysis completed	Analyst ID
882999	TP303	2.9	220	Asbestos Cement	**Chrysotile**	< 0.001	**< 0.001**	14/04/2026	KJK
883001	TP304	4.1	205	Loose Fibres	**Amosite & Chrysotile**	< 0.001	**< 0.001**	14/04/2026	KJK
883003	TP306	1.2	225	Loose Fibres, Loose Fibrous Debris	**Amosite & Chrysotile**	< 0.001	**< 0.001**	14/04/2026	KJK

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

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Analytical Report Number : 26-018094
Project / Site name: MCFC

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
882999	TP303	None Supplied	2.9	Brown loam and clay with vegetation and stones
883000	TP309	None Supplied	3.6	Brown clay and loam with stones
883001	TP304	None Supplied	4.1	Brown clay and loam with stones
883002	TP305	None Supplied	2.6	Brown clay and loam with gravel
883003	TP306	None Supplied	1.2	Brown loam and clay with gravel
883004	TP308	None Supplied	1.7	Brown loam and sand with stones

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Analytical Report Number : 26-018094
Project / Site name: MCFC

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	D	ISO 17025
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Moisture Content (Wet Weight)	Moisture content (% wet weight), determined gravimetrically (up to 30°C)	In-house-procedure based on BS EN 12880:2000	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Hexavalent chromium in soil (low level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	NONE
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

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Analytical Report Number : 26-018094
Project / Site name: MCFC

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Water Soluble Nitrate (2:1) as NO3 in soil	Determination of nitrate as NO3 in soil by discrete method	In-house method by discrete analyzer based on TON as N, Total Oxidized Nitrogen (Vanadium Chloride reduction), Thermo Fisher Scientific, MANUAL 2015-0	L082B	W	N/A
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC-MS	In-house method	L129-PL	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

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APPENDIX 9

CHEMICAL LABORATORY SCREENING TABLES

IGE consulting

Project: MCFC

Job No: 4490

Lab Sample Number			879892.00	879894.00	879895.00	879896.00	879897.00	879899.00	879901.00	879902.00	879903.00	883003.00	883004.00	882999.00	883000.00	883001.00	879898.00	879900.00	883002.00	879893.00
Sample Reference			TP303	TP309	TP304	TP301	DS302	TP302	DS307	DS306	DS304	TP306	TP308	TP303	TP309	TP304	TP309	TP302	TP305	TP303
Stratum			Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground (Infilled Canal)	Made Ground (Infilled Canal)	Made Ground (Infilled Canal)	Glacial Till	Glacial Till	Glacial Till	Glacial Till
Depth (m)			1.20	2.90	2.70	0.30	1.00	0.60	1.50	0.40	0.50	1.20	1.70	2.90	3.60	4.10	4.20	2.70	2.60	4.50
Date Sampled			02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026	01/04/2026	01/04/2026	01/04/2026	02/04/2026	02/04/2026	02/04/2026	02/04/2026
Analytical Parameter (Soil Analysis)	**Units**	**LoD**																		
Stone Content	%	0.1	0.10	0.10	0.10	38.70	60.50	0.10	0.10	0.10	0.10	0.10	2.20	3.90	0.10	2.10	0.10	0.10	0.10	0.10
Moisture Content	%	0.01	14.00	21.00	12.00	7.30	12.00	12.00	11.00	9.30	7.80	13.00	14.00	15.00	23.00	23.00	17.00	13.00	13.00	13.00
Total mass of sample received	kg	0.1	0.60	0.80	0.60	0.80	0.60	0.70	0.60	0.70	0.70	1.00	0.90	0.90	0.80	1.00	0.40	0.60	1.00	0.40
Asbestos in Soil Screen	Type	N/A	Amosite and Chrysotile	Amosite and Chrysotile	Amosite and Chrysotile	Amosite and Chrysotile	Chrysotile	Chrysotile	Amosite and Chrysotile	Amosite	Amosite	Amosite and Chrysotile	Not-detected	Chrysotile	Not-detected	Amosite and Chrysotile	-	-	-	-
Asbestos Containing Material (ACM) Detected	Type	N/A	Loose Fibres	Loose Fibres, Loose Fibrous Debris	Sheeting / Board Debris, Loose Fibres	Loose Fibres, Loose Fibrous Debris	Loose Fibres	Loose Fibres	Bitumen, Loose Fibres	Loose Fibres	Loose Fibres	Loose Fibres, Loose Fibrous Debris	-	Asbestos Cement	-	Loose Fibres	-	-	-	-
Asbestos Quantification Total	%	0.001	0.001	0.002	0.006	0.001	0.001	0.001	0.003	0.001	0.001	0.001	-	0.001	-	0.001	-	-	-	-
General Inorganics																				
pH - Automated	pH Units	N/A	9.60	9.50	9.50	11.20	10.30	10.50	9.40	10.10	10.30	9.90	10.10	9.20	8.70	9.10	7.80	8.10	8.50	7.70
Total Cyanide	mg/kg	1	1.00	1.00	1.70	1.00	3.90	1.10	1.30	1.40	1.50	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00
Free Cyanide	mg/kg	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total Sulphate as SO4	%	0.005	0.23	-	0.28	-	-	-	0.37	-	-	-	-	-	-	-	0.03	0.02	-	0.02
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.50	1100.00	840.00	1200.00	480.00	1400.00	780.00	1800.00	1100.00	880.00	1100.00	1300.00	1900.00	900.00	2000.00	110.00	86.00	320.00	59.00
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	540.00	419.00	585.00	238.00	702.00	389.00	914.00	532.00	438.00	530.00	630.00	933.00	452.00	1020.00	54.00	43.20	158.00	29.60
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	24.00	-	53.00	-	-	-	110.00	-	-	-	-	-	-	-	13.00	15.00	-	13.00
Total Sulphur	%	0.005	0.11	-	0.17	-	-	-	0.51	-	-	-	-	-	-	-	0.01	0.18	-	0.19
Ammoniacal Nitrogen as NH4	mg/kg	0.5	8.30	-	11.00	-	-	-	19.00	-	-	-	-	-	-	-	12.00	4.30	-	1.80
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	0.55	-	0.73	-	-	-	1.29	-	-	-	-	-	-	-	0.76	0.29	-	0.12
Organic Matter (automated)	%	0.1	3.30	2.80	3.50	2.90	3.90	2.50	3.90	5.00	3.20	3.00	2.20	4.20	3.70	3.30	1.70	1.30	1.60	1.30
Total Organic Carbon (automated)	%	0.100	1.90	1.60	2.00	1.70	2.30	1.50	2.30	2.90	1.90	1.80	1.30	2.40	2.10	1.90	1.00	0.80	0.90	0.80
Water Soluble Nitrate (2:1) as NO3	mg/kg	0.9	0.90	-	0.90	-	-	-	0.90	-	-	-	-	-	-	-	0.90	0.90	-	0.90
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	0.9	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Speciated PAHs																				
Naphthalene	mg/kg	0.05	1.60	4.50	2.60	1.40	2.00	1.90	2.30	8.60	3.40	2.70	1.40	3.80	32.00	3.70	0.10	0.10	0.06	0.05
Acenaphthylene	mg/kg	0.05	0.12	0.54	0.25	0.22	0.32	0.16	0.28	0.45	0.37	0.41	0.26	0.28	5.30	0.42	0.05	0.05	0.05	0.05
Acenaphthene	mg/kg	0.05	1.30	4.00	1.50	0.70	1.80	1.10	1.60	6.40	2.80	2.00	1.00	2.70	29.00	2.20	0.05	0.12	0.05	0.05
Fluorene	mg/kg	0.05	1.10	2.80	1.20	0.41	1.80	0.94	1.20	5.80	2.50	2.00	1.00	2.20	22.00	1.80	0.05	0.11	0.05	0.05
Phenanthrene	mg/kg	0.05	7.10	12.00	7.60	6.30	11.00	5.90	7.30	32.00	16.00	13.00	6.50	12.00	73.00	9.40	0.20	0.68	0.09	0.14
Anthracene	mg/kg	0.05	1.80	3.30	1.80	1.40	2.90	1.50	3.30	8.80	4.30	3.50	1.90	3.10	21.00	2.50	0.05	0.24	0.05	0.05
Fluoranthene	mg/kg	0.05	9.50	11.00	8.90	7.80	13.00	7.40	8.70	31.00	16.00	16.00	7.10	15.00	37.00	9.20	0.17	1.10	0.10	0.10
Pyrene	mg/kg	0.05	8.90	12.00	8.70	7.00	13.00	7.20	9.00	29.00	16.00	16.00	6.90	14.00	53.00	8.60	0.18	1.10	0.09	0.09
Benzo(a)anthracene	mg/kg	0.05	4.50	6.30	4.50	3.80	6.60	3.70	4.30	15.00	8.00	7.80	3.30	6.20	23.00	4.70	0.12	0.56	0.07	0.07
Chrysene	mg/kg	0.05	4.50	5.60	4.10	3.80	6.50	3.80	4.50	14.00	7.40	7.10	3.10	5.80	21.00	4.40	0.13	0.57	0.06	0.07
Benzo(b)fluoranthene	mg/kg	0.05	5.40	5.50	4.90	4.40	7.60	4.40	5.00	14.00	7.30	8.60	3.30	6.50	16.00	5.00	0.13	0.50	0.05	0.09
Benzo(k)fluoranthene	mg/kg	0.05	2.10	2.20	2.00	1.70	2.70	1.70	2.30	7.70	4.10	2.90	1.40	2.50	5.40	1.60	0.05	0.23	0.05	0.05
Benzo(a)pyrene	mg/kg	0.05	4.70	5.70	4.40	4.00	6.80	3.90	4.90	14.00	7.60	7.20	2.90	6.00	14.00	4.40	0.10	0.41	0.05	0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	2.20	2.20	2.00	1.80	3.00	1.80	2.30	6.90	3.30	3.30	1.30	3.00	5.00	1.90	0.05	0.19	0.05	0.05
Dibenz(a,h)anthracene	mg/kg	0.05	0.44	0.50	0.42	0.36	0.63	0.34	0.57	1.60	1.00	0.75	0.39	0.70	1.70	0.49	0.05	0.05	0.05	0.05
Benzo(ghi)perylene	mg/kg	0.05	2.50	2.50	2.40	2.10	3.40	2.00	2.70	7.40	4.00	3.70	1.70	3.40	6.20	2.20	0.06	0.23	0.05	0.05
Total PAH																				
Speciated Total EPA-16 PAHs	mg/kg	0.8	57.70	80.80	57.20	47.80	83.30	47.50	60.30	200.00	104.00	97.30	43.30	88.00	370.00	63.50	1.24	6.15	0.80	0.80
Heavy Metals / Metalloids																				
Arsenic (aqua regia extractable)	mg/kg	1	20.00	24.00	22.00	12.00	16.00	15.00	24.00	20.00	14.00	18.00	23.00	24.00	32.00	19.00	8.00	7.60	4.90	8.90
Barium (aqua regia extractable)	mg/kg	1	210.00	240.00	720.00	200.00	180.00	180.00	250.00	220.00	150.00	190.00	220.00	200.00	340.00	230.00	170.00	120.00	100.00	150.00
Boron (water soluble)	mg/kg	0.2	3.20	3.90	3.60	4.10	2.70	2.90	4.90	1.50	2.20	1.40	3.10	4.30	2.40	7.10	0.40	0.30	0.80	0.80
Cadmium (aqua regia extractable)	mg/kg	0.2	0.80	0.80	0.90	0.70	0.70	0.70	1.00	0.80	0.90	0.80	0.70	1.10	1.00	0.90	0.20	0.20	0.20	0.20
Chromium (hexavalent)	mg/kg	1.2	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Chromium (aqua regia extractable)	mg/kg	1	35.00	68.00	67.00	38.00	25.00	29.00	74.00	33.00	22.00	28.00	35.00	34.00	50.00	55.00	33.00	25.00	30.00	27.00
Copper (aqua regia extractable)	mg/kg	1	69.00	110.00	94.00	63.00	200.00	65.00	160.00	74.00	49.00	66.00	82.00	79.00	86.00	81.00	31.00	25.00	27.00	26.00
Lead (aqua regia extractable)	mg/kg	1	160.00	190.00	180.00	93.00	110.00	130.00	210.00	160.00	210.00	150.00	160.00	200.00	130.00	150.00	14.00	14.00	12.00	12.00
Mercury (aqua regia extractable)	mg/kg	0.3	0.30	0.30	0.30	0.30	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Nickel (aqua regia extractable)	mg/kg	1	36.00	34.00	33.00	29.00	27.00	23.00	60.00	32.00	21.00	29.00	39.00	34.00	40.00	36.00	40.00	32.00	32.00	33.00
Selenium (aqua regia extractable)	mg/kg	1	1.00	1.40	1.20	1.30	1.00	1.00	1.00	1.10	1.00	1.30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Vanadium (aqua regia extractable)	mg/kg	1	44.00	42.00	46.00	31.00	37.00	40.00	41.00	70.00	41.00	41.00	48.00	49.00	37.00	43.00	34.00	28.00	28.00	29.00
Zinc (aqua regia extractable)	mg/kg	1	350.00	290.00	360.00	220.00	190.00	270.00	390.00	310.00	210.00	260.00	300.00	390.00	290.00	400.00	73.00	58.00	61.00	63.00
Magnesium (water soluble)	mg/kg	5	6.80	-	6.20	-	-	-	7.20	-	-	-	-	-	-	-	13.00	11.00	-	12.00
Magnesium (leachate equivalent)	mg/l	2.5	3.40	-	3.10	-	-	-	3.60	-	-	-	-	-	-	-	6.70	5.60	-	6.20
Monoaromatics & Oxygenates																				
Benzene	µg/kg	5	5.00	15.00	5.00	5.00	17.00	5.00	12.00	11.00	7.30	5.00	5.00	5.00	15.00	12.00	-	-	-	-
Toluene	µg/kg	5	5.00	10.00	5.00	5.00	5.00	5.00	5.00	6.80	5.00	5.00	5.00	5.00	8.50	12.00	-	-	-	-
Ethylbenzene	µg/kg	5	5.00	12.00	5.00	5.00	5.00	5.00	7.50	5.00	5.00	5.00	5.00	5.00	190.00	25.00	-	-	-	-
p & m-xylene	µg/kg	8	8.00	12.00	8.00	8.00	9.50	8.00	8.00	12.00	8.00	8.00	8.00	8.00	36.00	20.00	-	-	-	-
o-xylene	µg/kg	5	5.00	8.50	5.00	5.00	5.00	5.00	5.00	9.40	5.00	5.00	5.00	5.00	85.00	17.00	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	-	-	-	-
Petroleum Hydrocarbons																				
Petroleum Range Organics (C6 - C10)	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	1.00	1.00
TPH C10 - C40	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00	10.00	10.00	10.00
TPH C6 - C40	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00	10.00	10.00	10.00
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.50	1.00	1.00	1.00	1.30	8.40	1.40	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	6.00	5.90	5.50	13.00	22.00	2.30	5.10	18.00	12.00	3.40	2.00	11.00	29.00	5.30	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	19.00	20.00	19.00	46.00	43.00	12.00	28.00	41.00	23.00	10.00	8.00	30.00	53.00	20.00	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	110.00	130.00	120.00	280.00	130.00	94.00	390.00	200.00	120.00	71.00	100.00	230.00	330.00	98.00	-	-	-	-
TPH-CWG - Aliphatic >EC35 - EC44	mg/kg	8.4	60.00	46.00	66.00	110.00	66.00	39.00	240.00	88.00	52.00	35.00	49.00	130.00	130.00	57.00	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	140.00	160.00	150.00	340.00	200.00	110.00	420.00	260.00	160.00	85.00	100.00	270.00	420.00	130.00	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	200.00	200.00	210.00	450.00	260.00	150.00	660.00	350.00	210.00	120.00	150.00	400.00	550.00	180.00	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.43	0.08	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	1.00	1.10	1.00	1.00	2.40	1.00	1.00	4.20	1.10	1.20	1.00	3.30	14.00	1.60	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	12.00	18.00	5.10	7.70	22.00	5.10	8.80	33.00	18.00	6.70	3.80	18.00	110.00	6.00	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	51.00	59.00	31.00	48.00	96.00	34.00	54.00	140.00	83.00	28.00	33.00	73.00	210.00	29.00	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	120.00	150.00	140.00	220.00	230.00	140.00	260.00	480.00	210.00	87.00	120.00	300.00	280.00	81.00	-	-	-	-
TPH-CWG - Aromatic >EC35 - EC44	mg/kg	8.4	55.00	58.00	72.00	110.00	92.00	68.00	200.00	240.00	97.00	39.00	61.00	200.00	82.00	51.00	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	180.00	220.00	180.00	270.00	350.00	180.00	330.00	660.00	310.00	120.00	160.00	400.00	620.00	120.00	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	240.00	280.00	250.00	380.00	440.00	240.00	530.00	900.00	400.00	160.00	220.00	600.00	700.00	170.00	-	-	-	-
VOCs - All below detection limit except the following:																				
Chloromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Chloroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Bromomethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Vinyl Chloride	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Trichlorofluoromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,1-Dichloroethene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,1-Dichloroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
2,2-Dichloropropane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Trichloromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,1,1-Trichloroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2-Dichloroethane	µg/kg	7	-	-	-	-	-	-	-	-	-	-	-	7.00	7.00	7.00	-	-	-	-
1,1-Dichloropropene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Benzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	15.00	12.00	-	-	-	-
Tetrachloromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2-Dichloropropane	µg/kg	6	-	-	-	-	-	-	-	-	-	-	-	6.00	6.00	6.00	-	-	-	-
Trichloroethene	µg/kg	10	-	-	-	-	-	-	-	-	-	-	-	10.00	10.00	10.00	-	-	-	-
Dibromomethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Bromodichloromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	10	-	-	-	-	-	-	-	-	-	-	-	10.00	10.00	10.00	-	-	-	-
Toluene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	8.50	12.00	-	-	-	-
1,1,2-Trichloroethane	µg/kg	6	-	-	-	-	-	-	-	-	-	-	-	6.00	6.00	6.00	-	-	-	-
1,3-Dichloropropane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Dibromochloromethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Tetrachloroethene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2-Dibromoethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Chlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Ethylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	190.00	25.00	-	-	-	-
p & m-Xylene	µg/kg	8	-	-	-	-	-	-	-	-	-	-	-	8.00	36.00	20.00	-	-	-	-
Styrene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Tribromomethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
o-Xylene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	85.00	17.00	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	59.00	5.00	-	-	-	-
Isopropylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Bromobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
n-Propylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	15.00	5.00	-	-	-	-
2-Chlorotoluene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
4-Chlorotoluene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	70.00	5.00	-	-	-	-
tert-Butylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	450.00	32.00	-	-	-	-
sec-Butylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,3-Dichlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
p-Isopropyltoluene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	43.00	5.00	-	-	-	-
1,2-Dichlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,4-Dichlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Butylbenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	8	-	-	-	-	-	-	-	-	-	-	-	8.00	8.00	8.00	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
Hexachlorobutadiene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	5	-	-	-	-	-	-	-	-	-	-	-	5.00	5.00	5.00	-	-	-	-

Statistical Analysis					GAC - S4UL unless stated				C4SL		
					Statistical Results						
Count	Standard Deviation	Minimum	Maximum	Mean	Maximum	2.5% Public Open Space - Park	Pass/Fail	Exceedances	2.5% Public Open Space - Park	Pass/Fail	Exceedances
18	16.32	0.1	60.5	6.0	60.5						
18	4.55	7.30	23.00	13.91	23.00						
18	0.19	0.400	1.000	0.728	1.000						
14	-	-	-	-							
12	-			-							
12	0.00	0.00	0.01	0.00							
18	0.97	7.70	11.20	9.42							
18	0.69	1.00	3.90	1.28	3.90	60	Pass	0			
18	0.00	1.00	1.00	1.00	1.00	60	Pass	0			
6	0.157	0.019	0.373	0.159							
18	598.58	59.00	2000.00	964.17							
18	299.82	29.60	1020.00	478.21							
6	38.4	13.0	110.0	38.0							
6	0.167	0.014	0.509	0.196							
6	6.11	1.80	19.00	9.40							

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Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	4490
Site Name	MCFC
Client	Manchester City Football Club
Run by	LG
Date	16-Apr-26
Scenario details	

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Unspecified fibrous board	2
Extent of degradation of ACMs at outset of work	Degraded (Significant degradation in ACM; material has lost its basic integrity)	3
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not firmly linked in a matrix	2
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Very Low quantities - <0.001 to 0.01 %wt/wt	1
Sub-total		**8**

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking **Low**

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Stage 2

Exposure Factors

		Score
Anticipated airborne fibre concentration - Control Limit or SALI?	<0.01 fibres/ml	1
Anticipated duration of exposure to asbestos	> 2 hours in a 7 day period and Up to 10 hours in a day (e.g. full time occupational exposure)	4
Activity type and effect on deterioration of ACMs during work	Not low intensity, significant deterioration expected	4
Best description of primary host material matrix (soil/made ground)	Made Ground - Recycled Aggregate, Track Ballast	4
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Low	2
Sub-total		**15**
Exposure ranking		Medium
Combined hazard and exposure ranking	**23**	Medium

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Stage 3

Risk Assessment Outputs

Probable Licensing Status	Non-Licensed Work
RPE*	EN149 type FFP3 disposable
Dust Suppression**	Manual/localised dust suppression
Hygiene/Decontamination***	Localised and basic personal decontamination facilities

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.
**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)
***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

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APPENDIX 10

GAS AND GROUNDWATER DEPTH MONITORING RESULTS

Gas & Groundwater Monitoring

Site: **MCFC**

Job No.: **4490**

Exploratory Hole	Date	Time	Engineer	Response zone range	Water level	Base level	Atm. pressure	Pressure Trend	Flow		CH_4		LEL		Hex		CO_2		O_2			H_2S	CO	Total Volatiles (PID)		Remarks
				(m bgl)	(m bgl)	(m bgl)	(mbar)		(l/hr)		(%)		(%)		(%)		(%)		(%)			(ppm)	(ppm)	(ppm)		
									peak	steady	peak	steady	peak	steady	peak	steady	peak	steady	high	steady	low	peak	peak	peak	steady	
CP301	08/04/2026	10:42:00	LG	1.00 - 3.00	1.63	3.05	1019	Rising	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.5	19.1	19.1	1.0	1.0	-	-	Bailed to 2.72m bgl at 10:54; redipped to 2.65m bgl at 11:22
	22/04/2026	13:15:00	LG		1.77	3.06	1023	Falling	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.8	19.8	19.2	1.0	1.0	5.2	4.5	Bailed to 2.26m bgl at 13:34; redipped to 2.22m bgl at 14:17
	05/05/2026	10:14:00	CC		1.80	3.07	1009	Falling	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.2	19.2	15.1	1.0	1.0	-	-	Bailed to 3.04m bgl; redipped to 3.04m bgl at 10:46.
	15/05/2026	11:14:00	LG		1.53	3.06	1003	Rising	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.2	0.2	19.1	19.0	18.8	1.0	1.0	-	-	Bailed to 2.27m bgl at 11:23; redipped tp 2.22m bgl at 11:50.
DS302	08/04/2026	10:57:00	LG	0.60 - 1.20	0.25	1.04	1020	Rising	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.7	19.7	19.3	1.0	1.0	-	-	Bailed to 0.99m bgl at 11:05; redipped to 0.90m bgl at 11:23
	22/04/2026	13:30:00	LG		0.75	1.05	1022	Falling	59.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.3	18.7	18.7	1.0	1.0	2.3	1.7	Flow fell below instrument detection limits after 10 seconds. Bailed to 0.95m bgl at 13:40; redipped to 0.94m bgl at 14:22
	05/05/2026	09:35:00	CC		0.51	1.03	1010	Falling	70.8	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	18.8	0.1	0.1	1.0	1.0	-	-	Flow fell below instrument detection limits after 15 seconds. Bailed to 0.93m bgl at 9:50; redipped to 0.80 m bgl at 10:44.
	15/05/2026	11:27:00	LG		0.64	1.04	1004	Rising	92.6	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.1	0.1	19.3	19.2	19.2	1.0	1.0	-	-	ell below detection limits after 5 minutes. Bailed to 0.99m bgl at 11:37; redipped to 0.96m bgl at
CP302	08/04/2026	11:09:00	LG	5.00 - 8.00	7.69	7.92	1019	Rising	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.2	0.2	19.6	14.1	14.1	1.0	27.0	-	-	-
	22/04/2026	13:50:00	LG		7.49	7.89	1022	Falling	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.5	0.5	19.4	7.8	7.8	1.0	1.0	3.8	3.0	-
	05/05/2026	10:30:00	CC		7.51	7.91	1009	Falling	0.4	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.9	0.9	16.3	5.4	5.4	1.0	1.0	-	-	Flow fell below instrument detection limits after 2 seconds.
	15/05/2026	11:41:00	LG		7.21	7.91	1004	Rising	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	1.0	1.0	19.2	3.3	3.3	1.0	1.0	-	-	-

Response zone partially flooded. Results should be treated with caution in accordance with BS8485:2015 + A1 2019

Response zone flooded. Results considered unreliable in accordance with BS8485:2015 + A1 2019

Values recorded below instrument detection limit

TEST DATE AND CONDITIONS	
Date	8/1/26
Atmospheric pressure	987mb
Ambient Temp	19.7°C
Environics Serial No.	9634

GAS DATA LTD
Unit 4 Fairfield court
Seven Stars Estate
Coventry
CV3 4LJ, UK
+44 (0) 24 7630 3311

GAS DATA
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GFM436-1 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

INSTRUMENT DETAILS

Serial No	Customer
13397	IGE Consulting Ltd

INSTRUMENT CHECKS

Keyboard	✓	Pump Flow	500cc/min
Display Contrast	✓	Pump Flow @ -200mB	300cc/min
Clock Set / Running	✓	S/W Version	G436.0027/0010
Labels Fitted	✓	Recalibration Date	8/1/27

GAS CHECKS

Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+/-0.1
CH4	5%	4.9	+/-0.3	0.0	0.0	0.0	+/-0.1
	60%	59.9	+/-3.0	0.0	0.0	0.0	+/-0.1
CO2	5%	0.0	0.0	4.9	+/-0.3	0.0	+/-0.1
	40%	0.0	0.0	39.8	+/-3.0	0.0	+/-0.1
O2	20.9%	0.0	0.0	0.0	+0.1	20.9	+/-0.5

OPTIONAL GAS CHECKS

Calibration Gas		Instrument Gas Channels Read						
Gas Type	Applied Conc.	Label	H2S	CO			Hexane	tol. (% vol.)
		Range	5000ppm	2000ppm			2.00%	
N2	100%		0	0			0.000	0.0
H2S	1500ppm		1520	0				+/- 5.0
CO	1000ppm		90	1003				+/- 5.0
Hexane	2.00%						2.089	+/- 10.0

PRESSURE CHECKS

Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)	Static [Sp] (mB)	tol. (mB)		
All Ports	Current Atmospheric	987	+/-2.0		0.0		
Ap Port (Internal)	+800mB(a)	800	+/-5.0		0.0		
	+1200mB(a)	1199	+/-5.0		0.0		

TEST DATE AND CONDITIONS	
Date	8/1/26
Atmospheric pressure	987mb
Ambient Temp	19.7°C
Environics Serial No.	9634

GAS DATA LTD
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FLOW CHECKS

Calibration Flow		Instrument Flow Channels Read			
Applied Flow (l/hour)	Applied Pressure (Pa)	Flow [Flow] (l/hour)	tol. (l/hour)	Differential Pressure [Dp] (Pa)	tol. (Pa)
-30.0	-373	-29.7	+/-3.0	-375	+/-50
-3.0	-17	-3.1	+/-1.0	-19	+/-6
0.0	0	0.0	0.0	0	0.0
+3.0	14	2.8	+/-0.5	13	+/-3
+30.0	345	29.2	+/-3.0	339	+/-50
+60.0	1036	61.6	+/-6.0	1081	+/-130
+90.0	2073	91.5	+/-9.0	2164	+/-250

TEMPERATURE CHECK

Calibration Temperature	Instrument Temperature Channel Read	
Applied Equivalent Temperature (°C)	Temperature [Temp] (°C)	tol. (°C)
-10.0	-10.5	+/- 2.0
0.0	0.0	+/- 1.0
30.0	30.0	+/- 1.0
60.0	60.0	+/- 1.0
100.0	99.5	+/- 1.0

Notes:

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO 14001:2015 and BS EN ISO 45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to: BS EN ISO 9001:2015
BS EN ISO 14001:2015
BS EN ISO 45001:2018

TEST DATE AND CONDITIONS	
Date	9/1/26
Atmospheric pressure	979 mb
Ambient Temp	19.1 °C
Environics Serial No.	9634

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GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS					
SO Number	Instrument Banner	Instrument Serial Number + SW Version	Job Number(s)		
346524	GFM436	13397/27-1Φ	3184Φ		

Calibration Technician [redacted] **DATE** 8/1/26

Inspection Technician [redacted] **DATE** 9/1/26

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable(NA)
Function Tests	Dust Caps Fitted	P
	Keyboard Test (All keys)	P
	Backlight Test	P
	Clock Set / Running	P
	Comms Test	P
	Pump Flow Test (In & Out)	P
	Overall Leak Test (30mb)	N/A
	Battery Charge Test	P
	Service Date set to?	8/1/27
Channel Tests	Data Logging Enabled?	P
	Verify CH4/LEL/Hexane/PID	P
	Verify CO2	P
	Verify O2	P
	Verify H2S	P
	Verify CO	P
	Verify LEL	P
	Verify 1st Option gas	N/A
	Verify atmospheric pressure	P
	Verify differential pressure	P
	Verify flow	P
	Verify temperature probe input	P
	Verify vane anemometer input	P
DataBase Checks	Jobcard(s) completed and signed	P
	Jobcard(s) booked off database	P
	Calibration certificate completed	P
	Complete & print QI record	N/A
Label Checks	No. of Calibration label fitted	14397
	MCERTS label not displayed	P
	Warranty label fitted	P
H2S Range	H2S Range from SO	5000 ppm
	H2S Range from cal cert	5000 ppm
	Over-range value correct?	P

INSTRUMENT PACKING LIST		Tick if included
Instrument		✓
Leather Case		✓
Instrument Strap		✓
AC Battery Charger (UK)		✓
AC Battery Charger (EURO)		X
AC Battery Charger (US)		X
AC Battery Charger (AUS)		X
Gas Sample Pipe		✓
Hard Carry Case		✓
Spares Pot		✓
Allen Key		X
Flow Sample Pipe		✓
Temperature Probe		X
Vane Anemometer		X
USB Cable		✓
USB Memory Stick		X
SM V5 Software	Ver	X
Internal Filter Pack	Qty	X
External Filter Pack	Qty	X
Field Guide		X
EX Safety Flier		X

Extra Items:

Comments



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Email: contact@igeconsulting.co.uk