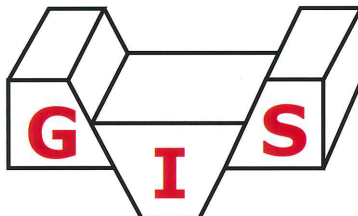

GEOTECHNICAL INVESTIGATION
AT
UNIT 32
STAKEHILL INDUSTRIAL ESTATE
MIDDLETON
MANCHESTER

CLIENT: AMPLE POWER LTD
ARCHITECT: SAMMONS ARCHITECTURAL LTD
ENGINEER: BJSE

DATE: OCTOBER 2025 **REPORT NO:** 2715

**GROUND INVESTIGATION
SPECIALISTS LIMITED**

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Church Road
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WV5 9EZ



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REPORT NO: 2715

GEOTECHNICAL INVESTIGATION

AT

UNIT 32

STAKEHILL INDUSTRIAL ESTATE

MIDDLETON

MANCHESTER

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REPORT NO: 2715

GEOTECHNICAL INVESTIGATION
AT
UNIT 32
STAKEHILL INDUSTRIAL ESTATE
MIDDLETON
MANCHESTER

1.0 INTRODUCTION

In September 2025 Ground Investigation Specialists Ltd (GIS) received an instruction from Ample Power Ltd to carry out a geotechnical investigation at Unit 32 Stakehill Industrial Estate, Middleton, Manchester, where it is proposed to extend the existing industrial unit building and construct a new vehicle ramp, as part of a project to repurpose the site into a commercial vehicle workshop. The appointed architect for the project was Sammons Architectural Ltd and the consulting Engineer was BJSE.

The purpose of the investigation was to provide geotechnical information relevant to the construction of the proposed extension and vehicle ramp and the scope of works was set out by the Engineer. Fieldwork was carried out on the 26th September 2025 and consisted of sinking 2no. boreholes by windowless sampling methods and excavating 3 no. trial pits by hand to expose the existing foundations and inspect the underlying strata.

This report presents a factual account of the work undertaken and gives a geotechnical appraisal of the ground conditions with respect to the design of foundations for the proposed extension and construction of the vehicle ramp.

This report is for the sole use of Ample Power Ltd and their advisors in support of the extension and vehicle ramp at Unit 32 Stakehill industrial Estate, Middleton. No liability can be accepted for its use by other parties or for any other development proposals.

2.0 SITE INVESTIGATION

2.1 Windowless Sampling Boreholes (WS1 – WS2)

On 26th September 2025 a percussive windowless sampling rig was mobilised to sink boreholes WS1 and WS2 to a depth of 5.0 m at the locations shown on the site plan in Section 4.0.

After coring through the blacktop hardstanding, continuous 1.0 m long undisturbed samples were taken using steel sampling tubes reducing in diameter from 100 mm, to the base of each borehole. The boreholes were described on site by a geotechnical engineer who has produced the borehole logs in Section 5.0, and samples were taken for geotechnical laboratory testing.

Standard Penetration Tests (SPTs) were carried out at regular 1.0 m intervals in both boreholes, starting from a depth of 1.0 m to determine the relative density or strength of the underlying strata. At depths of 4 and 5 m, the split spoon sampler was exchanged for a solid cone and an SPT with Cone (SPTC) was carried out instead.

On completion of drilling, the boreholes were backfilled with arisings and the hardstanding was reinstated with a layer of cold-lay blacktop.

2.2 Hand Excavated Trial Pits (TP1 – TP3)

On the same day, trial pits TP1 and TP2 were excavated adjacent to the existing building to inspect the foundations and underlying strata. A third foundation trial pit was attempted at position TP1A but was obstructed by a solid concrete slab below the blacktop hardstanding.

Trial pit TP3 was excavated by hand in the area of the proposed ramp to inspect and sample the shallow strata below.

All trial pits were logged and sampled on site by a geotechnical engineer and the trial pit logs are presented in Section 6.0. Trial pits were backfilled with arisings on completion and the hardstanding was reinstated with a layer of cold-lay blacktop.

2.3 Laboratory Testing

GIS specified the following schedule of laboratory testing, the full results of which are included in Section 7.0.

To aid in its classification and determine the potential for shrinkage or swelling movements, 1no. sample of the shallow cohesive soil underwent determination of its plasticity (Atterberg limits) and moisture content. A sample of the shallow granular soil has undergone Particle Size Distribution (PSD) analysis using the wet sieve method.

With regards to conditions considered aggressive to buried concrete and determining the suitable concrete classification, 3no. samples of soil were tested for their water-soluble sulphate content (using a 2:1 water/ soil extract) and pH value.

3.0 ENGINEERING DISCUSSION

3.1 Ground Conditions

3.1.1 Anticipated Geology

Reference to the British Geological Survey (BGS) sheet 85 for Manchester (1: 50,000 series) along with the online BGS GeoIndex viewer indicates that the southern half of the site may be underlain by an unknown thickness of made ground.

Below any made ground, the site is indicated to be within the margins of a buried glacial channel and is expected to be underlain by a significant thickness of glaciofluvial sheet deposits comprising sand and gravel.

The superficial geology is expected to be underlain by bedrock of the Pennine Lower Coal Measures Formation (PLCM), comprising interbedded grey mudstone, siltstone and light grey sandstone with numerous coal seams.

It is noted that the site falls within the Mining Remediation Authority (formerly the Coal Authority) reporting area due to the presence of potential coal bearing strata (PLCM). The following engineering comments in this report have not considered the potential for issues arising from coal mining legacy on or near to the site and it is recommended that a coal mining report is obtained in the first instance.

3.1.2 Strata Encountered

Full details of the conditions encountered are given on the borehole and trial pit logs in Sections 5.0 and 6.0. However, as a brief summary the main engineering horizons in each area are described below. The reduced levels given on the borehole and trial pit logs are approximate and have been extrapolated from the topographic survey data provided.

Proposed Extension Area

Borehole WS1 encountered a surface layer of blacktop and weak concrete hardstanding to 0.4 m. This was underlain by Glaciofluvial Sheet Deposits which continued to a depth of more than 5 m and comprised generally medium dense becoming loose brown sand, becoming gravelly below 1.2 m, and with a thin band of stiff brown sandy gravelly clay from 1.0 – 1.2 m.

Trial pit TP2 proved that below the surface layer of blacktop and ash fill to 0.4 m was the natural Glaciofluvial Sheet Deposits comprising greenish-brownish-grey clayey gravelly sand.

Proposed Vehicle Ramp Area

Borehole WS2 was sunk at the southern edge of the site on the slightly raised ground (c. 1 m higher than the land to the west) where it is proposed to construct the new vehicle ramp. Below the surface layer of blacktop to 0.1 m was fill comprising ash gravel onto limestone hardcore gravel to a total depth of 0.8 m. Further made ground was below this, comprising soft to firm brown sandy gravelly clay with fragments of ash, paper, glass and brick, to 1.3 m. Below this

was Glaciofluvial Sheet Deposits comprising stiff brown sandy gravelly clay to 1.7 m, onto loose becoming medium dense brown silty sand which was proved to a depth in excess of 5 m. Trial pit TP3 was excavated at the northern end of the proposed ramp and found blacktop to 0.2 m, underlain by fill to 0.6 m comprising grey-brown hardcore gravel, then onto disturbed ground comprising soft dark greenish-brownish-grey silty sandy clay with occasional ash and land drain fragments, proved to a depth in excess of 1.2 m.

3.1.3 Groundwater

Approximately 30 minutes after each borehole was complete, the water level was at 1.2 m in WS1 and 2.7 m in WS2.

3.2 Existing Foundations

Trial pits TP1, TP1A and TP2 were excavated to expose the foundations to the existing industrial unit building. As can be seen on the trial pit logs in Section 6.0, the brick walls were supported by a shallow concrete foundation at a depth of 0.2 – 0.3 m, bearing onto a thin layer of ash gravel fill. TP1 and TP1A could not be continued below depths of 0.3 and 0.1 m respectively, due to the obstruction of a solid concrete slab which extended horizontally more than 1 m from the edge of the building.

3.3 New Foundations

In the area of the proposed extension, the ground conditions comprised a little blacktop and ash fill to 0.4 m, underlain by Glaciofluvial Sheet Deposits generally comprising medium dense becoming loose brown sand to > 5 m, with a band of stiff brown sandy gravelly clay from 1.0 – 1.2 m. The uncorrected SPT N values varied between 6 at a depth of 3.0 m, and 22 at depths of 1.0 m and 5.0 m. Groundwater was present at a depth of c. 1.2 m.

Prior to construction, it will be necessary to strip the existing hardstanding and grub out any remaining concrete obstructions such as the slab encountered in WS1, TP1 and TP1A.

Due to the variable nature of Glaciofluvial Sheet Deposits and the presence of shallow groundwater, strip or pad foundations for the new extension would need to be well reinforced and designed to a maximum allowable bearing of 75 kPa in order to keep settlements to less than 25 mm total and 15 mm differential, bearing onto the natural soils at the minimum depth that building regulations permit. Unnecessary deepening of excavations should be avoided as this will not result in greater bearing capacity and will increase the likelihood of encountering groundwater.

Consideration could also be given to the alternative of supporting the extension on either i) a reinforced semi-rigid raft foundation with perimeter downstand beams, or ii) a reinforced ground beam beneath load bearing walls/columns with an independent floating slab. Mesh reinforcement should be placed in both the top and bottom of the slab. Design bearing pressures should not exceed 110 kPa beneath the downstand beams and 25 kPa beneath the floor slab, for settlements of a similar magnitude. The soils at formation level should be proof rolled and any inferior pockets replaced with well compacted granular fill.

Care should be taken to ensure that conditions at formation level are similar to those described on the borehole and trial pit logs. If conditions at the southern end of the extension are found to differ significantly from those anticipated, reference should be made to the geotechnical specialist for further advice.

There should be a structural break between the existing unit building and the extension to allow for any differential movement between the two structures.

3.4 Buried Concrete

Reference to BRE Special Digest 1:2005 and the pH value and soluble sulphate testing carried out on the 3no. soil samples would indicate that in terms of buried concrete and classifying the site as to its Design Sulphate Class (DS) and Aggressive Chemical Environment for Concrete Class (ACEC) the site could be considered to have a DS class of DS-1 and an ACEC Class of AC-1.

C.S. Noakes, MSci., MSc., FGS.

Geotechnical Engineer

Ground Investigation Specialists Ltd

H.S. Lister, BSc., C. Geol., C Sci., FGS.

Director

4.0 EXISTING AND PROPOSED SITE PLANS



Important Information:

We advise that an arborologist be appointed to correctly determine the species and condition of all trees surveyed prior to any design work.

All information contained in this drawing (including digital data) should be checked and verified prior to any fabrication or construction.

Survey Legend

FENCES	SW	Tones
BARRICADE FENCE	GR	
CORRUGATED IRON FENCE	GR	
CLOSE BOARD FENCE	GB	
CHINESE TYP. PALM FENCE	CP	
IRON RAIL FENCE	IR	
POST AND RAIL FENCE	PR	
POST AND RAIL FENCE	PR	
POST AND RAIL FENCE	PR	
CHAIN LINK FENCE	GL	
LARCH LATH FENCE	LA	
INTERWOVEN FENCE	SW	

Diagram illustrating a fence section with a post and rail. The post is labeled 'POST' and the rail is labeled 'RAIL'. The diagram also shows a 'RAIL 2.0m' and a 'RAIL 2.0m' section.

ABBREVIATIONS

BRILLIANT	Ba	SHOWER	MS
BRIAR TELECOM II	BT	SMOKE BOARD	MS
CONCRETE PAVING SLAB	CPB	PARKING METER	PL
COVER LIDS	CL	NO. NAME PLATE	PL
DROP KERN	DK	ROAD SIGN	RS
ELECTRIC INSPECTION COVER	EC	RODDING CIE	RE
ELECTRICITY POLE	EP	RETAINING WALL	RW
FIRE HYDRANT	FH	SANITARY PIPE	SP
FLINGER BED	FB	STOP VALVE	SV
FOOTPATH	FP	TELEGRAPH POLE	TP
GAS VALVE	GV	TELEPHONE CALL BOX	TCB
GALLY	GY	TRAFFIC LIGHT	TL
INSPECTION COVER	IC	UNABLE TO LIFT	UL
PIPE JOINT LEVEL	IL	UNKNOWN	UN
KERN OUTLET	KO	VENT PIPE	VP
NAIL HOLE	NH	WATER METER	WM
THRESHOLD	TH	WASTEWATER	WW

Tree Schedule

Point	Spread	Bole	Height	Species
T605	5,0	0,30	10,0	Acacia
T606	5,0	0,30	10,0	Acacia
T607	5,0	0,30	10,0	Tree Unknown
T608	5,0	0,30	10,0	Tree Unknown
T848	6,0	0,30	14,0	Silver Birch
T849	10,0	0,40	14,0	Tree Unknown
T850	10,0	0,55	14,0	Tree Unknown
T851	4,0	0,20	10,0	Fir

North:



ON.	Grid:	Local Grid
-----	-------	------------

Levelling:	Datum based on manhole as shown. Value used 50.00m
------------	---

Drawing Title:	Topographical Survey
----------------	----------------------

Site Address:
Unit 32
Stakehill Industrial Estate
Manchester
M24 2RW

Client:

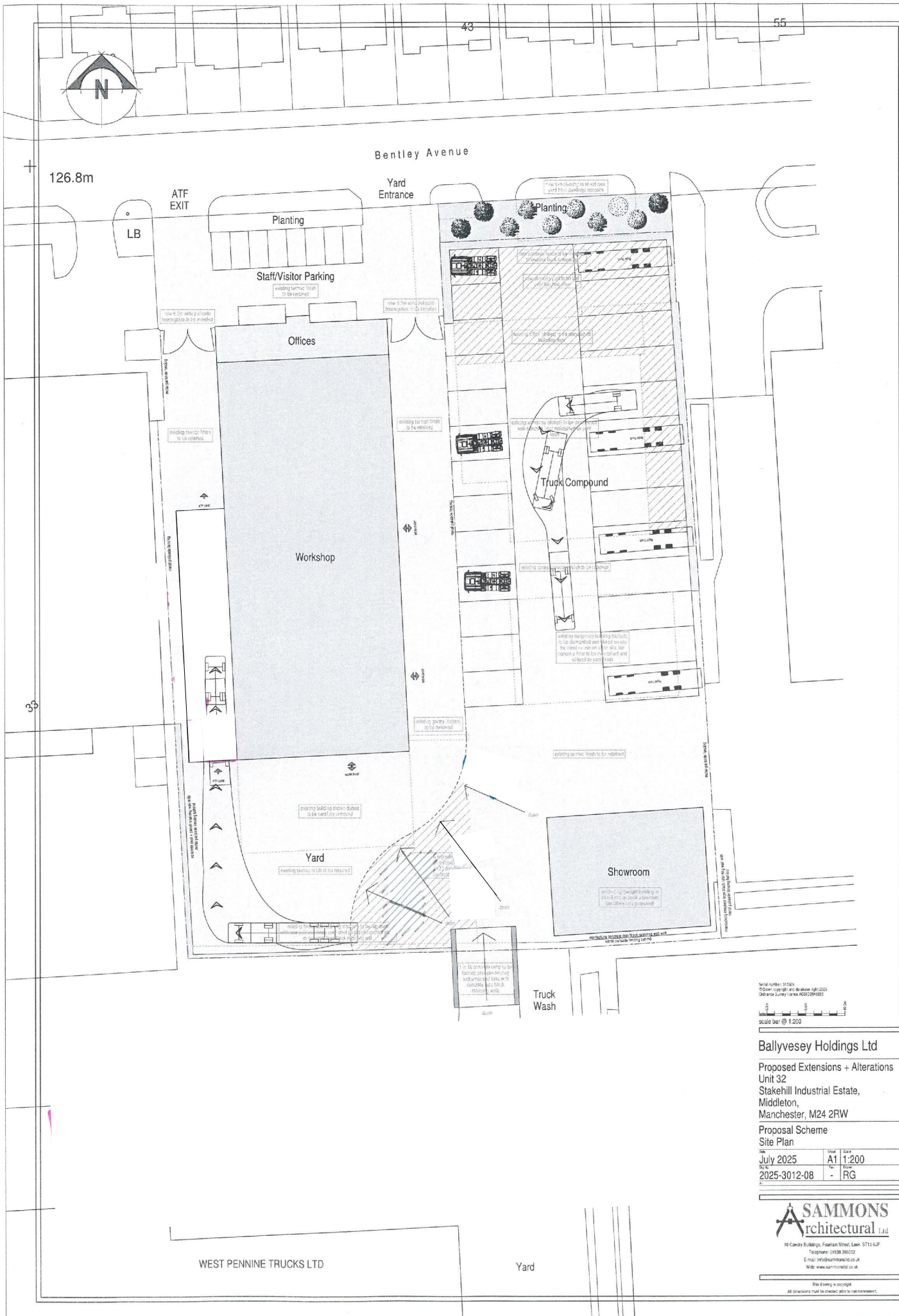
Montgomery Transport Ltd

Surveyor	MG	Drawn By	HF	Verified By	AF	Date	08.08.2025
CM No: CM/259-43/T				Rev:			
Scale: 1:200m @ A1				Date: August 2025			



Cadmap Ltd
Unit 131 Dunsfold Park
Cranleigh
Surrey, GU6 5TB
T: 01483 429385
E: info@cadmap.co.uk





Serial number: 01200
 7/07/2025 Copyright: 2025
 01/07/2025 Survey: 01/07/2025
 Scale bar: 1:200

Ballyvesey Holdings Ltd

Proposed Extensions + Alterations
 Unit 32
 Stakehill Industrial Estate,
 Middleton,
 Manchester, M24 2RW

Proposal Scheme
 Site Plan

Date	July 2025	Drawn	A1	Scale	1:200
Rev	2025-3012-08	Rev	-	Rev	RG

SAMMONS
 Architectural Ltd

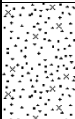
10 Candy Buildings, Fountain Street, Leam, ST12 6LP
 Telephone: 01535 380000
 E-mail: info@sammons.co.uk
 Web: www.sammons.co.uk

This drawing is copyright.
 All dimensions must be checked prior to construction.

5.0 BOREHOLE LOGS

GROUND INVESTIGATION SPECIALISTS LIMITED

BOREHOLE RECORD	BORING COMMENCED:	26.09.25	TYPE OF BORING:	Windowless Sampling	CLIENT:	Ample Power Ltd	BOREHOLE: WS1
	BORING COMPLETED:	26.09.25	DIAMETER OF HOLE:	100 – 60 mm	ENGINEER:	BJSE	SHEET: 1 OF 1
	GROUND LEVEL:	c. 49.1 m AOD	BOREHOLE CASING:	1.0 m	CONTRACT:	Unit 32, Stakehill Industrial Estate	JOB NO: 2715

DRILLING			SAMPLES					RESULTS OF TESTS													
DESCRIPTION OF STRATA	LEGEND	WATER LEVEL	THICK-NESS	DEPTH	REDUCED LEVEL	DEPTH	TYPE	INDEX PROPERTIES					DENSITIES		STRENGTH TESTS			IN-SITU TESTS AND REMARKS (SPT Blows)			
								'N' VALUE	M/C %	LL %	PL %	PI	WET (kg/m³)	DRY (kg/m³)	TYPE	COHESION (kN/m²)	ANGLE OF INTERNAL FRICTION (degrees)				
BLACKTOP.		▼	0.21	GL	49.1													pH Value = 7.4 Water Soluble SO ₄ (2:1) = 36 mg/l (5.5.6.5.5.6.) pH Value = 7.4 Water Soluble SO ₄ (2:1) = 14 mg/l			
Weak CONCRETE.			0.14	0.21	48.89																
Brown silty fine to medium SAND. (GLACIOFLUVIAL SHEET DEPOSITS)			0.60		0.35	48.75															
				0.80	D1																
Stiff brown slightly sandy gravelly CLAY; assorted fine to coarse angular to rounded gravel of various lithologies. (GLACIOFLUVIAL SHEET DEPOSITS)			0.25	0.95	48.15	1.00	S2	22	13.0	22	13	9									
				1.20	47.90	1.00	D3														
Medium dense becoming loose brown slightly gravelly SAND; gravel comprising fine to coarse sub-angular to rounded quartzite, sandstone and mudstone. (GLACIOFLUVIAL SHEET DEPOSITS) ...becoming loose and very gravelly below 3.0 m. ... becoming medium dense and gravelly below 4.0 m.			3.80					2.00	S4	11									(4.4.4.3.2.2.)		
																					(1.1.1.1.2.2.)
																					(-.-.2.2.3.3.)
Borehole Complete.				5.00	44.10	5.00	S(C)7	22										(1.3.3.5.6.8.)			
GROUNDWATER OBSERVATIONS: Water at 1.20 m on completion.			▼ - Final groundwater level ▽ - Groundwater first struck ▲ - Standpipe ● - Piezometer			W - Water Sample B - Bulk Sample T - Tub Sample E - Environmental Sample			M/C - Natural Moisture Content LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index			'N' - Standard or Cone Penetration Test Result T - Undrained Triaxial M - Multi-stage Undrained Triaxial			S - Standard Penetration Test C - Standard Penetration Test with Cone V - Pocket Vane Test						

GROUND INVESTIGATION SPECIALISTS LIMITED

BOREHOLE RECORD	BORING COMMENCED:	26.09.25	TYPE OF BORING:	Windowless Sampling	CLIENT:	Ample Power Ltd	BOREHOLE: WS2
	BORING COMPLETED:	26.09.25	DIAMETER OF HOLE:	100 – 60 mm	ENGINEER:	BJSE	SHEET: 1 OF 1
	GROUND LEVEL:	c. 49.9 m AOD	BOREHOLE CASING:	1.0 m	CONTRACT:	Unit 32, Stakehill Industrial Estate	JOB NO: 2715

DRILLING			SAMPLES					RESULTS OF TESTS											
DESCRIPTION OF STRATA	LEGEND	WATER LEVEL	THICK-NESS	DEPTH	REDUCED LEVEL	DEPTH	TYPE	INDEX PROPERTIES					DENSITIES		STRENGTH TESTS			IN-SITU TESTS AND REMARKS (SPT Blows)	
								'N' VALUE	M/C %	LL %	PL %	PI	WET (kg/m ³)	DRY (kg/m ³)	TYPE	COHESION (kN/m ²)	ANGLE OF INTERNAL FRICTION (degrees)		
		▼		GL	49.9													(1.1.1.2.2.3.)	
BLACKTOP.			0.12	0.12	49.78														
Fill (black very sandy fine to coarse ASH GRAVEL).			0.18																
Fill (light grey sandy fine to coarse angular limestone hardcore GRAVEL).			0.47		49.60														
Made ground (soft to firm brown sandy slightly gravelly CLAY with some fine to coarse angular brick and ash fragments).			0.53		49.13		1.00	S1	8										
..... with many glass, paper, ash and brick fragments below 1.0 m.							1.00	D2											
Stiff brown slightly sandy gravelly CLAY; assorted fine to coarse angular to rounded gravel of various lithologies. (GLACIOFLUVIAL SHEET DEPOSITS)			0.44		48.60		1.30												
							1.50	D3											
Loose brown medium grained SAND with occasional very thin silty bands. (GLACIOFLUVIAL SHEET DEPOSITS)					48.16		1.74												(1.2.2.2.1.1.)
			1.36				2.00	S4	6										
						2.00	D5												
				47.20		2.70											(1.1.2.1.2.1.)		
		3.10				3.00	S6	6											
Thinly to medium interbedded loose becoming medium dense dark brown medium grained SAND and soft to dark brown clayey SILT with occasional fine to coarse rounded quartzite gravel. (GLACIOFLUVIAL SHEET DEPOSITS)			1.90														(2.3.3.4.4.3.)		
						4.00	S(C)7	14											
Borehole Complete.				5.00	44.90	5.00	S(C)8	4									(1.1.1.1.1.1.)		
GROUNDWATER OBSERVATIONS: ▼ - Final groundwater level		W - Water Sample		M/C - Natural Moisture Content		'N' - Standard or Cone Penetration Test Result		S - Standard Penetration Test											
Water level settled at 2.70 m approximately 30 mins after completion of boring.		B - Bulk Sample		LL - Liquid Limit		T - Undrained Triaxial		C - Standard Penetration Test with Cone											
▲ - Standpipe		T - Tub Sample		PL - Plastic Limit		M - Multi-stage Undrained Triaxial		V - Pocket Vane Test											
● - Piezometer		E - Environmental Sample		PI - Plasticity Index															

6.0 TRIAL PIT LOGS

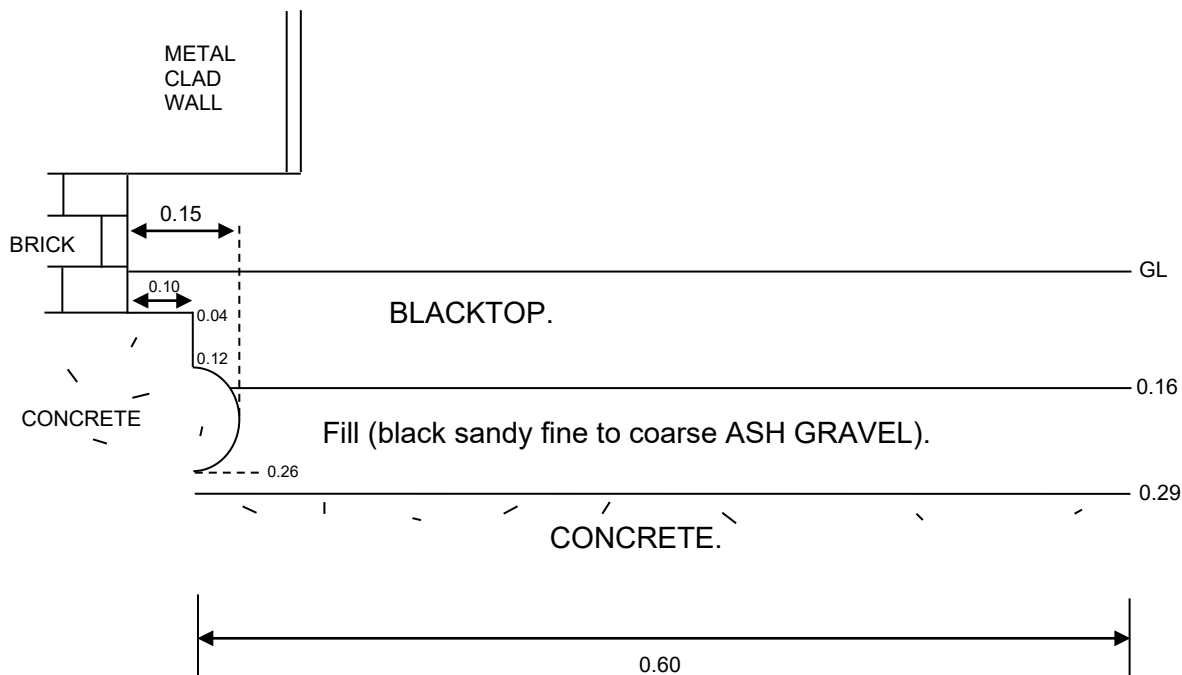
GROUND INVESTIGATION SPECIALISTS LIMITED

TRIAL PIT LOG

CONTRACT: Unit 32 Stakehill Industrial Estate, Middleton	TRIAL PIT No. TP1
CLIENT: Ample Power Ltd	SHEET 1 OF 1
ENGINEER: BJSE	JOB No. 2715

DATES EXCAVATED: 26.09.2025	GROUND LEVEL: c. 49.2 m AOD	TECHNICIAN: CSN
EXCAVATION METHOD: Hand	CO-ORDINATES: -	WEATHER: Sunny

CROSS SECTION (m) :



GROUND WATER OBSERVATION:

Dry

STABILITY OF EXCAVATION:

Sides stable and even

SAMPLES TAKEN:

No samples taken

IN-SITU TESTS UNDERTAKEN:

No tests taken

REMARKS:

Trial pit terminated at 0.29 due to flat concrete obstruction.

FIG NO.

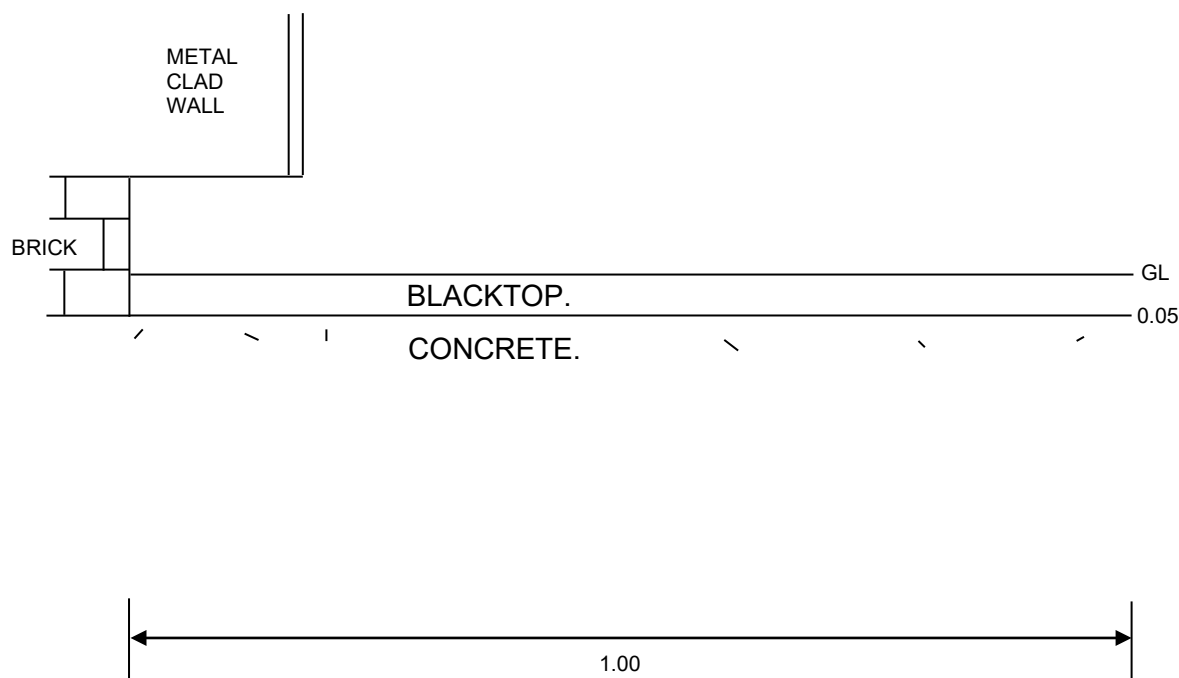
GROUND INVESTIGATION SPECIALISTS LIMITED

TRIAL PIT LOG

CONTRACT: Unit 32 Stakehill Industrial Estate, Middleton	TRIAL PIT No. TP1A
CLIENT: Ample Power Ltd	SHEET 1 OF 1
ENGINEER: BJSE	JOB No. 2715

DATES EXCAVATED: 26.09.2025	GROUND LEVEL: c. 49.2 m AOD	TECHNICIAN: CSN
EXCAVATION METHOD: Hand	CO-ORDINATES: -	WEATHER: Sunny

CROSS SECTION (m) :



GROUND WATER OBSERVATION:

Dry

STABILITY OF EXCAVATION:

Sides stable and even

SAMPLES TAKEN:

No samples taken

IN-SITU TESTS UNDERTAKEN:

No tests taken

REMARKS:

Trial pit terminated at 0.05 m due to flat concrete obstruction.

FIG NO.

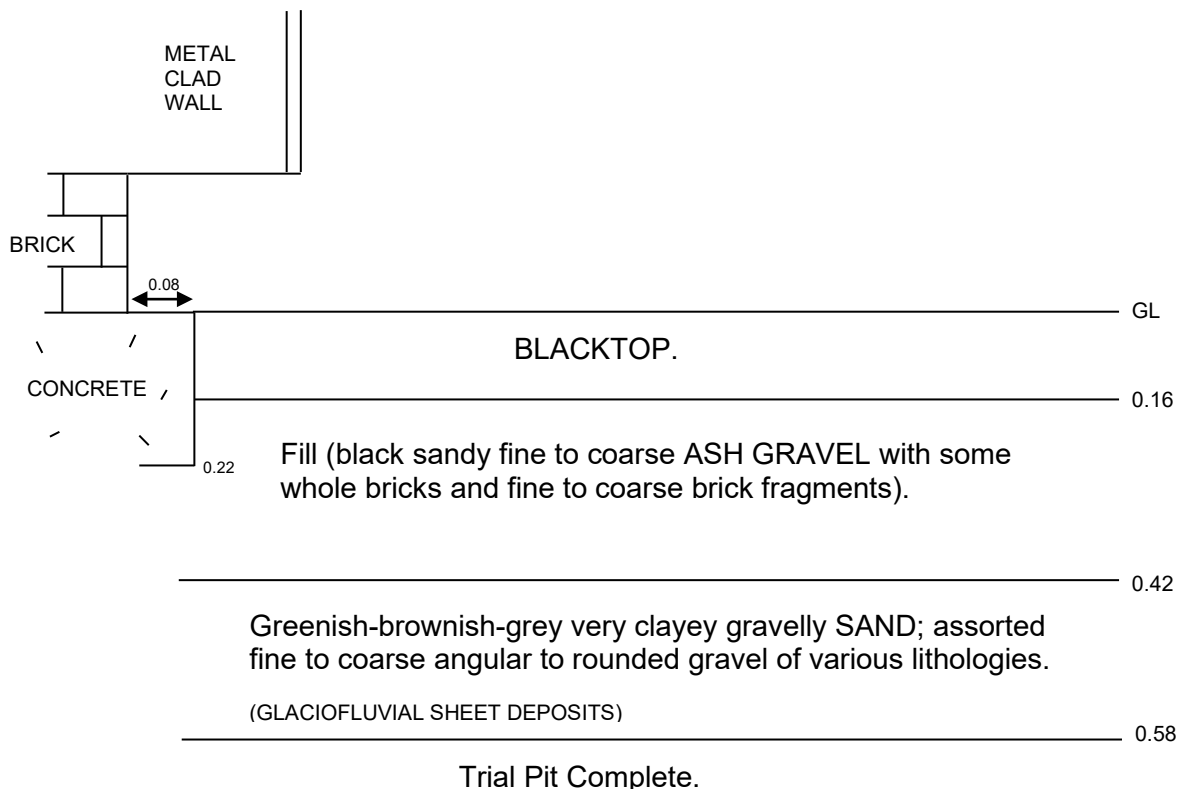
GROUND INVESTIGATION SPECIALISTS LIMITED

TRIAL PIT LOG

CONTRACT: Unit 32 Stakehill Industrial Estate, Middleton	TRIAL PIT No. TP2
CLIENT: Ample Power Ltd	SHEET 1 OF 1
ENGINEER: BJSE	JOB No. 2715

DATES EXCAVATED: 26.09.2025	GROUND LEVEL: c. 49.1 m AOD	TECHNICIAN: CSN
EXCAVATION METHOD: Hand	CO-ORDINATES: -	WEATHER: Sunny

CROSS SECTION (m) :



GROUND WATER OBSERVATION:

Dry

STABILITY OF EXCAVATION:

Sides stable and even

SAMPLES TAKEN:

Environmental Suite at 0.30 m
Disturbed Sample at 0.30 m and 0.50 m.

IN-SITU TESTS UNDERTAKEN:

No tests taken

REMARKS:

FIG NO.

GROUND INVESTIGATION SPECIALISTS LIMITED

TRIAL PIT LOG

CONTRACT: Unit 32 Stakehill Industrial Estate, Middleton	TRIAL PIT No. TP3
CLIENT: Ample Power Ltd	SHEET 1 OF 1
ENGINEER: BJSE	JOB No. 2715

DATES EXCAVATED: 26.09.2025	GROUND LEVEL: c. 49.5 m AOD	TECHNICIAN: CSN
EXCAVATION METHOD: Hand	CO-ORDINATES: -	WEATHER: Sunny

CROSS SECTION (m) :

GL —————

BLACKTOP.

0.17 —————

Fill (light greyish-brown sandy fine to coarse angular limestone
hardcore GRAVEL).

0.37 —————

Fill (brown very sandy fine to coarse angular hardcore GRAVEL).

0.59 —————

Disturbed ground (soft dark greenish-brownish-grey sandy silty
slightly gravelly CLAY with occasional decomposed rootlets,
occasional fine to coarse ash fragments and occasional land
drain fragments).

1.24 —————

Trial Pit Complete.

GROUND WATER OBSERVATION:

Dry

STABILITY OF EXCAVATION:

Sides stable and even

SAMPLES TAKEN:

Environmental Suite at 0.60 m

IN-SITU TESTS UNDERTAKEN:

No tests taken

REMARKS:

FIG NO.

7.0 GEOTECHNICAL LABORATORY TEST RESULTS

GEOLABS Limited
Albany House
Station Road
Coleshill
North Warwickshire
B46 1HT
Tel: +44(0) 121 296 4600

email: admin@geolabs.co.uk
web: www.geolabs.co.uk

Ground Investigation Specialists Limited
First Floor, Lowcroft House
Church Road
Wombourne
WV5 9EZ

17 October 2025

Report No : GEO/43456/01

Page 1 of 1

For the attention of Mr C Noakes

Our ref	GEO / 43456	Date samples received	03/10/2025
Your ref	J.2715	Date written instructions received	03/10/2025
Order ref	J.2715	Date testing commenced	04/10/2025
		Date of sample disposal	14/11/2025

Project **MIDDLETON**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	~	Liquid & Plastic Limits Summary
~	1	Water Content
2	1	Liquid & Plastic Limits
3	~	Geochemical Test Summary
~	3	BRE SD1 Suite A - Natural ground
4	1	Particle Size Distribution

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional and may be subject to change unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**



J A Reynolds
Director

Test Type:	2 - 4 point 80g / 30° fall cone method.	Sample condition:	1 - As Received 2 - Air Dried 3 - Washed & Air Dried
-------------------	---	--------------------------	--

J A Reynolds - Director
17/10/2025

MIDDLETON
J.2715



LIQUID AND PLASTIC LIMITS

Location WS1
Depth (m) 1.00
Sample Type D

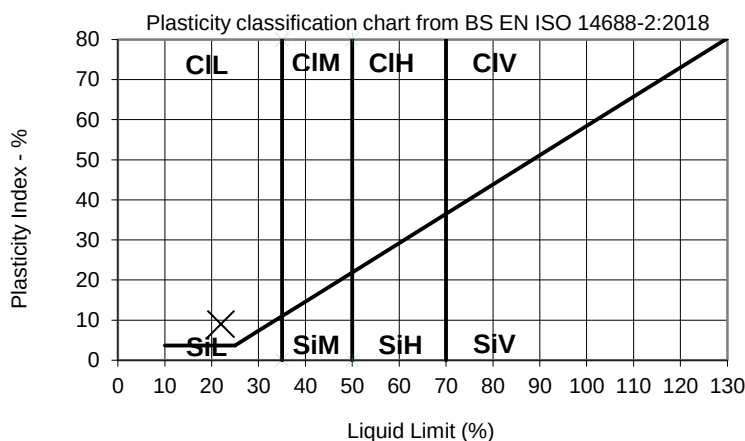
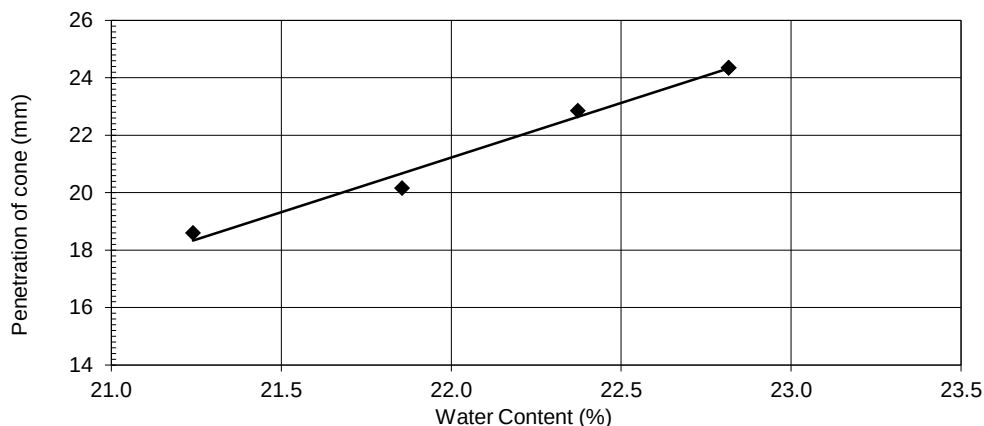
Description:

Brown mottled reddish brown and yellowish brown sandy CLAY with rare fine to medium gravel.

Preparation : Sample as received with discrete coarse particles removed by hand.

Water Content : (BS EN ISO 17892-1:2014+A1:2022) 13.0 %
Estimated percentage passing 425µm sieve : 94 %
Liquid Limit - Fall Cone 4 point Method (cone angle 30°) with increasing water content : 22 %
Plastic Limit : 13 %
Plasticity Index : 9 %

Equivalent Water Content of material passing 425µm sieve : 13.8 %
Liquidity Index : 0.09



Tested by AJ
Checked and Approved by

J A Reynolds

J A Reynolds - Director
17/10/2025

Project Number:

GEO / 43456

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**MIDDLETON
J.2715**

GEOLABS



Tested by i2 Analytical : MCERTS / UKAS No 4041

GEOLABSPage 1 of 1
(Ref 1760698675)

PARTICLE SIZE DISTRIBUTION

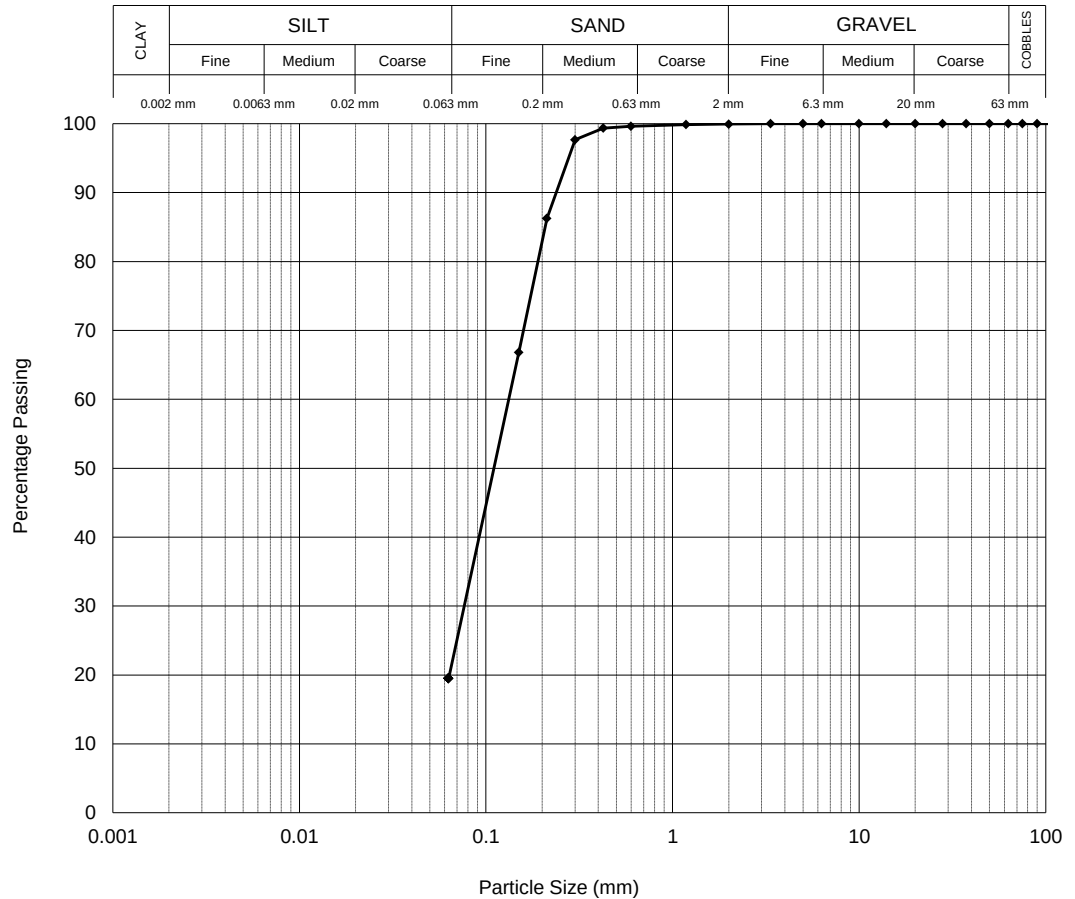
Location WS1
Sample Depth 0.80 m
Sample Type D

Description

Dark brown clayey SAND.

BS EN ISO 17892-4 : 2016 : Clause 5.2 - Wet Sieve

Sieve	
Size	% Pass
200.0 mm	100
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	100
20.0 mm	100
14.0 mm	100
10.0 mm	100
6.30 mm	100
5.00 mm	100
3.35 mm	100
2.00 mm	100
1.18 mm	100
600 µm	100
425 µm	99
300 µm	98
212 µm	86
150 µm	67
63 µm	20



Particle Proportions	
Cobbles	0.0
Gravel	0.1
Sand	80.4
Silt & Clay	19.5

Tested by JB
Checked and Approved by

J A Reynolds - Director
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