

Appendix C





Scientific Analysis Laboratories Ltd

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 378899-3

Date of Report: 11-Mar-2014

Customer: Ashton Bennett Consultancy
Unit K
Bridge Mills
Huddersfield Road
Holmfirth
HD9 3TW

Customer Contact: Ms Frances Bennett

Customer Job Reference: 3135
Customer Purchase Order: 3135
Customer Site Reference: ABC
Date Job Received at SAL: 21-Feb-2014
Date Analysis Started: 28-Feb-2014
Date Analysis Completed: 11-Mar-2014

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs
All results have been reviewed in accordance with QP22



Report checked
and authorised by :
Chris Murphy
Project Manager

Issued by :
Chris Murphy
Project Manager

<p>SAL Reference: 378899 Project Site: ABC Customer Reference: 3135</p> <p>Soil Heavy Metals(9) Analysed as Soil</p>							
SAL Reference					378899 003	378899 012	378899 020
Customer Sample Reference					WS1 1-1.45	WS2 1-1.45	WS3 1-1.45
Date Sampled					Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units			
Arsenic	T6	AR	1	mg/kg	14	21	16
Cadmium	T6	AR	1	mg/kg	<1	<1	<1
Chromium	T6	AR	1	mg/kg	49	42	58
Copper	T6	AR	1	mg/kg	29	17	20
Lead	T6	AR	1	mg/kg	30	18	18
Mercury	T6	AR	1	mg/kg	<1	<1	<1
Nickel	T6	AR	1	mg/kg	44	49	32
Selenium	T6	AR	3	mg/kg	<3	<3	<3
Zinc	T6	AR	1	mg/kg	120	51	80

<p>SAL Reference: 378899 Project Site: ABC Customer Reference: 3135</p> <p>Soil Miscellaneous Analysed as Soil</p>									
SAL Reference				378899 001	378899 002	378899 003	378899 005	378899 009	
Customer Sample Reference				WS1 0.35	WS1 0.8	WS1 1-1.45	WS1 2-2.45	WS2 0.2	
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units					
Asbestos	T27	AR			-	N.D.	-	-	-
Chromium VI	T6	AR	1	mg/kg	-	-	<1	-	-
SO4(Total)	T6	AR	0.01	%	-	-	-	0.09	-
Total Petroleum Hydrocarbons	T8	AR	1	mg/kg	20	-	-	-	35
pH	T7	AR			-	-	-	8.1	-

<p>SAL Reference: 378899 Project Site: ABC Customer Reference: 3135</p> <p>Soil Miscellaneous Analysed as Soil</p>									
SAL Reference				378899 010	378899 012	378899 014	378899 018	378899 019	
Customer Sample Reference				WS2 0.35	WS2 1-1.45	WS2 2-2.45	WS3 0.2	WS3 0.25	
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units					
Asbestos	T27	AR			N.D.	-	-	-	N.D.
Chromium VI	T6	AR	1	mg/kg	-	<1	-	-	-
SO4(Total)	T6	AR	0.01	%	-	-	0.07	-	-
Total Petroleum Hydrocarbons	T8	AR	1	mg/kg	-	-	-	<1	-
pH	T7	AR			-	-	7.5	-	-

SAL Reference: 378899						
Project Site: ABC						
Customer Reference: 3135						
Soil				Analysed as Soil		
Miscellaneous						
SAL Reference					378899 020	378899 021
Customer Sample Reference					WS3 1-1.45	WS3 2-2.45
Date Sampled					Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units		
Chromium VI	T6	AR	1	mg/kg	<1	-
SO4(Total)	T6	AR	0.01	%	-	0.05
pH	T7	AR			-	7.3

SAL Reference: 378899							
Project Site: ABC							
Customer Reference: 3135							
Soil				Analysed as Soil			
Total and Speciated USEPA16 PAH							
SAL Reference					378899 001	378899 009	378899 018
Customer Sample Reference					WS1 0.35	WS2 0.2	WS3 0.2
Date Sampled					Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1	
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1	
Acenaphthene	T16	AR	0.1	mg/kg	<0.1	<0.1	
Fluorene	T16	AR	0.1	mg/kg	<0.1	<0.1	
Phenanthrene	T16	AR	0.1	mg/kg	0.3	0.8	
Anthracene	T16	AR	0.1	mg/kg	<0.1	0.1	
Fluoranthene	T16	AR	0.1	mg/kg	0.8	1.7	
Pyrene	T16	AR	0.1	mg/kg	0.7	1.5	
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.3	0.4	
Chrysene	T16	AR	0.1	mg/kg	0.2	0.4	
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	0.7	1.3	
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.2	0.5	
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	0.3	
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1	
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.1	0.3	
PAH(total)	T16	AR	0.1	mg/kg	3.5	7.3	

Index to symbols used in 378899-3

Value	Description
AR	As Received
N.D.	Not Detected
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

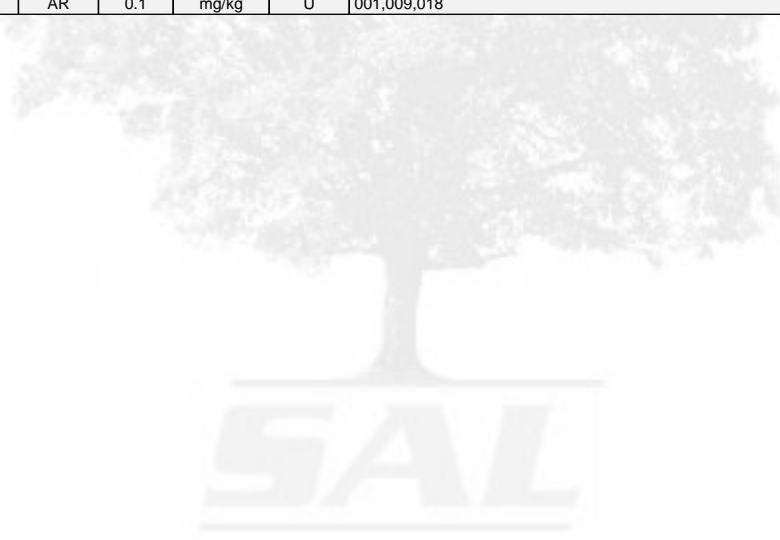
The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised

Method Index

Value	Description
T6	ICP/OES
T7	Probe
T16	GC/MS
T8	GC/FID
T27	PLM

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Asbestos	T27	AR			SU	002,010,019
Chromium VI	T6	AR	1	mg/kg	N	003,012,020
SO4(Total)	T6	AR	0.01	%	N	005,014,021
Total Petroleum Hydrocarbons	T8	AR	1	mg/kg	U	001,009,018
pH	T7	AR			U	005,014,021
Arsenic	T6	AR	1	mg/kg	U	003,012,020
Cadmium	T6	AR	1	mg/kg	U	003,012,020
Chromium	T6	AR	1	mg/kg	U	003,012,020
Copper	T6	AR	1	mg/kg	U	003,012,020
Lead	T6	AR	1	mg/kg	U	003,012,020
Mercury	T6	AR	1	mg/kg	U	003,012,020
Nickel	T6	AR	1	mg/kg	U	003,012,020
Selenium	T6	AR	3	mg/kg	U	003,012,020
Zinc	T6	AR	1	mg/kg	U	003,012,020
Naphthalene	T16	AR	0.1	mg/kg	U	001,009,018
Acenaphthylene	T16	AR	0.1	mg/kg	U	001,009,018
Acenaphthene	T16	AR	0.1	mg/kg	U	001,009,018
Fluorene	T16	AR	0.1	mg/kg	U	001,009,018
Phenanthrene	T16	AR	0.1	mg/kg	U	001,009,018
Anthracene	T16	AR	0.1	mg/kg	U	001,009,018
Fluoranthene	T16	AR	0.1	mg/kg	U	001,009,018
Pyrene	T16	AR	0.1	mg/kg	U	001,009,018
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	001,009,018
Chrysene	T16	AR	0.1	mg/kg	U	001,009,018
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	U	001,009,018
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	001,009,018
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	001,009,018
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	001,009,018
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	001,009,018
PAH(total)	T16	AR	0.1	mg/kg	U	001,009,018





STRUCTURAL SOILS LTD
TEST REPORT



Report No. 781139 R1

1774

Date 14-March-2014 Contract 3135

Client Ashton Bennett Consultancy
Address Unit K
Bridge Mills
Huddersfield Road
Holmfirth HD9 3TW

For the Attention of Tristan Bennett

Samples submitted by client 28/02/2014
Testing Started 03/03/2014
Testing Completed 14/03/2014

Client Reference
Client Order No.
Instruction Type Written

UKAS Accredited Tests Undertaken

- Moisture Content (oven drying method) BS1377:Part 2:1990,clause 3.2
- Liquid Limit (definitive method) BS1377:Part 2:1990,clause 4.3
- Plastic Limit BS1377:Part 2:1990,clause 5.3
- Plasticity Index Derivation BS1377:Part 2:1990,clause 5.4

Please Note: Remaining samples will be retained for a period of one month from today and will then be disposed of

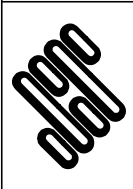
Approved signatories: Mark Athorne (Laboratory Manager) Richard Clarkson

Page 2 of

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990


Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index %	% <425um	Description of Sample
WS1	1	D	3.00	33	75	26	49	99	Brown grey slightly sandy slightly gravelly CLAY
WS3	1	D	3.00	35	76	26	50	100	Grey brown slightly sandy slightly gravelly CLAY
WS3	2	D	4.00	32	71	27	44	100	Grey brown slightly sandy CLAY



STRUCTURAL SOILS LTD

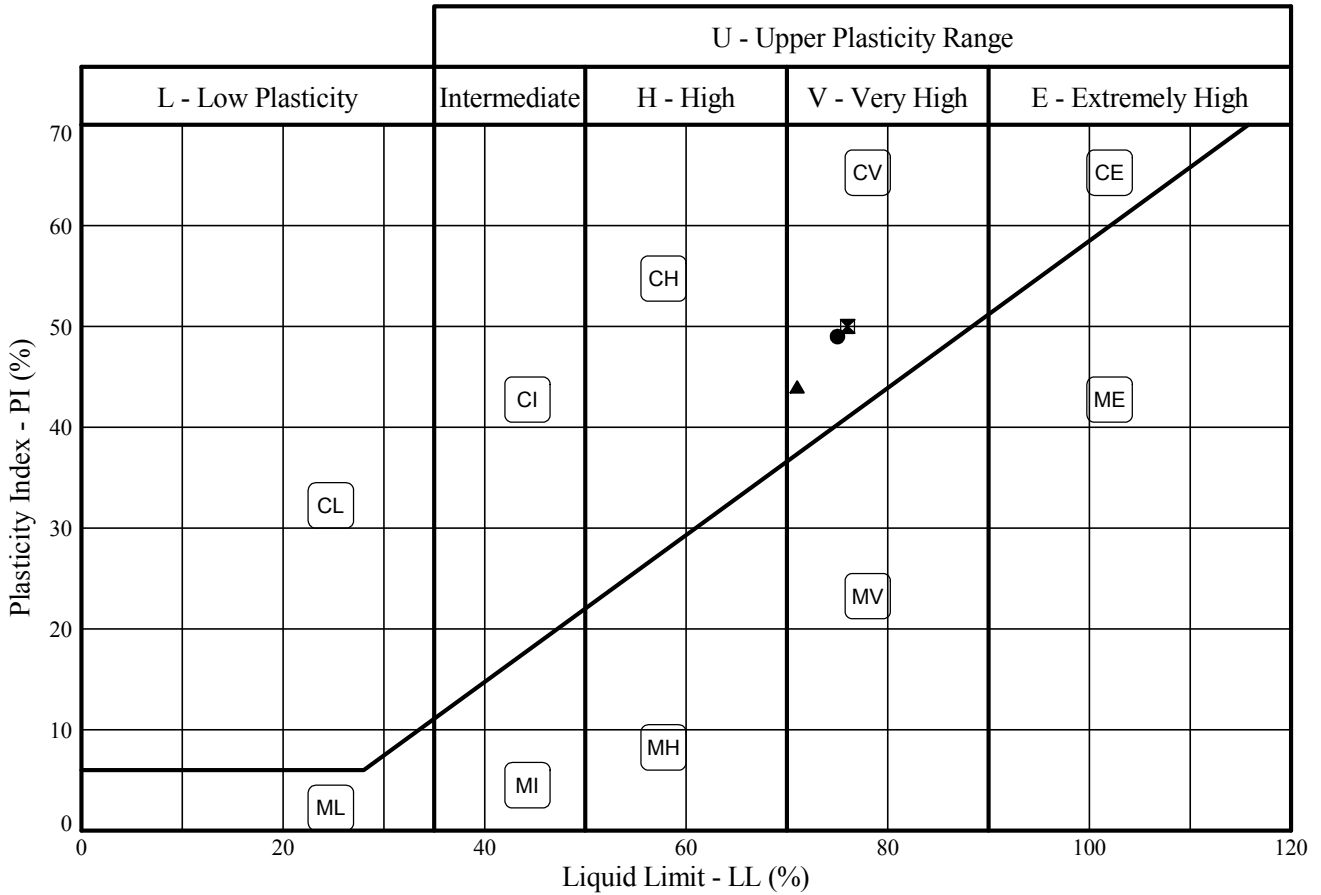
Contract: **3135**

Contract Ref: **781139**



PLASTICITY CHART - PI Vs LL

In accordance with clause 42.3 of BS5930:1999
Testing in accordance with BS1377-2:1990



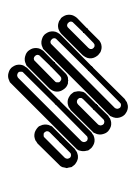
Sample Identification			BS Test Method #	Preparation Method +	MC %	LL %	PL %	PI %	<425um %	
Exploratory Position ID	Sample	Depth (m)								
●	WS1	1D	3.00	3.2/4.3/5.3/5.4	4.2.4	33	75	26	49	99
⊠	WS3	1D	3.00	3.2/4.3/5.3/5.4	4.2.4	35	76	26	50	100
▲	WS3	2D	4.00	3.2/4.3/5.3/5.4	4.2.3	32	71	27	44	100

Tested in accordance with the following clauses of BS1377-2:1990.
3.2 - Moisture Content
4.3 - Cone Penetrometer Method
4.4 - One Point Cone Penetrometer Method
4.6 - One Point Casagrande Method
5.3 - Plastic Limit Method
5.4 - Plasticity Index

+ Tested in accordance with the following clauses of BS1377-2:1990.
4.2.3 - Natural State
4.2.4 - Wet Sieved

Key: * = Non standard test, NP = Non plastic.

Approved Signatories: J.BARRETT M.MATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

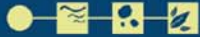


STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
<i>M. Fisher</i>		14/03/14
Contract		Contract Ref:
3135		781139



GINT_LIBRARY_v8_05.GLB Lib Version: v8_05 - Lib0004 PptVersion: v8_05 - Core+Logs+Geotech Lab-Castleford - 0002 | Graph L - ALINE STANDARD - EC7 | 781139 - 3135 GPJ - v8_05 | 14/03/14 - 14:34 | MF. Structural Soils Ltd, Branch Office - Castleford: The Potteries, Pottery Street, Castleford, West Yorkshire, WF10 1NJ. Tel: 01977-552255, Fax: 01977-552299, Web: www.soils.co.uk, Email: ask@soils.co.uk



Project Name
62 Mansfield Road

Project No.
3135

Co-ords: -

Hole Type
WLS

Location: Camden, London

Level: -

Scale
1:50

Client: Allan Properties Ltd

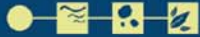
Dates: 19/02/2014

Logged By
T Bennett

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.14			0.14		Concrete	
		0.35 0.35	ES D		0.45		MADE GROUND - Brown clay with roots and gravel of red brick and limestone	
		0.80 1.00	D SPT	N=21 (3,4,4,4,6,7)	1.30		Medium strength orange brown silty mottled CLAY with roots and specks of carbonaceous material.	1
		1.00-1.45	SPTLS		1.30		Medium strength brown orange silty CLAY with inbedded rounded and sub rounded flint.	
		1.75 2.00	D SPT	N=14 (2,2,3,4,3,4)	1.95		Medium strength sandy orange brown CLAY with rounded to sub rounded flint pebbles.	2
		2.00-2.45	SPTLS		2.15		Medium strength brown blue silty London CLAY	
		2.50	D		3.00		Medium strength brown blue silty London CLAY.	3
		3.00 3.00-3.45	SPT SPTLS	N=13 (3,2,3,3,3,4)	3.00			
		3.25 3.50	D D		4.00			
		4.00 4.00-4.45	SPT SPTLS	N=16 (3,4,3,4,4,5)	4.45			4
					4.45		End of Borehole at 4.45 m	5
								6
								7
								8
								9

Remarks:





Project Name
62 Mansfield Road

Project No.
3135

Co-ords: -

Hole Type
WLS

Location: Camden, London

Level: -

Scale
1:50

Client: Allan Properties Ltd

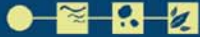
Dates: 19/02/2014

Logged By
T Bennett

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.03		CONCRETE	
		0.35	D		0.20		MADE GROUND - Black brown clay with gravel of red brick and flint with roots and carbonaceous material.	
		0.65	D		0.45		MADE GROUND - Brown clay with roots and gravel of red brick and flint and glass	
		1.00	SPT	N=12				
		1.00-1.45	SPTLS	(1,2,2,3,2,5)			Medium strength brown orange mottled silty CLAY with carbonaceous materials.	1
		1.90	D		1.60		Medium strength brown orange silty cobbly CLAY. Cobbles are sub rounded rounded flint	
		2.00	SPT	N=15				2
		2.00-2.45	SPTLS	(3,3,3,3,4,5)	2.20		Medium becoming high strength brown blue silty London CLAY	
		2.75	D					3
		2.80	SPT	N=14				
	2.80-3.25	SPTLS	(3,2,3,3,4,4)				4	
	3.60	D						
	3.80	SPT	N=18					
	3.80-4.25	SPTLS	(4,3,4,4,5,5)	4.25			End of Borehole at 4.25 m	5
								6
								7
								8
								9

Remarks: Standpipe installed.





Project Name
62 Mansfield Road

Project No.
3135

Co-ords: -

Hole Type
WLS

Location: Camden, London

Level: -

Scale
1:50

Client: Allan Properties Ltd

Dates: 19/02/2014

Logged By
T Bennett

Well	Water Strikes	Samples & In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.10		CONCRETE	
		0.25	D		0.15		MADE GROUND - Gravel of red brick concrete limestone and sandstone with roots	
					0.30		MADE GROUND - Brown red grey mottled clay with red brick and flint gravel	
		1.00	SPT	N=27	1.25		High strength brown orange mottled silty CLAY with roots and carbonaceous materials.	
		1.00-1.45	SPTLS	(6,6,6,6,7,8)			Medium strength brown orange silty cobbly CLAY. Cobbles are rounded to sub rounded flint.	
		2.00	SPT	N=13	2.00		Medium strength brown blue silty London CLAY	
		2.00-2.45	SPTLS	(2,2,3,3,3,4)				
		2.65	D					
		3.00	SPT	N=12	3.00			
		3.00-3.45	SPTLS	(2,3,2,3,3,4)				
3.50	D							
4.00	SPT	N=15	4.45					
4.00-4.45	SPTLS	(3,3,3,4,4,4)						
							End of Borehole at 4.45 m	

Remarks:

