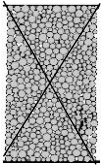


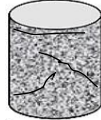
Total Stress Triaxial Compression

Unconsolidated Undrained (Single Stage)

Summary Report

Sample Details  <i>sketch showing specimen location in original sample</i>	Depth 1.40		
	Description Yellowish brown slightly gravelly slightly sandy CLAY		
	Type	B	
	Initial Sample Length	L ₀	(mm) 74.1
	Initial Sample Diameter	D ₀	(mm) 38.2
	Initial Sample Weight	W ₀	(gr) 147.3
	Bulk Density	ρ ₀	(Mg/m ³) 1.73
	Particle Density	ρ _s	(Mg/m ³) 2.65

Initial Conditions			
Initial Cell Pressure	σ ₃	(kPa)	28
Strain Rate	m _s	(mm/min)	1.48180
Membrane Thickness	m _b	(mm)	0.26
Displacement Input	L _{IP}	(mm)	CH 2
Load Input	N _{IP}	(N)	CH 1
Initial Moisture	ω _i %	(%)	49
Initial Dry Density	ρ _{d0}	(Mg/m ³)	1.16
Initial Voids Ratio	e ₀	.	1.28
Initial Degree of Saturation	S _o	(%)	100

Final Conditions			
Max Deviator Stress	(σ ₁ - σ ₃) _f	(kPa)	113
Membrane Correction	m _c	(kPa)	1.439
Strain At Max Stress	ε _f %	(%)	4.57
Shear Strength	c _u	(kPa)	57
Final Moisture	ω _f %	(%)	49
Final Dry Density	ρ _{df}	(Mg/m ³)	1.16
Final Voids Ratio	e _f	.	1.28
Final Degree of Saturation	S _f	(%)	100.0
Notes			
			

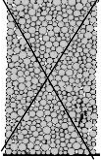
	Test Method BS1377-7 : 1990 Clause 8	Test Name 729309
	Database: .\SQLEXPRESS \ 6171-I2 Analytical	Test Date 12/04/2017
Site Reference Southall Jobfile 17-44724 Client Card	Borehole TP20C	Sample 2
	Depth 1.40	Operator palmowska
Checked pytlkm		Approved pytlkm

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Total Stress Triaxial Compression

Unconsolidated Undrained (Single Stage)

Summary Report

Sample Details  <i>sketch showing specimen location in original sample</i>	Depth 0.40		
	Description Yellowish brown slightly gravelly slightly sandy CLAY		
	Type	D	
	Initial Sample Length	L ₀	(mm) 75.2
	Initial Sample Diameter	D ₀	(mm) 37.5
	Initial Sample Weight	W ₀	(gr) 157.2
	Bulk Density	ρ ₀	(Mg/m ³) 1.89
	Particle Density	ρ _s	(Mg/m ³) 2.65

Initial Conditions			
Initial Cell Pressure	σ ₃	(kPa)	8
Strain Rate	m _s	(mm/min)	1.50480
Membrane Thickness	m _b	(mm)	0.23
Displacement Input	L _{IP}	(mm)	CH 2
Load Input	N _{IP}	(N)	CH 1
Initial Moisture	ω _i %	(%)	33
Initial Dry Density	ρ _{d0}	(Mg/m ³)	1.43
Initial Voids Ratio	e ₀	.	0.86
Initial Degree of Saturation	S _o	(%)	100

Final Conditions			
Max Deviator Stress	(σ ₁ - σ ₃) _f	(kPa)	94
Membrane Correction	m _c	(kPa)	2.057
Strain At Max Stress	ε _f %	(%)	12.37
Shear Strength	c _u	(kPa)	47
Final Moisture	ω _f %	(%)	33
Final Dry Density	ρ _{df}	(Mg/m ³)	1.43
Final Voids Ratio	e _f	.	0.86
Final Degree of Saturation	S _f	(%)	100.0
Notes			
 Failure Sketch (surface inclination) 			

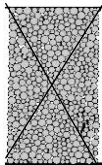
 Environmental Science	Test Method BS1377-7 : 1990 Clause 8		Test Name 729310	
	Database: .\SQLEXPRESS \ 6171-I2 Analytical		Test Date 12/04/2017	
	Site Reference Southall		Borehole TP22C	
	Jobfile 17-44724		Sample 1	
	Client Card		Depth 0.40	
Operator palmowska			Checked pytlkm	Approved pytlkm

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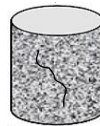
Total Stress Triaxial Compression

Unconsolidated Undrained (Single Stage)

Summary Report

Sample Details  sketch showing specimen location in original sample	Depth	2.50		
	Description	Dark brown slightly gravelly organic CLAY		
	Type	D		
	Initial Sample Length	L ₀	(mm)	68.9
	Initial Sample Diameter	D ₀	(mm)	37.8
	Initial Sample Weight	W ₀	(gr)	118.5
	Bulk Density	ρ ₀	(Mg/m ³)	1.53
	Particle Density	ρ _s	(Mg/m ³)	2.65

Initial Conditions			
Initial Cell Pressure	σ ₃	(kPa)	50
Strain Rate	m _s	(mm/min)	1.37780
Membrane Thickness	m _b	(mm)	0.22
Displacement Input	L _{IP}	(mm)	CH 2
Load Input	N _{IP}	(N)	CH 1
Initial Moisture	ω _i %	(%)	65
Initial Dry Density	ρ _{d0}	(Mg/m ³)	0.93
Initial Voids Ratio	e ₀	.	1.86
Initial Degree of Saturation	S _o	(%)	93

Final Conditions			
Max Deviator Stress	(σ ₁ - σ ₃) _f	(kPa)	62
Membrane Correction	m _c	(kPa)	1.458
Strain At Max Stress	ε _f %	(%)	10.00
Shear Strength	c _u	(kPa)	31
Final Moisture	ω _f %	(%)	65
Final Dry Density	ρ _{df}	(Mg/m ³)	0.93
Final Voids Ratio	e _f	.	1.86
Final Degree of Saturation	S _f	(%)	93.3
Notes			
 Failure Sketch (surface inclination) 			

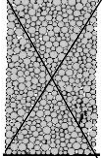
 Environmental Science	Test Method BS1377-7 : 1990 Clause 8		Test Name 729314	
	Database: .\SQLEXPRESS \ 6171-I2 Analytical		Test Date 12/04/2017	
	Site Reference Southall		Borehole TP27C	
	Jobfile 17-44724		Sample 1	
	Client Card		Depth 2.50	
	Operator palmowska	Checked pytlkm	Approved pytlkm	

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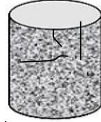
Total Stress Triaxial Compression

Unconsolidated Undrained (Single Stage)

Summary Report

Sample Details  <i>sketch showing specimen location in original sample</i>	Depth 0.70 Description Brown slightly sandy CLAY Type B		
	Initial Sample Length L ₀ (mm) 72.2 Initial Sample Diameter D ₀ (mm) 37.7 Initial Sample Weight W ₀ (gr) 153.9 Bulk Density ρ ₀ (Mg/m ³) 1.91 Particle Density ρ _s (Mg/m ³) 2.65		

Initial Conditions			
Initial Cell Pressure	σ ₃	(kPa)	14
Strain Rate	m _s	(mm/min)	1.44320
Membrane Thickness	m _b	(mm)	0.23
Displacement Input	L _{IP}	(mm)	CH 2
Load Input	N _{IP}	(N)	CH 1
Initial Moisture	ω _i %	(%)	31
Initial Dry Density	ρ _{d0}	(Mg/m ³)	1.46
Initial Voids Ratio	e ₀	.	0.81
Initial Degree of Saturation	S _o	(%)	100

Final Conditions			
Max Deviator Stress	(σ ₁ - σ ₃) _f	(kPa)	98
Membrane Correction	m _c	(kPa)	2.228
Strain At Max Stress	ε _f %	(%)	13.50
Shear Strength	c _u	(kPa)	49
Final Moisture	ω _f %	(%)	31
Final Dry Density	ρ _{df}	(Mg/m ³)	1.46
Final Voids Ratio	e _f	.	0.81
Final Degree of Saturation	S _f	(%)	100.0
Notes 			
		 Failure Sketch (surface inclination)	

 Environmental Science	Test Method BS1377-7 : 1990 Clause 8 Database: .\SQLEXPRESS \ 6171-I2 Analytical	Test Name 729320 Test Date 12/04/2017
	Site Reference Southall Jobfile 17-44724 Client Card	Borehole TP21C Sample 729320 Depth 0.70
Operator palmowska Checked pytlkm		Approved pytlkm

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APPENDIX C

Lime Trial Test

Results



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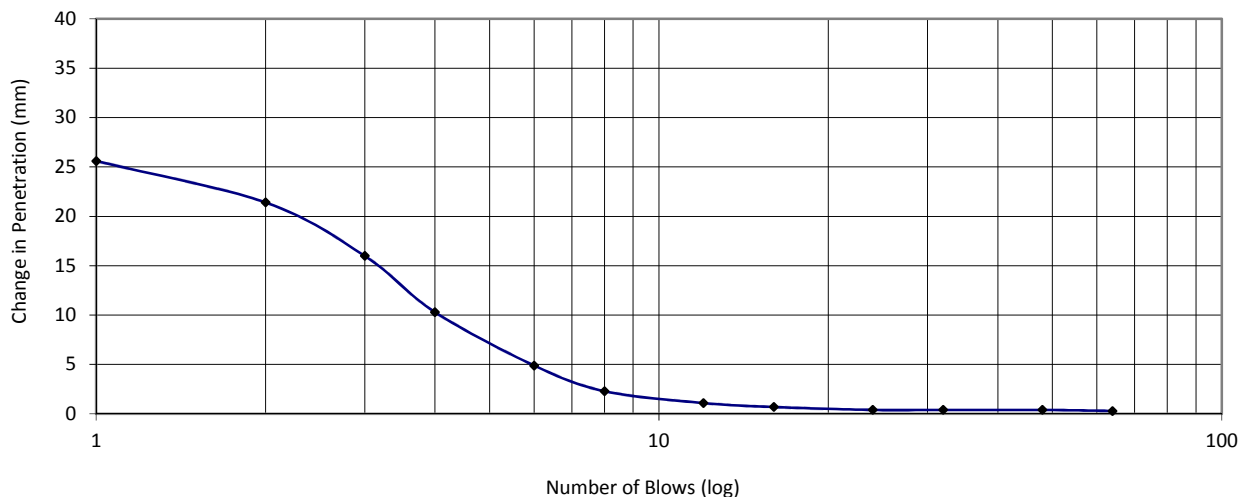
TEST REPORT: DETERMINATION OF MOISTURE CONDITION VALUE (M.C.V.)
BS 1377 Part 4 : 1990 Clause 5.4 - Natural Moisture Content

REPORT No.:	MH17-2992-2703-1	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4071/2	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	In-Situ
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay + 1.5% Lime
DATE RECEIVED:	27.03.2017	LOCATION:	Trial Pit
DATE TESTED:	11.04.2017	CERTIFICATE OF SAMPLING:	Yes
TESTED BY:	SM	VARIATIONS FROM STANDARD:	None
ORIENTATION OF TEST SPECIMEN		TYPE OF SAMPLE:	Disturbed
WITHIN ORIGINAL SAMPLE:	N/A		

RESULTS:

MOISTURE CONDITION VALUE	:	7.9
NATURAL MOISTURE CONTENT (%)	:	52.1
PERCENTAGE RETAINED 20mm (%)	:	0.0
INTERPRETATION OF CURVE	:	Best fit line
PREPARATION METHOD	:	BS 1377: Part 4: 1990 clause 5.4 (Natural and sieved through 20mm test sieve)

CHANGE IN PENETRATION vs No. OF BLOWS



REMARKS:

Checked and verified by:

Jon Champion

General Manager

24-Apr-17



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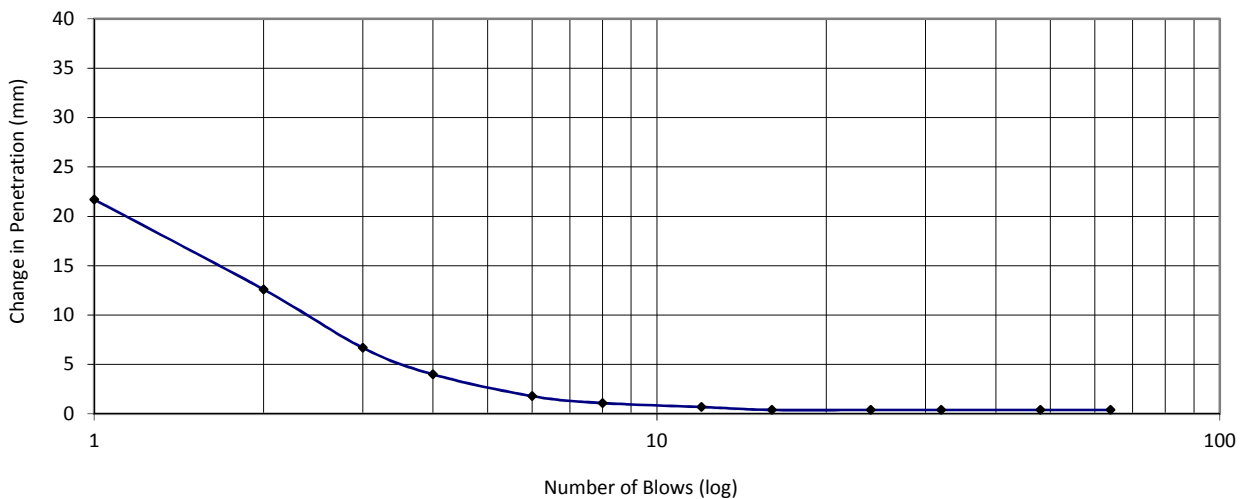
TEST REPORT: DETERMINATION OF MOISTURE CONDITION VALUE (M.C.V.)
BS 1377 Part 4 : 1990 Clause 5.4 - Natural Moisture Content

REPORT No.:	MH17-2992-2703-2	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4072/2	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	In-Situ
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay + 1% Lime & 2% GGBS
DATE RECEIVED:	27.03.2017	LOCATION:	Trial Pit
DATE TESTED:	11.04.2017	CERTIFICATE OF SAMPLING:	Yes
TESTED BY:	SM	VARIATIONS FROM STANDARD:	None
ORIENTATION OF TEST SPECIMEN		TYPE OF SAMPLE:	Disturbed
WITHIN ORIGINAL SAMPLE:	N/A		

RESULTS:

MOISTURE CONDITION VALUE	:	5.6
NATURAL MOISTURE CONTENT (%)	:	53.4
PERCENTAGE RETAINED 20mm (%)	:	0.0
INTERPRETATION OF CURVE	:	Best fit line
PREPARATION METHOD	:	BS 1377: Part 4: 1990 clause 5.4 (Natural and sieved through 20mm test sieve)

CHANGE IN PENETRATION vs No. OF BLOWS



REMARKS:

Checked and verified by:
Jon Champion
General Manager

12-Apr-17



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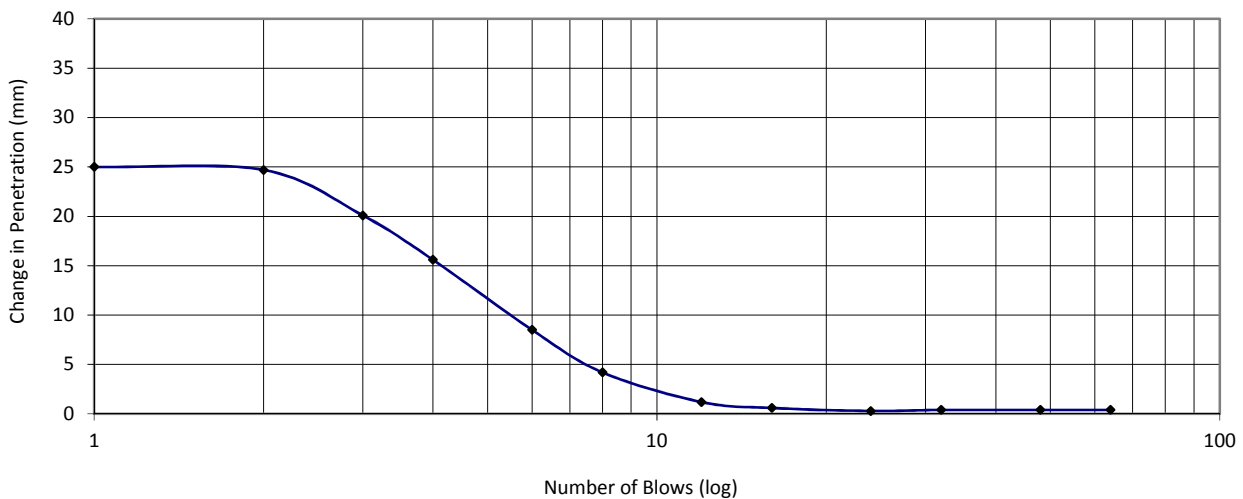
TEST REPORT: DETERMINATION OF MOISTURE CONDITION VALUE (M.C.V.)
BS 1377 Part 4 : 1990 Clause 5.4 - Natural Moisture Content

REPORT No.:	MH17-2992-2703-3	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4073/2	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	In-Situ
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay + 1.5% Lime & 3% GGBS
DATE RECEIVED:	27.03.2017	LOCATION:	Trial Pit
DATE TESTED:	11.04.2017	CERTIFICATE OF SAMPLING:	Yes
TESTED BY:	SM	VARIATIONS FROM STANDARD:	None
ORIENTATION OF TEST SPECIMEN		TYPE OF SAMPLE:	Disturbed
WITHIN ORIGINAL SAMPLE:	N/A		

RESULTS:

MOISTURE CONDITION VALUE	:	8.8
NATURAL MOISTURE CONTENT (%)	:	40.9
PERCENTAGE RETAINED 20mm (%)	:	0.0
INTERPRETATION OF CURVE	:	Best fit line
PREPARATION METHOD	:	BS 1377: Part 4: 1990 clause 5.4 (Natural and sieved through 20mm test sieve)

CHANGE IN PENETRATION vs No. OF BLOWS



REMARKS:

Checked and verified by:
Jon Champion
General Manager

12-Apr-17



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-4

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 4071

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Black Silty Clay + 1% Lime

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	55 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-5

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 4072

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Black Silty Clay + 1% Lime & 2% GGBS

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	58 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-6

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 4073

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Black Silty Clay + 1.5% Lime & 3% GGBS

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	52 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-7

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 3935

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Brown Silty Clay

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	29 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-6

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 4073

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Black Silty Clay + 1.5% Lime & 3% GGBS

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	52 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT : DETERMINATION OF THE MOISTURE CONTENT OF SOIL MATERIAL

BS 1377:Part 2:1990 clause 3.2 - oven drying method

REPORT No.: MH17-2992-2703-8

CLIENT: Beach Ground Engineering Ltd

SAMPLE No.: 3945

ADDRESS: Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath

CLIENT REF: -

SITE: Pump Lane, Hayes

DATE SAMPLED: 27.03.2017

SUPPLIER: In-Situ

SAMPLED BY: D.Wilkins

MATERIAL: Black Silty Clay

DATE RECEIVED: 27.03.2017

LOCATION: Trial Pits

DATE TESTED: 11.04.2017

ACCEPT STD.: Yes

TESTED BY: SM

PREPARATION METHOD: BS1377:Part1:1990 clauses 7.3 and 7.4.5

TYPE OF SAMPLE: Disturbed

VARIATIONS: None

ORIENTATION OF TEST SPECIMEN WITHIN

ORIGINAL SAMPLE : N/A

SPECIFICATION REQUIREMENTS	
LOWER LIMIT	UPPER LIMIT
(%)	(%)

MATERIAL MOISTURE CONTENT:	53 %	N/A	-	N/A
----------------------------	------	-----	---	-----

REMARKS:

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-9	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4069/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Brown Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	At Natural
DATE TESTED:	11-13.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day Air Cured	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.894	Mg/m ³
Moisture Content :	29	%
Dry Density :	1.465	Mg/m ³

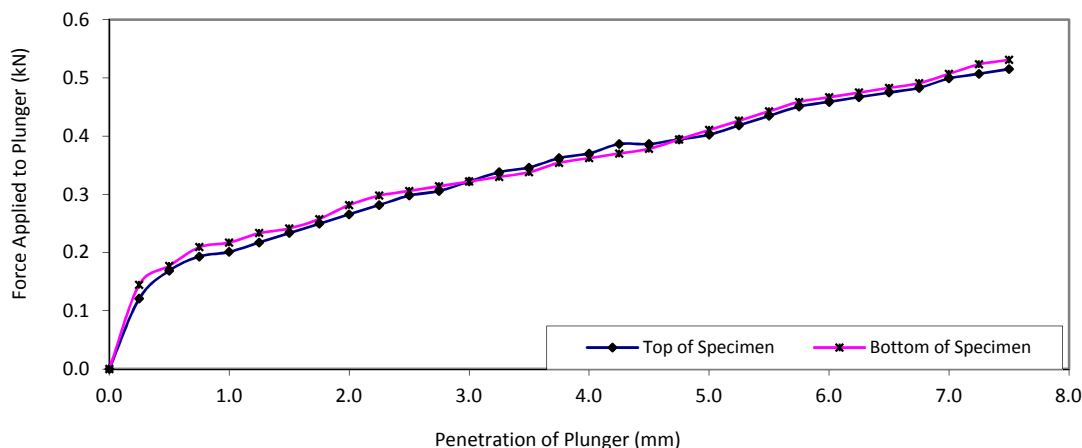
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.30	kN
CBR Value @ 2.5mm Penetration	: 2.2	%
Load on Plunger @ 5.0mm Penetration	: 0.40	kN
CBR Value @ 5.0mm Penetration	: 2.0	%
Top Half Moisture Content	: 29	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.31	kN
CBR Value @ 2.5mm Penetration	: 2.3	%
Load on Plunger @ 5.0mm Penetration	: 0.41	kN
CBR Value @ 5.0mm Penetration	: 2.1	%
Bottom Half Moisture Content	: 30	%

MEAN C.B.R VALUE: 2.3 %

**REMARKS:**

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:
Jon Champion
General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-10	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4070/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	At Natural
DATE TESTED:	11-13.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day Air Cured	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.582	Mg/m ³
Moisture Content :	53	%
Dry Density :	1.033	Mg/m ³

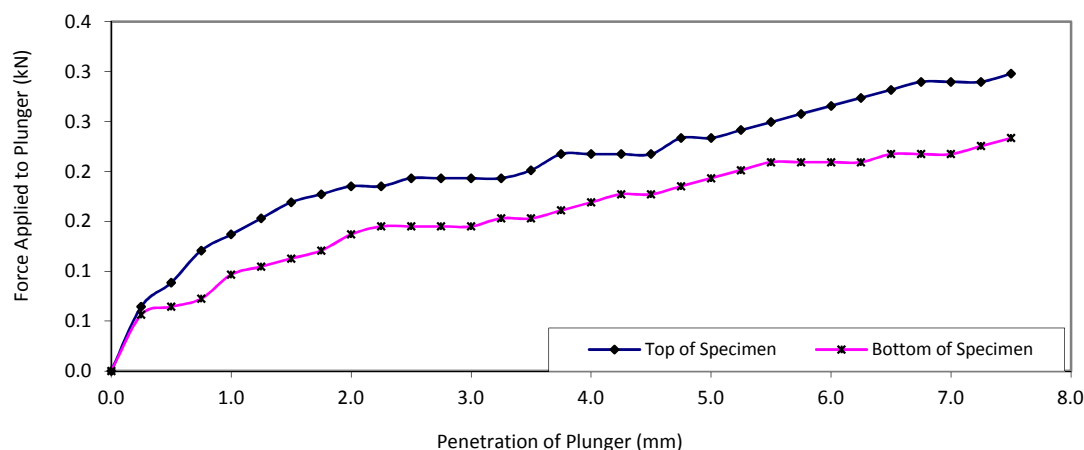
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.19	kN
CBR Value @ 2.5mm Penetration	: 1.5	%
Load on Plunger @ 5.0mm Penetration	: 0.23	kN
CBR Value @ 5.0mm Penetration	: 1.2	%
Top Half Moisture Content	: 53	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.14	kN
CBR Value @ 2.5mm Penetration	: 1.1	%
Load on Plunger @ 5.0mm Penetration	: 0.19	kN
CBR Value @ 5.0mm Penetration	: 1.0	%
Bottom Half Moisture Content	: 54	%

MEAN C.B.R VALUE: 1.3 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:
Jon Champion
General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-11	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4071/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1.5% Lime
DATE TESTED:	11-13.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day Air Cured	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.579	Mg/m ³
Moisture Content :	53	%
Dry Density :	1.030	Mg/m ³

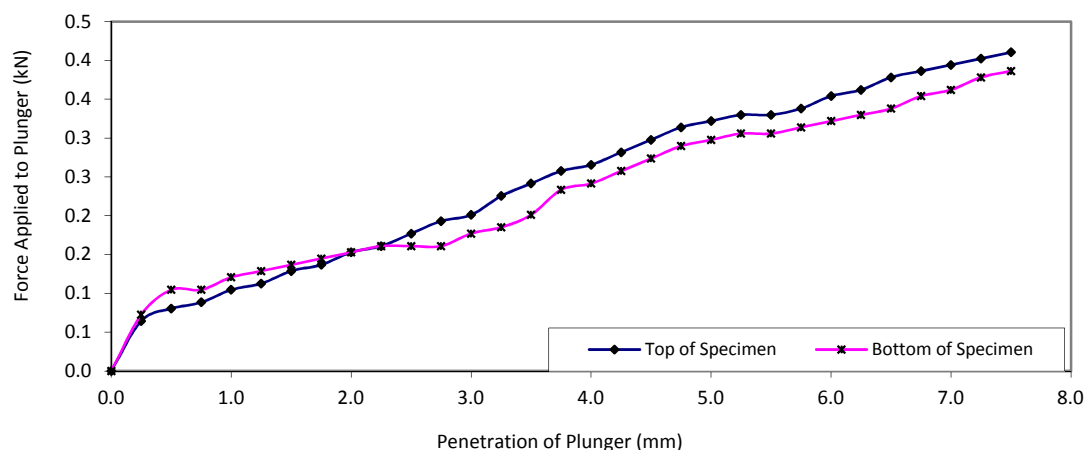
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.18	kN
CBR Value @ 2.5mm Penetration	: 1.3	%
Load on Plunger @ 5.0mm Penetration	: 0.32	kN
CBR Value @ 5.0mm Penetration	: 1.6	%
Top Half Moisture Content	: 53	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.16	kN
CBR Value @ 2.5mm Penetration	: 1.2	%
Load on Plunger @ 5.0mm Penetration	: 0.30	kN
CBR Value @ 5.0mm Penetration	: 1.5	%
Bottom Half Moisture Content	: 54	%

MEAN C.B.R VALUE: 1.6 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:
Jon Champion
General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-12	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4072/3	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1% Lime + 2% GGBS
DATE TESTED:	11-13.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day Air Cured	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.563	Mg/m ³
Moisture Content :	53	%
Dry Density :	1.020	Mg/m ³

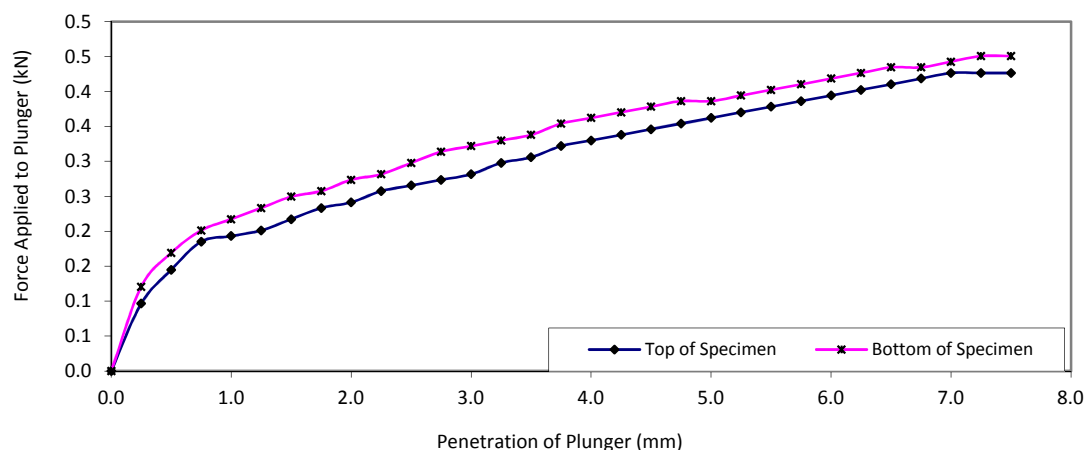
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.27	kN
CBR Value @ 2.5mm Penetration	: 2.0	%
Load on Plunger @ 5.0mm Penetration	: 0.36	kN
CBR Value @ 5.0mm Penetration	: 1.8	%
Top Half Moisture Content	: 53	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.30	kN
CBR Value @ 2.5mm Penetration	: 2.2	%
Load on Plunger @ 5.0mm Penetration	: 0.39	kN
CBR Value @ 5.0mm Penetration	: 1.9	%
Bottom Half Moisture Content	: 54	%

MEAN C.B.R VALUE: 2.1 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:
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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-13	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4073/3	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1.5% Lime + 3% GGBS
DATE TESTED:	11-13.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day Air Cured	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.543	Mg/m ³
Moisture Content :	53	%
Dry Density :	1.007	Mg/m ³

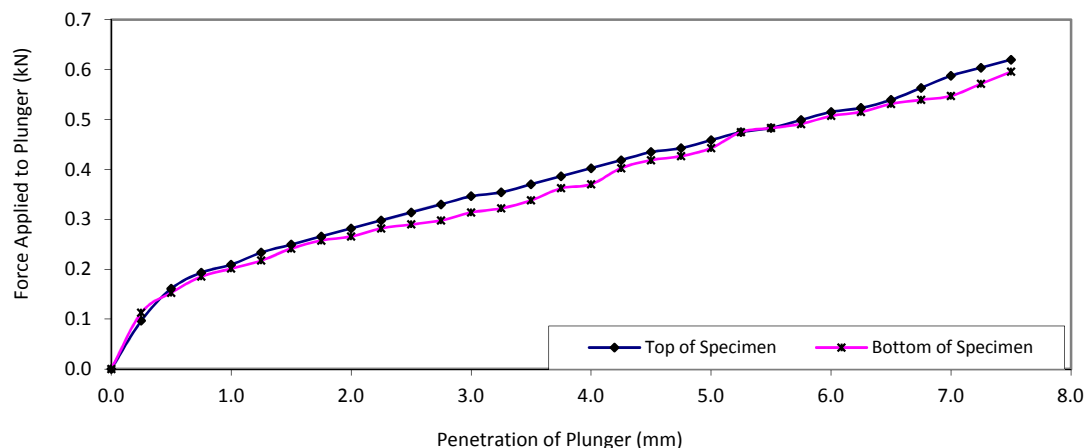
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.31	kN
CBR Value @ 2.5mm Penetration	: 2.4	%
Load on Plunger @ 5.0mm Penetration	: 0.46	kN
CBR Value @ 5.0mm Penetration	: 2.3	%
Top Half Moisture Content	: 53	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.29	kN
CBR Value @ 2.5mm Penetration	: 2.2	%
Load on Plunger @ 5.0mm Penetration	: 0.44	kN
CBR Value @ 5.0mm Penetration	: 2.2	%
Bottom Half Moisture Content	: 54	%

MEAN C.B.R VALUE: 2.3 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:
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General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-18	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4073/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1.5% Lime & 3% GGBS
DATE TESTED:	11-18.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	7 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.548	Mg/m ³
Moisture Content :	58	%
Dry Density :	0.981	Mg/m ³

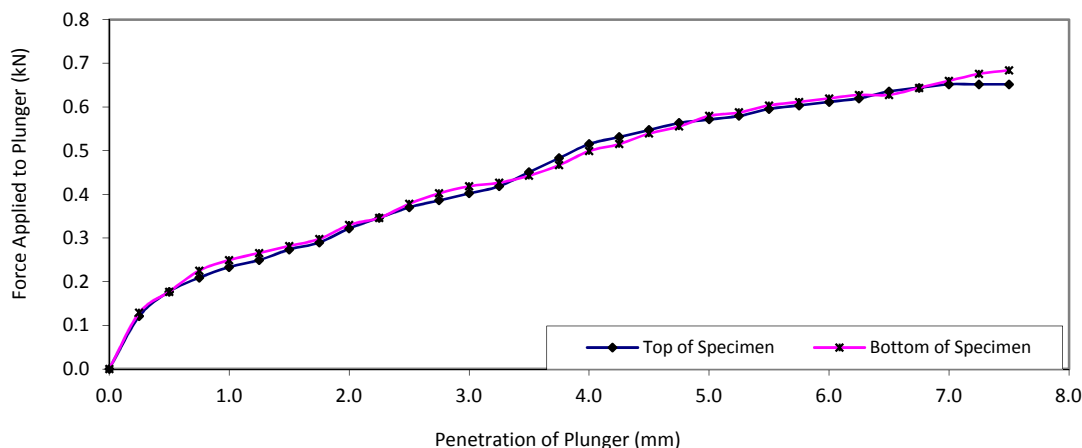
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.37	kN
CBR Value @ 2.5mm Penetration	: 2.8	%
Load on Plunger @ 5.0mm Penetration	: 0.57	kN
CBR Value @ 5.0mm Penetration	: 2.9	%
Top Half Moisture Content	: 58	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.38	kN
CBR Value @ 2.5mm Penetration	: 2.9	%
Load on Plunger @ 5.0mm Penetration	: 0.58	kN
CBR Value @ 5.0mm Penetration	: 2.9	%
Bottom Half Moisture Content	: 58	%

MEAN C.B.R VALUE: 2.9 %



REMARKS: Shear Vane - 76 KpA

Remaining sample will be retained for a minimum of 14 days from date of report.

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General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-17	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4072/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1% Lime & 2% GGBS
DATE TESTED:	11-18.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	7 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.559	Mg/m ³
Moisture Content :	59	%
Dry Density :	0.978	Mg/m ³

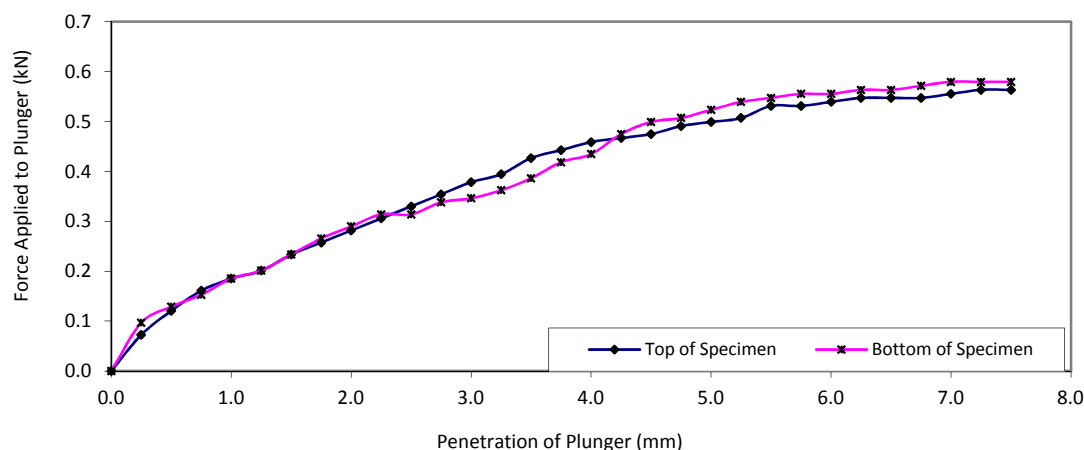
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.33	kN
CBR Value @ 2.5mm Penetration	: 2.5	%
Load on Plunger @ 5.0mm Penetration	: 0.50	kN
CBR Value @ 5.0mm Penetration	: 2.5	%
Top Half Moisture Content	: 59	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.31	kN
CBR Value @ 2.5mm Penetration	: 2.4	%
Load on Plunger @ 5.0mm Penetration	: 0.52	kN
CBR Value @ 5.0mm Penetration	: 2.6	%
Bottom Half Moisture Content	: 59	%

MEAN C.B.R VALUE: 2.6 %



REMARKS: Shear Vane - 44 KpA

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:

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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-16	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4071/4	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	1.5% Lime
DATE TESTED:	11-18.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	7 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.568	Mg/m ³
Moisture Content :	59	%
Dry Density :	0.986	Mg/m ³

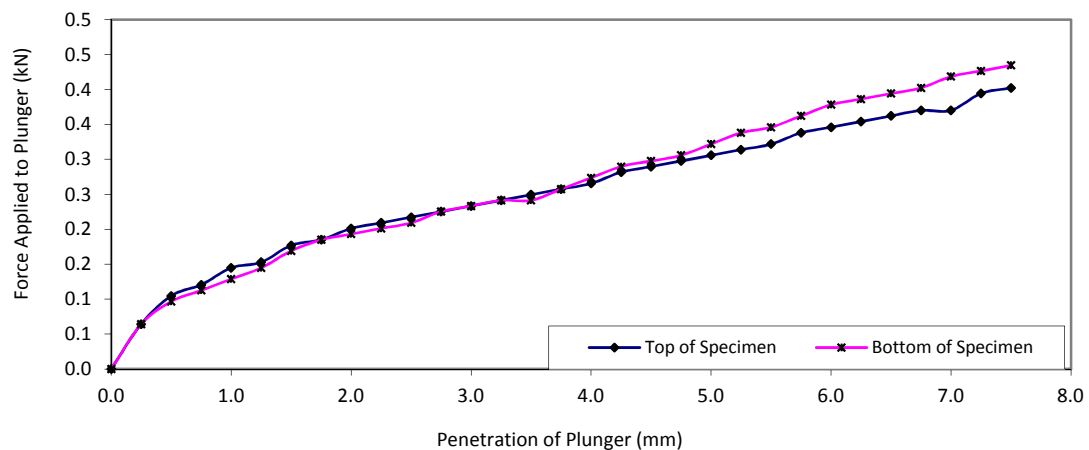
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.22	kN
CBR Value @ 2.5mm Penetration	: 1.6	%
Load on Plunger @ 5.0mm Penetration	: 0.31	kN
CBR Value @ 5.0mm Penetration	: 1.5	%
Top Half Moisture Content	: 59	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.21	kN
CBR Value @ 2.5mm Penetration	: 1.6	%
Load on Plunger @ 5.0mm Penetration	: 0.32	kN
CBR Value @ 5.0mm Penetration	: 1.6	%
Bottom Half Moisture Content	: 59	%

MEAN C.B.R VALUE: 1.6 %



REMARKS: Shear Vane - 42 KpA

Remaining sample will be retained for a minimum of 14 days from date of report.

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-15	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4070/5	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	At Natural
DATE TESTED:	11-18.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	7 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.568	Mg/m ³
Moisture Content :	61	%
Dry Density :	0.974	Mg/m ³

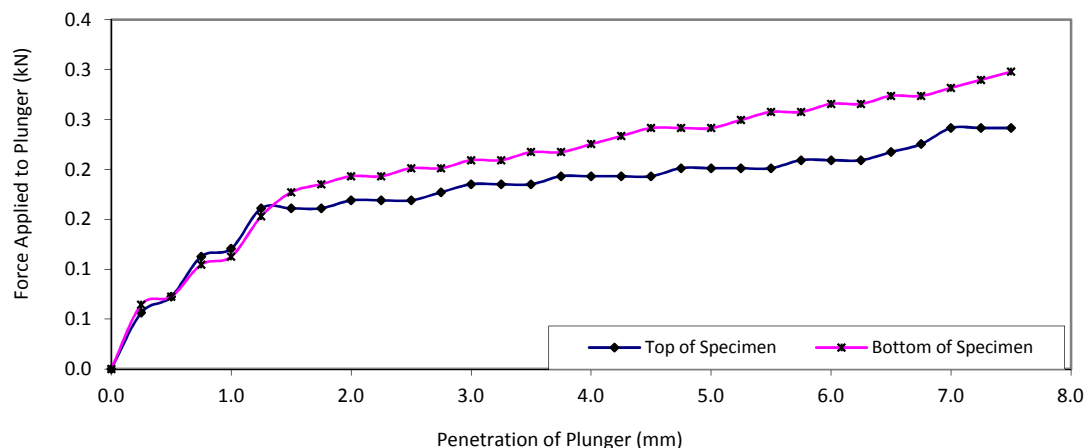
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.17	kN
CBR Value @ 2.5mm Penetration	: 1.3	%
Load on Plunger @ 5.0mm Penetration	: 0.20	kN
CBR Value @ 5.0mm Penetration	: 1.0	%
Top Half Moisture Content	: 61	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.20	kN
CBR Value @ 2.5mm Penetration	: 1.5	%
Load on Plunger @ 5.0mm Penetration	: 0.24	kN
CBR Value @ 5.0mm Penetration	: 1.2	%
Bottom Half Moisture Content	: 61	%

MEAN C.B.R VALUE: 1.4 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Approved Signatory
19-Apr-17

Checked and verified by:
Jon Champion
General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-14	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4069/5	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	Brown Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	At Natural
DATE TESTED:	11-18.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	7 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.895	Mg/m ³
Moisture Content :	29	%
Dry Density :	1.470	Mg/m ³

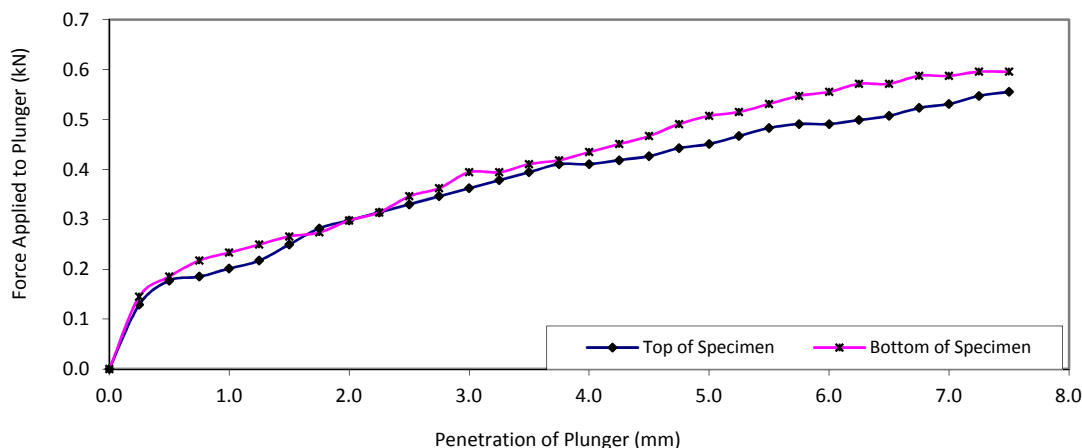
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.33	kN
CBR Value @ 2.5mm Penetration	: 2.5	%
Load on Plunger @ 5.0mm Penetration	: 0.45	kN
CBR Value @ 5.0mm Penetration	: 2.3	%
Top Half Moisture Content	: 29	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 0.35	kN
CBR Value @ 2.5mm Penetration	: 2.6	%
Load on Plunger @ 5.0mm Penetration	: 0.51	kN
CBR Value @ 5.0mm Penetration	: 2.5	%
Bottom Half Moisture Content	: 29	%

MEAN C.B.R VALUE: 2.6 %



REMARKS:

Remaining sample will be retained for a minimum of 14 days from date of report.

Approved Signatory

19-Apr-17

Checked and verified by:

Jon Champion

General Manager



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TEST REPORT: DETERMINATION OF THE CALIFORNIA BEARING RATIO (C.B.R.)

BS 1377 Part 4 : 1990 : clause 7

REPORT No.:	MH17-2992-2703-19	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	-	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	Site Won Material
SAMPLED BY:	D.Wilkins	MATERIAL:	60% Black Silty Clay + 40% Brown Silty Clay
DATE RECEIVED:	27.03.2017	ADDITIONS:	3% Lime & 5% GGBS
DATE TESTED:	24.04.2017	LOCATION:	Stockpile
TESTED BY:	S.Messer	PREPARATION METHOD:	2.5kg Rammer
CERTIFICATE OF SAMPLING:	Yes	VARIATIONS FROM STD:	None
CURING / SOAKING PERIOD:	3 Day	TYPE OF SAMPLE:	Disturbed

RESULTS:

Recompacted Bulk Density :	1.697	Mg/m ³
Moisture Content :	44	%
Dry Density :	1.180	Mg/m ³

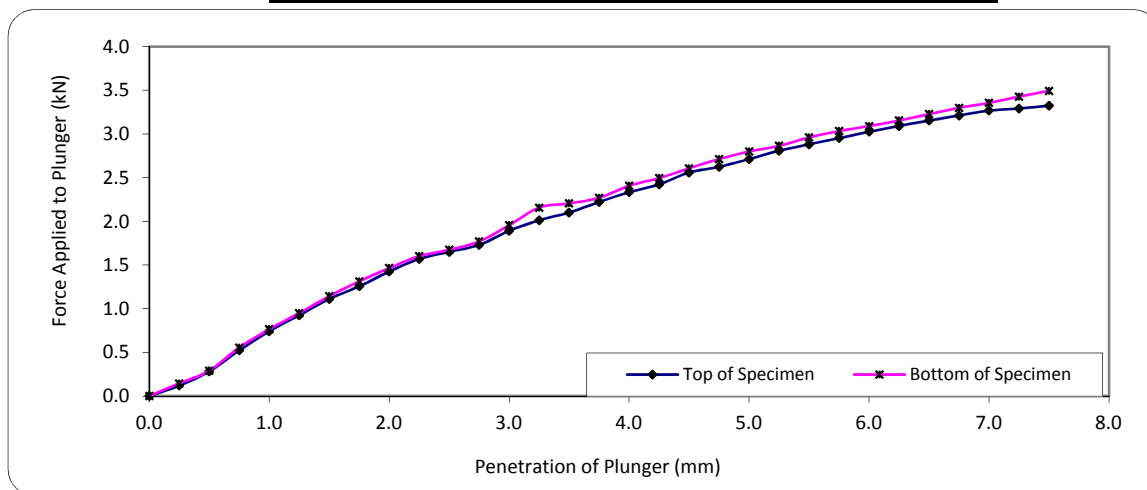
Top Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 1.65	kN
CBR Value @ 2.5mm Penetration	: 12	%
Load on Plunger @ 5.0mm Penetration	: 2.71	kN
CBR Value @ 5.0mm Penetration	: 14	%
Top Half Moisture Content	: 44	%

Bottom Half of CBR Test

Load on Plunger @ 2.5mm Penetration	: 1.67	kN
CBR Value @ 2.5mm Penetration	: 13	%
Load on Plunger @ 5.0mm Penetration	: 2.80	kN
CBR Value @ 5.0mm Penetration	: 14	%
Bottom Half Moisture Content	: 44	%

MEAN C.B.R VALUE: 14 %



REMARKS: Shear Vane - 76 KpA

Remaining sample will be retained for a minimum of 14 days from date of report.



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REPORT No.:	MH17-2992-2703-21	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4070	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	In Situ
SAMPLED BY:	D.Wilkins	MATERIAL:	Black Silty Clay
DATE RECEIVED:	27.03.2017	LOCATION:	Trial Pits
DATE TESTED:	18.04.2017	ACCEPT STD.:	Contract Specification
TESTED BY:	QTSE		

REPORT: DETERMINATION OF TRL 447, Tests 1, 2 & 4

pH	pH Units	7.2
Organic Matter	%	8.5
W/S Sulphur (as S)	%	0.123
Water Soluble Sulphate as SO ₄ (2:1)	g/l	1.840
Acid Soluble Sulphur (as S)	%	0.140
Acid Soluble Sulphate (as SO ₄)	%	0.430
Total Sulphur (as S)	%	0.510
Total Potential Sulphate (as SO ₄)	%	1.540
Oxidisable Sulphide (as SO ₄)	%	1.110

REMARKS:

Checked and verified by:
Jon Champion
General Manager



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REPORT No.:	MH17-2992-2703-20	CLIENT:	Beach Ground Engineering Ltd
SAMPLE No.:	4069	ADDRESS:	Unit 3 Heasewood Farm, Isaacs Lane, Haywards Heath
CLIENT REF:	-	SITE:	Pump Lane, Hayes
DATE SAMPLED:	27.03.2017	SUPPLIER:	In Situ
SAMPLED BY:	D.Wilkins	MATERIAL:	Brown Silty Clay
DATE RECEIVED:	27.03.2017	LOCATION:	Trial Pits
DATE TESTED:	18.04.2017	ACCEPT STD.:	Contract Specification
TESTED BY:	QTSE		

REPORT: DETERMINATION OF TRL 447, Tests 1, 2 & 4

pH	pH Units	7.4
Organic Matter	%	1.3
W/S Sulphur (as S)	%	0.008
Water Soluble Sulphate as SO ₄ (2:1)	g/l	0.120
Acid Soluble Sulphur (as S)	%	0.020
Acid Soluble Sulphate (as SO ₄)	%	0.060
Total Sulphur (as S)	%	0.020
Total Potential Sulphate (as SO ₄)	%	0.070
Oxidisable Sulphide (as SO ₄)	%	<0.01

REMARKS:

Checked and verified by:
Jon Champion
General Manager

APPENDIX D

Chemical Test Results

**Amir Abbasi**

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Godalming
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i2 Analytical Ltd.
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Analytical Report Number : 17-44697

Project / Site name:	Southall	Samples received on:	28/03/2017
Your job number:	CGN-3732D	Samples instructed on:	31/03/2017
Your order number:		Analysis completed by:	13/04/2017
Report Issue Number:	1	Report issued on:	13/04/2017
Samples Analysed:	8 leachate samples - 53 soil samples		

Signed:

Emma Winter
Assistant Reporting Manager
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

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

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728975	728976	728977	728978	728979
Sample Reference				TP1C	TP2C	TP3C	TP4C	TP5C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	0.40	0.40	0.40	0.30
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	-	-	-	30	< 0.1
Moisture Content	%	N/A	NONE	-	-	-	22	18
Total mass of sample received	kg	0.001	NONE	-	-	-	0.56	0.50

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	-	-	7.3
Total Cyanide	mg/kg	1	MCERTS	-	-	-	-	2
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	-	-	-	1200
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	-	0.086	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	0.13	-
Total Sulphur	%	0.005	MCERTS	-	-	-	0.049	-
Organic Matter	%	0.1	MCERTS	-	-	-	-	5.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.10
Fluorene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	-	-	-	-	1.5
Anthracene	mg/kg	0.1	MCERTS	-	-	-	-	0.24
Fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	3.4
Pyrene	mg/kg	0.1	MCERTS	-	-	-	-	3.2
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	2.0
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	2.0
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	2.5
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	-	-	1.6
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	2.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	-	-	1.5
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	-	-	0.46
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	1.5
Coronene	mg/kg	0.05	NONE	-	-	-	-	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	-	-	-	-	22
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	-	-	-	6.1
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	31
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	350
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-	1.6
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	2.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	0.5
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	-	< 1.2
Chromium (III)	mg/kg	1	NONE	-	-	-	-	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	190
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	930
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-	6.0
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	57
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	290



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728975	728976	728977	728978	728979
Sample Reference				TP1C	TP2C	TP3C	TP4C	TP5C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	0.40	0.40	0.40	0.30
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728975	728976	728977	728978	728979
Sample Reference				TP1C	TP2C	TP3C	TP4C	TP5C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	0.40	0.40	0.40	0.30
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Monoaromatics

Benzene	ug/kg	1	MCERTS	-	-	-	-	< 1.0
Toluene	ug/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	ug/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-xylene	ug/kg	1	MCERTS	-	-	-	-	< 1.0
o-xylene	ug/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	-	-	-	-	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	14
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	41
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	55

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728980	728981	728982	728983	728984
Sample Reference				TP7C	TP8C	TP9C	TP11C	TP12C
Sample Number				ES1/D1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.20	0.30	0.30	0.20	0.20
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	-	-	< 0.1	-	-
Moisture Content	%	N/A	NONE	-	-	15	-	-
Total mass of sample received	kg	0.001	NONE	-	-	0.54	-	-

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	7.3	-	-
Total Cyanide	mg/kg	1	MCERTS	-	-	< 1	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	-	520	-	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	3.6	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	< 1.0	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Fluorene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	-
Phenanthrene	mg/kg	0.1	MCERTS	-	-	0.71	-	-
Anthracene	mg/kg	0.1	MCERTS	-	-	0.16	-	-
Fluoranthene	mg/kg	0.1	MCERTS	-	-	1.7	-	-
Pyrene	mg/kg	0.1	MCERTS	-	-	1.5	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	0.91	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	0.81	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	1.0	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	0.51	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	1.0	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	0.58	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	0.16	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	0.62	-	-
Coronene	mg/kg	0.05	NONE	-	-	< 0.05	-	-

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	-	-	9.7	-	-
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	-	1.5	-	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	13	-	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	120	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	0.75	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	1.6	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	< 1.2	-	-
Chromium (III)	mg/kg	1	NONE	-	-	22	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	23	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	55	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	120	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	0.9	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	20	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	< 1.0	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	39	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	140	-	-



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728980	728981	728982	728983	728984
Sample Reference				TP7C	TP8C	TP9C	TP11C	TP12C
Sample Number				ES1/D1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.20	0.30	0.30	0.20	0.20
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728980	728981	728982	728983	728984
Sample Reference				TP7C	TP8C	TP9C	TP11C	TP12C
Sample Number				ES1/D1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.20	0.30	0.30	0.20	0.20
Date Sampled				23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	-	-	< 1.0	-	-
Toluene	ug/kg	1	MCERTS	-	-	< 1.0	-	-
Ethylbenzene	ug/kg	1	MCERTS	-	-	< 1.0	-	-
p & m-xylene	ug/kg	1	MCERTS	-	-	< 1.0	-	-
o-xylene	ug/kg	1	MCERTS	-	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	-	-	< 1.0	-	-
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	< 8.0	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	< 8.0	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	< 10	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	< 10	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	23	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	29	-	-

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728985	728986	728987	728988	728989
Sample Reference				TP13C	TP14C	TP15C	TP16C	TP16C
Sample Number				ES1/D1/B1	ES1/D1	ES1/D1	ES1/D1	ES2/D2
Depth (m)				0.30	0.30	0.60	0.50	1.50
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	27	-	< 0.1	-	< 0.1
Moisture Content	%	N/A	NONE	20	-	9.6	-	17
Total mass of sample received	kg	0.001	NONE	1.4	-	0.58	-	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	7.6	-	10.2
Total Cyanide	mg/kg	1	MCERTS	-	-	< 1	-	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	-	500	-	2600
Total Sulphate as SO ₄	%	0.005	MCERTS	0.206	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.29	-	-	-	-
Total Sulphur	%	0.005	MCERTS	0.360	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	2.6	-	1.5

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	< 0.10
Fluorene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	-	-	0.54	-	0.63
Anthracene	mg/kg	0.1	MCERTS	-	-	0.17	-	0.26
Fluoranthene	mg/kg	0.1	MCERTS	-	-	1.2	-	2.2
Pyrene	mg/kg	0.1	MCERTS	-	-	1.2	-	1.9
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	-	0.62	-	1.2
Chrysene	mg/kg	0.05	MCERTS	-	-	0.53	-	0.95
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	-	0.82	-	1.3
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	-	0.44	-	0.74
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	-	0.77	-	1.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	-	0.53	-	0.78
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	-	< 0.10	-	0.22
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	0.52	-	0.72
Coronene	mg/kg	0.05	NONE	-	-	< 0.05	-	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	-	-	7.3	-	12
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	-	< 1.0	-	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	16	-	14
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	81	-	90
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	0.69	-	0.92
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	0.2	-	2.0
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	< 0.2	-	0.3
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	< 1.2	-	< 1.2
Chromium (III)	mg/kg	1	NONE	-	-	26	-	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	26	-	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	28	-	39
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	43	-	59
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	< 0.3	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	20	-	27
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	45	-	47
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	83	-	99



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728985	728986	728987	728988	728989
Sample Reference				TP13C	TP14C	TP15C	TP16C	TP16C
Sample Number				ES1/D1/B1	ES1/D1	ES1/D1	ES1/D1	ES2/D2
Depth (m)				0.30	0.30	0.60	0.50	1.50
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728985	728986	728987	728988	728989
Sample Reference				TP13C	TP14C	TP15C	TP16C	TP16C
Sample Number				ES1/D1/B1	ES1/D1	ES1/D1	ES1/D1	ES2/D2
Depth (m)				0.30	0.30	0.60	0.50	1.50
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
Toluene	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
Ethylbenzene	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
p & m-xylene	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
o-xylene	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	-	1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	-	6.4
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	< 8.0	-	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	< 8.0	-	18
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	< 10	-	33
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	-	< 0.1	-	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	< 10	-	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	45	-	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	51	-	14

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728990	728991	728992	728993	728994
Sample Reference				TP17C	TP17C	TP19C	TP20C	TP22C
Sample Number				ES1/D1	ES2/D2	ES/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	1.50	0.40	0.40	0.40
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	-	-	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	12	-	-	22	19
Total mass of sample received	kg	0.001	NONE	1.9	-	-	1.4	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	-	-	7.6	8.0
Total Cyanide	mg/kg	1	MCERTS	< 1	-	-	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	MCERTS	770	-	-	1000	1200
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	-	-	0.118
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	0.18
Total Sulphur	%	0.005	MCERTS	-	-	-	-	0.063
Organic Matter	%	0.1	MCERTS	4.6	-	-	7.3	3.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.50	< 0.05
Acenaphthylene	mg/kg	0.1	MCERTS	0.43	-	-	0.48	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	0.52	-	-	0.45	< 0.10
Fluorene	mg/kg	0.1	MCERTS	0.61	-	-	0.60	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	6.9	-	-	6.5	0.35
Anthracene	mg/kg	0.1	MCERTS	1.5	-	-	1.4	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	16	-	-	11	0.97
Pyrene	mg/kg	0.1	MCERTS	14	-	-	8.6	0.79
Benzo(a)anthracene	mg/kg	0.1	MCERTS	8.2	-	-	4.7	0.45
Chrysene	mg/kg	0.05	MCERTS	5.7	-	-	4.5	0.47
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	7.6	-	-	4.8	0.62
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	5.1	-	-	3.5	0.42
Benzo(a)pyrene	mg/kg	0.1	MCERTS	7.9	-	-	4.6	0.48
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	4.5	-	-	2.5	0.39
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	1.1	-	-	0.69	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	4.4	-	-	2.8	0.42
Coronene	mg/kg	0.05	NONE	1.5	-	-	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	85	-	-	57	5.4
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.7	-	-	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	19	-	-	26	6.2
Barium (aqua regia extractable)	mg/kg	1	MCERTS	270	-	-	160	120
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.96	-	-	1.2	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2.6	-	-	4.7	6.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.5	-	-	2.0	2.6
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	-	-	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	37	-	-	40	45
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	-	-	40	45
Copper (aqua regia extractable)	mg/kg	1	MCERTS	140	-	-	90	53
Lead (aqua regia extractable)	mg/kg	1	MCERTS	210	-	-	510	66
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	-	3.4	0.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	30	-	-	28	26
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	40	-	-	60	66
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	300	-	-	260	120



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728990	728991	728992	728993	728994
Sample Reference				TP17C	TP17C	TP19C	TP20C	TP22C
Sample Number				ES1/D1	ES2/D2	ES/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	1.50	0.40	0.40	0.40
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728990	728991	728992	728993	728994
Sample Reference				TP17C	TP17C	TP19C	TP20C	TP22C
Sample Number				ES1/D1	ES2/D2	ES/D1/B1	ES1/D1/B1	ES1/D1/B1
Depth (m)				0.50	1.50	0.40	0.40	0.40
Date Sampled				24/03/2017	24/03/2017	24/03/2017	24/03/2017	24/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
Toluene	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
Ethylbenzene	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
p & m-xylene	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
o-xylene	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.8	-	-	3.1	3.1
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	48	-	-	42	35
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	59	-	-	51	44
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.2	-	-	5.8	2.6
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	62	-	-	41	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	160	-	-	89	22
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	220	-	-	140	34



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728995	728996	728997	728998	728999
Sample Reference				TP23C	TP23C	TP25C	TP26C	TP27C
Sample Number				ES1/D1	ES2/D2	ES1/D1	ES1/D1	ES1/D1/B1
Depth (m)				0.20	0.80	1.00	2.50	2.50
Date Sampled				24/03/2017	24/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	26	27	18	30	31
Total mass of sample received	kg	0.001	NONE	1.2	1.5	1.8	1.8	1.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile- Loose fibres	-	Chrysotile- Loose fibres	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.8	9.4	7.0	7.9	7.8
Total Cyanide	mg/kg	1	MCERTS	76	< 1	3	< 1	70
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1800	1200	7900	1700	2900
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	-	0.171	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	0.45	-
Total Sulphur	%	0.005	MCERTS	-	-	-	0.351	-
Organic Matter	%	0.1	MCERTS	6.8	2.7	4.6	6.3	11

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	2.2	< 0.05	0.46	3.3	0.96
Acenaphthylene	mg/kg	0.1	MCERTS	3.5	0.42	0.55	3.6	1.7
Acenaphthene	mg/kg	0.1	MCERTS	2.0	0.26	0.33	3.1	1.9
Fluorene	mg/kg	0.1	MCERTS	1.9	0.52	0.37	3.6	2.7
Phenanthrene	mg/kg	0.1	MCERTS	20	4.0	3.4	22	22
Anthracene	mg/kg	0.1	MCERTS	4.8	1.1	1.2	7.1	5.6
Fluoranthene	mg/kg	0.1	MCERTS	41	5.6	6.7	30	51
Pyrene	mg/kg	0.1	MCERTS	38	4.5	5.7	26	44
Benzo(a)anthracene	mg/kg	0.1	MCERTS	22	2.9	3.7	17	23
Chrysene	mg/kg	0.05	MCERTS	20	2.5	3.3	13	22
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	26	2.6	4.4	18	32
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	15	1.5	3.4	9.7	13
Benzo(a)pyrene	mg/kg	0.1	MCERTS	26	2.6	4.2	16	25
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	16	1.3	3.6	11	17
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	4.1	0.38	0.86	3.0	4.1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	16	1.2	4.3	12	20
Coronene	mg/kg	0.05	NONE	4.8	< 0.05	1.5	4.3	6.1

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	260	31	48	200	290
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	14	< 1.0	4.4	12	14
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	57	23	22	48	59
Barium (aqua regia extractable)	mg/kg	1	MCERTS	670	140	250	430	370
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.8	1.2	1.2	1.7	2.3
Boron (water soluble)	mg/kg	0.2	MCERTS	5.3	3.1	3.7	11	8.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	94	< 0.2	9.5	53	33
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	490	41	100	170	280
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	490	41	100	170	280
Copper (aqua regia extractable)	mg/kg	1	MCERTS	1500	47	220	690	720
Lead (aqua regia extractable)	mg/kg	1	MCERTS	600	140	360	570	890
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	3.9	2.1	2.0	4.1	1.0
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	170	25	54	110	110
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	66	60	59	65	72
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1500	93	610	800	1700



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728995	728996	728997	728998	728999
Sample Reference				TP23C	TP23C	TP25C	TP26C	TP27C
Sample Number				ES1/D1	ES2/D2	ES1/D1	ES1/D1	ES1/D1/B1
Depth (m)				0.20	0.80	1.00	2.50	2.50
Date Sampled				24/03/2017	24/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				728995	728996	728997	728998	728999
Sample Reference				TP23C	TP23C	TP25C	TP26C	TP27C
Sample Number				ES1/D1	ES2/D2	ES1/D1	ES1/D1	ES1/D1/B1
Depth (m)				0.20	0.80	1.00	2.50	2.50
Date Sampled				24/03/2017	24/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	3.8	6.2	7.9
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	21	7.5	20	53	340
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	140	17	100	200	1500
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	930	13	690	980	6600
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	1100	38	820	1200	8500
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	1.3	9.9	3.2
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	25	< 2.0	12	88	150
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	19	75	500	1500
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	560	34	470	1500	4900
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	790	53	560	2000	6500

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729000	729001	729002	729003	729004
Sample Reference				TP28C	TP29C	TP30C	TP31C	TP32C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1	ES1/D1
Depth (m)				1.80	1.30	0.50	0.40	0.50
Date Sampled				27/03/2017	27/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	82	-	-
Moisture Content	%	N/A	NONE	27	25	4.6	-	-
Total mass of sample received	kg	0.001	NONE	1.1	0.53	1.4	-	-

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.0	2.7	-	-	-
Total Cyanide	mg/kg	1	MCERTS	7	10000	-	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	2300	100000	-	-	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-	10.0	0.030	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	2.6	0.042	-	-
Total Sulphur	%	0.005	MCERTS	-	7.45	0.023	-	-
Organic Matter	%	0.1	MCERTS	5.9	7.0	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	2.9	-	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.82	6.8	-	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	0.77	2.1	-	-	-
Acenaphthene	mg/kg	0.1	MCERTS	1.6	0.40	-	-	-
Fluorene	mg/kg	0.1	MCERTS	1.6	0.69	-	-	-
Phenanthrene	mg/kg	0.1	MCERTS	11	6.0	-	-	-
Anthracene	mg/kg	0.1	MCERTS	3.5	1.7	-	-	-
Fluoranthene	mg/kg	0.1	MCERTS	23	14	-	-	-
Pyrene	mg/kg	0.1	MCERTS	19	13	-	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	12	9.5	-	-	-
Chrysene	mg/kg	0.05	MCERTS	10	9.8	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	13	13	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	8.4	8.3	-	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	11	9.2	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	6.2	8.1	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	1.7	1.8	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	6.8	6.8	-	-	-
Coronene	mg/kg	0.05	NONE	1.8	2.0	-	-	-

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	130	110	-	-	-
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	10	1.5	-	-	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	67	42	-	-	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	420	46	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	4.3	0.33	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	6.7	5.3	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	24	1.2	-	-	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	-	-	-
Chromium (III)	mg/kg	1	NONE	130	40	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	130	40	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	710	460	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	800	290	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.7	< 0.3	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	94	9.1	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	86	47	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1700	340	-	-	-



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729000	729001	729002	729003	729004
Sample Reference				TP28C	TP29C	TP30C	TP31C	TP32C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1	ES1/D1
Depth (m)				1.80	1.30	0.50	0.40	0.50
Date Sampled				27/03/2017	27/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729000	729001	729002	729003	729004
Sample Reference				TP28C	TP29C	TP30C	TP31C	TP32C
Sample Number				ES1/D1	ES1/D1	ES1/D1	ES1/D1	ES1/D1
Depth (m)				1.80	1.30	0.50	0.40	0.50
Date Sampled				27/03/2017	27/03/2017	27/03/2017	27/03/2017	27/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Toluene	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Ethylbenzene	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
p & m-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
o-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	6.8	4.7	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	74	23	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	410	71	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	1800	410	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	2300	510	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	11	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	62	33	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	670	120	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	2100	470	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	2900	630	-	-	-

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729005	729006	729389	729390	729391
Sample Reference				TP33C	C1	TP1C	TP3C	TP3C
Sample Number				ES/D1	ES1/D1	B1	B1	B2
Depth (m)				0.30	None Supplied	1.00	1.00	1.70
Date Sampled				27/03/2017	24/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	-	< 0.1	38	26	59
Moisture Content	%	N/A	NONE	-	57	11	20	6.6
Total mass of sample received	kg	0.001	NONE	-	1.2	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile- Loose fibres	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	-	-	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	7.8	-	-	-
Total Cyanide	mg/kg	1	MCERTS	-	1	-	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	2000	-	-	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	0.043	0.038	0.034
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	0.049	0.053	0.060
Total Sulphur	%	0.005	MCERTS	-	-	0.025	0.019	0.016
Organic Matter	%	0.1	MCERTS	-	8.1	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	-	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Acenaphthylene	mg/kg	0.1	MCERTS	-	< 0.10	-	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	< 0.10	-	-	-
Fluorene	mg/kg	0.1	MCERTS	-	0.27	-	-	-
Phenanthrene	mg/kg	0.1	MCERTS	-	1.5	-	-	-
Anthracene	mg/kg	0.1	MCERTS	-	0.45	-	-	-
Fluoranthene	mg/kg	0.1	MCERTS	-	4.0	-	-	-
Pyrene	mg/kg	0.1	MCERTS	-	4.0	-	-	-
Benzo(a)anthracene	mg/kg	0.1	MCERTS	-	1.6	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	2.1	-	-	-
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	-	2.6	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	-	1.8	-	-	-
Benzo(a)pyrene	mg/kg	0.1	MCERTS	-	1.8	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	-	1.6	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	-	0.36	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	2.1	-	-	-
Coronene	mg/kg	0.05	NONE	-	< 0.05	-	-	-

Total PAH

Total WAC-17 PAHs	mg/kg	1.6	NONE	-	24	-	-	-
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Heavy Metals / Metalloids

Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	-	2.1	-	-	-
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	13	-	-	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	190	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	0.88	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	3.9	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	1.6	-	-	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	1.7	-	-	-
Chromium (III)	mg/kg	1	NONE	-	43	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	45	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	110	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	190	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	27	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	54	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	360	-	-	-



Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729005	729006	729389	729390	729391
Sample Reference				TP33C	C1	TP1C	TP3C	TP3C
Sample Number				ES/D1	ES1/D1	B1	B1	B2
Depth (m)				0.30	None Supplied	1.00	1.00	1.70
Date Sampled				27/03/2017	24/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Analytical Report Number: 17-44697

Project / Site name: Southall

Lab Sample Number				729005	729006	729389	729390	729391
Sample Reference				TP33C	C1	TP1C	TP3C	TP3C
Sample Number				ES/D1	ES1/D1	B1	B1	B2
Depth (m)				0.30	None Supplied	1.00	1.00	1.70
Date Sampled				27/03/2017	24/03/2017	23/03/2017	23/03/2017	23/03/2017
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	-	< 1.0	-	-	-
Toluene	ug/kg	1	MCERTS	-	< 1.0	-	-	-
Ethylbenzene	ug/kg	1	MCERTS	-	< 1.0	-	-	-
p & m-xylene	ug/kg	1	MCERTS	-	< 1.0	-	-	-
o-xylene	ug/kg	1	MCERTS	-	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	-	< 1.0	-	-	-
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	2.8	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	63	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	240	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	1000	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	1300	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	-	< 0.1	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	39	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	200	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	870	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	1100	-	-	-