CAPITA SYMONDS

Prospect House
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Tel : 0161 486 1521
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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS03
Sheet 1 of 1

E Coord : 385224 42 | N Coord : 406822 31 | G L 108 50(m) ASD | Logged By: AJW

Date : 05/01/2006 | Method : Dynamic Window Sampler Equipment | Checked By:

SAMPLING DATA

Depth (m)	Type	Test Result
0 40	ES	
1 00 - 1 45	S	N=9 (2.1.2.2.2.3)
1 70	ES	
2 00 - 2 45	S	N=16 (2.2.2.4.4.6)
2 70	ES	
3 00 - 3 45	S	N=23 (3.3.4.4.6.9)
3 80	ES	
4 00 - 4 45	S	N=22 (2.2.4.5.5.8)

GROUND STRATA

Level (m) ASD	Depth (m)	Description
		Brown, slightly sandy, slightly gravelly greeny brown CLAY With gravel of concrete fragments (MADE GROUND)
107 60	0 90	Firm, light brown. sandy CLAY (GLACIAL TILL)
107 20	1 30	Soft, light brown sandy CLAY (GLACIAL TILL).
106 90	1 60	Firm, brown/mottled grey. slightly gravelly CLAY Grey clay contains organic material i e roots With occasional gravel of sub-rounded to rounded siltstone and occasional natural coal (GLACIAL TILL).
106 40	2 10	Stiff, brown, slightly gravelly CLAY With occasional gravel of rounded sandstone and siltstone (GLACIAL TILL)
104 50	4 00	End of Probehole at 4 00 m

Water

Standpipe

SAMPLE/TEST KEY
B - Bulk Sample
D - Small Disturbed Sample
ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley, Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS04
Sheet 1 of 1

E Coord : 385306 40 | N Coord : 406785 07 | G L 113 59(m) ASD | Logged By: AJW

Date : 05/01/2006 | Method : Dynamic Window Sampler Equipment | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
			113 29	0 30	Brown, slightly sandy, slightly gravelly. humic CLAY. With gravel of brick fragments. (TOPSOIL)		
			113 04	0 55	Sandy GRAVEL With gravel of brick and concrete fragments. (MADE GROUND).		
0 70	ES		112 79	0 80	Dark brown/black. slightly clayey SAND Slight organic odour detected (MADE GROUND).		
1 00 - 1 45	S	N=7 (2.2.1.2.2.2)					
1 40	D				Firm, light brown, slightly gravelly. slightly sandy CLAY. With bands of light grey clayey sand With occasional gravel of rounded medium siltstone. (GLACIAL TILL)		
			111 69	1 90			
2 00 - 2 45	S	N=11 (1.2.3.2.3.3)	111 49	2 10			
					Firm, brown, sandy CLAY With occasional gravel of rounded siltstone, with pyrite. Occasional natural coal (GLACIAL TILL)		
2 80	D						
3 00 - 3 45	S	N=13 (3.3.3.4.3.3)			Firm, brown, slightly gravelly CLAY With gravel of sub-rounded to rounded sandstone and siltstone With natural coal (GLACIAL TILL)		
3 80	D						
4 00 - 4 45	S	N=19 (2.3.4.4.5.6)	109 59	4 00	End of Probehole at 4 00 m		

SAMPLE/TEST KEY
B - Bulk Sample
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U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS05
Sheet 1 of 1

E Coord : 385440 74 | N Coord : 406785 37 | G L 117 30(m) ASD | Logged By: AJW

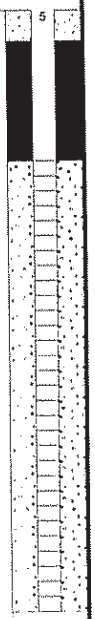
Date : 05/01/2006 | Method : Dynamic Window Sampler Equipment | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description
0 25	D		117 00	0 30	Dark brown, slightly sandy. slightly gravelly humic CLAY With gravel of brick fragments (TOPSOIL).
			116 90	0 40	Black. GRAVEL of brick and clinker (MADE GROUND).
			116 45	0 85	
1 00 - 1 45	S	N=10 (1.2.2.2.2.4)	116 20	1 10	Firm, brown/mottled black. slightly sandy, slightly gravelly CLAY With gravel of medium and coarse rounded to sub-rounded siltstone (GLACIAL TILL).
2 00 - 2 45	S	N=13 (2.2.2.3.3.5)			Firm, light brown/mottled grey. slightly sandy. slightly gravelly CLAY (GLACIAL TILL).
3 00 - 3 45	S	N=13 (3.2.2.3.4.4)			Firm, brown, slightly sandy, slightly gravelly CLAY. interbedded with widely spaced, thinly bedded red, clayey sand With occasional gravel of fine and medium siltstone (GLACIAL TILL)
4 00 - 4 45	S	N=13 (2.2.2.3.3.5)	113 30	4 00	End of Probehole at 4 00 m

Water | Standpipe



SAMPLE/TEST KEY
B - Bulk Sample
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W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS06
Sheet 1 of 1

E Coord : 385326 71 | N Coord : 406868 78 | G L 112 48(m) ASD | Logged By: AJW

Date : 05/01/2006 | Method : Dynamic Window Sampler Equipment | Checked By:

SAMPLING DATA

Depth (m)	Type	Test Result
0 40	ES	
0 80	ES	
1 00 - 1 45	S	N=7 (2.1.1.1.2.3)
2 00 - 2 45	S	N=7 (1.2.1.2.2.2)
2 80	ES	
3 00 - 3 45	S	N=10 (1.2.2.2.2.4)
3 80	ES	
4 00 - 4 45	S	N=10 (1.2.2.2.3.3)

GROUND STRATA

Level (m) ASD	Depth (m)	Description
112 38	0 10	Dark brown, slightly sandy. slightly gravelly humic CLAY With gravel of brick fragments (TOPSOIL).
111 98	0 50	
111 88	0 60	Firm, brown, slightly sandy, slightly gravelly CLAY. With occasional gravel of medium concrete (MADE GROUND).
111 73	0 75	
111 63	0 85	Concrete.
110 98	1 50	Firm, light brown. slightly silty CLAY (GLACIAL TILL)
		Soft, light brown SILT (GLACIAL TILL)
110 48	2 00	Firm, becoming soft, light brown. silty CLAY (GLACIAL TILL).
110 28	2 20	Soft, light brown CLAY. (GLACIAL TILL).
		Soft, light brown SILT (GLACIAL TILL)
		Firm, brown CLAY (GLACIAL TILL)
108 88	3 60	Soft to firm brown SILT (GLACIAL TILL)
108 48	4 00	End of Probehole at 4 00 m

Water

Standpipe

SAMPLE/TEST KEY
B - Bulk Sample
D - Small Disturbed Sample
ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

E Coord : 385066 68 | N Coord : 406576 30 | G L 108 10(m) ASD

Date : 25/01/2006 | Method :

Probehole Number
WS07
Sheet 1 of 1

Logged By: AJW

Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description
0 20	ES		107 85	0 25	Brown/orangey grey. slightly gravelly CLAY. With medium gravel of rounded sandstone and brick fragments (MADE GROUND)
0 60	D		107 50	0 60	Firm, orange/mottled grey, slightly sandy, slightly gravelly CLAY With gravel of rounded granite and sandstone Occasional organic matter (1mm roots) Occasional natural coal and tabular siltstone. Grey bands have a higher % of sand. (GLACIAL TILL)
1 30 - 1 75	S	N=11 (2.2.2.2.3.4)			
1 70	D				
2 30 - 2 75	S	N=10 (3.2.3.2.2.3)	105 85	2 25	Firm, brown/mottled grey, slightly sandy. slightly gravelly CLAY With gravel of fine tabular mudstone. Occasional organic matter (1mm roots) Occasional natural coal. Grey bands have a higher % of sand (GLACIAL TILL)
2 40	D		105 40	2 70	
			105 10	3 00	Medium dense, brown. wet, slightly gravelly, slightly clayey SAND (GLACIAL TILL).
3 30 - 3 75	S	N=5 (1.1.1.1.2.1)			Firm, brown, slightly gravelly CLAY With gravel of fine to coarse rounded granite and medium sub-rounded siltstone (GLACIAL TILL).
3 50	ES		104 35	3 75	
4 30 - 4 75	S	N=13 (2.2.2.3.3.5)			Loose, brown, wet running SAND With occasional, medium, rounded siltstone gravel. (GLACIAL TILL)
			103 65	4 45	Firm, brown CLAY (GLACIAL TILL)
					End of Probehole at 4 45 m

Water

Standpipe

7 00

1 2 3 4 5 6 7

SAMPLE/TEST KEY
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D - Small Disturbed Sample
ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 4 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed
-	2.25				
-	3.00				

Groundwater Remarks:
Granular strata wet below 2 25m

Driller
Exploration Ltd

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Project : Langley, Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS08
Sheet 1 of 1

E Coord : 385040 58 | N Coord : 406682 26 | G.L 104 50(m) ASD | Logged By: AJW

Date : 25/01/2006 | Method : | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
			104 10	0 40	Gravel of brick and concrete (MADE GROUND)		0.00
					No recovery		
1 10	ES		103 50	1 00			
1 30 - 1 75	S	N=15 (2.2.2.2.4.7)	103 30	1 20	Black, sandy, gravelly CLAY. With gravel of brick fragments (MADE GROUND)		
1 30	D		103 10	1 40	Firm to stiff, brown, sandy CLAY (GLACIAL TILL)		
2.00	D		102 85	1 65	Stiff, rusty brown/mottled grey, slightly gravelly CLAY. With occasional gravel of sub-rounded siltstone. (GLACIAL TILL).		
2 30 - 2 75	S	N=18 (3.5.4.4.5.5)	102 00	2 50	Medium dense, brown. coarse SAND With occasional sandstone gravel and natural coal (GLACIAL TILL)		
2 60	D				Firm to stiff. brown, sandy CLAY With occasional gravel of sub-angular siltstone and coal (GLACIAL TILL)		
3 30 - 3 75	S	N=121 (3.6.10.12.15.84)	101 05	3 45	End of Probehole at 3 45 m		

SAMPLE/TEST KEY
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U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
WS08 end at 3 00m due to refusal. No recovery after 3 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller
Exploration Ltd

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Project : Langley, Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS09
Sheet 1 of 1

E Coord : 385147 80 | N Coord : 406834 20 | G L 105 46(m) ASD | Logged By: AJW

Date : 25/01/2006 | Method : | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
0 30	ES		104 86	0 60	Black, slightly gravelly CLAY. With gravel of brick, clinker, granite, coal and siltstone. (MADE GROUND)		
0 80	ES		104 61	0 85	Brown, slightly sandy, slightly gravelly CLAY. With medium bedded clayey SAND Gravel is of rounded siltstone and sandstone. (GLACIAL TILL)		
1 30 - 1 75	S	N=11 (3.3.2.3.3.3)	104 11	1 35	Firm, brown/mottled grey CLAY. Grey clay is sandy. (GLACIAL TILL).		
			103 46	2 00	Firm, brown. sandy CLAY. With occasional natural coal (GLACIAL TILL)		
2 30 - 2 75	S	N=12 (1.1.2.3.3.4)	103 36	2 10	Medium dense, brown. slightly clayey. coarse SAND		
2 60	D		103 06	2 40	Soft. brown slightly gravelly CLAY. With rare medium rounded gravel (70mm) (GLACIAL TILL)		
3 30 - 3 75	S	N=19 (3.3.4.4.5.6)			Red. wet SAND. With occasional natural coal. Higher % of natural coal below 3 60m (GLACIAL TILL)		
3 60	ES		101 66	3 80	End of Probehole at 3 80 m		
4 30 - 4 75	S	N=19 (3.4.4.4.5.6)					

0.00

1 2 3 4 5 6 7

SAMPLE/TEST KEY
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U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 3 80m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley. Area F			Probehole Number WS10
Job Number : SS015173			Sheet 1 of 1
Client : Lovells			
E Coord : 385271 56	N Coord : 406920 15	G L 110 52(m) ASD	Logged By: AJW
Date : 25/01/2006	Method :		Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
0 05	D		110 42	0 10	Brown. slightly sandy, slightly gravelly clay. With gravel of brick gragments (TOPSOIL)		0 00
0 70	D		109 62	0 90	Dark brown, slightly gravelly. slightly sandy CLAY With gravel of clinker, brick fragments, wood and roof slate (MADE GROUND).		
1 30 - 1 75	S	N=9 (1.2.2.2.2.3)	109 32	1 20	Firm, brown, mottled grey, slightly sandy, slightly gravelly CLAY With gravel of sandstone Grey clay is sandy (GLACIAL TILL).		
1 90	D		108 72	1.80	Soft to firm. brown, slightly gravelly, slightly sandy CLAY. With occasional sandstone gravel. (GLACIAL TILL).		
2 30 - 2 75	S	N=19 (3.3.4.4.5.6)	108 42	2.10	Firm to stiff, brown, slightly gravelly CLAY (GLACIAL TILL)		
3 30 - 3 75	S	N=21 (3.4.4.5.6.6)	108 32	2 20	Medium dense. red/brown wet SAND (GLACIAL TILL)		
3 60	D				Firm to stiff, brown, slightly gravelly CLAY (GLACIAL TILL)		
4 30 - 4 75	S	N=23 (4.4.4.6.6.7)	106 52	4.00	End of Probehole at 4 00 m		

SAMPLE/TEST KEY
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ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 4 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed
-	2.10				

Groundwater Remarks:
Wet sand 2 10m and below

Driller
Exploration Ltd

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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS11
Sheet 1 of 1

E Coord : 385315 16 | N Coord : 406975 85 | G L 108 77(m) ASD | Logged By: AJW

Date : 25/01/2006 | Method : | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
0 20	D		108 47	0 30	Brown, slightly sandy, slightly gravelly clay. With gravel of brick fragments (TOPSOIL).		1 00
			108 17	0 60	Firm, orangey brown, slightly gravelly, slightly sandy CLAY With gravel of sanstone and siltstone Evidence of oxidisation. Medium spaced sandy bands (GLACIAL TILL)		
			107 97	0 80			
1 30 - 1 75	S	N=8 (3.2.1.2.2.3)	107 37	1 40	Firm, grey sandy CLAY (GLACIAL TILL)		
1 50	D						
			106 97	1 80	Brown, slightly sandy CLAY (GLACIAL TILL)		
2 30 - 2 75	S	N=14 (3.2.3.3.3.5)			Soft, orangey grey becoming sandy CLAY With gravel of sub-angular to sub-rounded siltstone and occasional coal (GLACIAL TILL).		
2 80	D		105 97	2 80	Soft, brown/grey sandy CLAY With bands of grey sandy clay. (GLACIAL TILL).		
			105 77	3 00	Brown, slightly clayey, slightly sandy GRAVEL Gravel is of fine and medium siltstone and sandstone. (GLACIAL TILL).		
3 30 - 3 90	S	N=0 (0.0.0.0.0.0)					
3 60	D						
			104 77	4 00	Soft, brown. slightly gravelly CLAY With rare medium siltstone gravel (GLACIAL TILL).		
4 30 - 4 90	S	N=3 (0.0.0.1.1.1)			End of Probehole at 4 00 m		

1 2 3 4 5 6 7

SAMPLE/TEST KEY
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S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 4 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley, Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS12
Sheet 1 of 1

E Coord : 385462 98 | N Coord : 406853 16 | G L. 115 92(m) ASD | Logged By: AJW

Date : 25/01/2006 | Method : | Checked By:

SAMPLING DATA

Depth (m)	Type	Test Result
0 10	ES	
0 50	ES	
1 30 - 1 75	S	N=14 (2.3.2.3.4.5)
2 20	D	
2 30 - 2 75	S	N=28 (4.5.5.6.8.9)
3 30 - 3 75	S	N=15 (3.2.3.4.4.4)
3 90	ES	
4 30 - 4 75	S	N=10 (2.1.2.2.3.3)

GROUND STRATA

Level (m) ASD	Depth (m)	Description
115 72	0 20	Brown, slightly sandy, slightly gravelly CLAY. With gravel of brick fragments. (TOPSOIL)
115 32	0 60	Brown, slightly gravelly CLAY. With gravel of brick fragments. (MADE GROUND)
115 02	0 90	Firm, brown/mottled grey, slightly sandy, slightly gravelly CLAY. Grey clay is sandy CLAY with occasional siltstone gravel. (GLACIAL TILL).
113 82	2 10	Firm to stiff, brown/mottled grey slightly gravelly CLAY. With gravel of fine tabular mudstone, rounded siltstone and sandstone. With occasional coal and occasional root. (GLACIAL TILL).
112 92	3 00	Stiff, brown, slightly gravelly CLAY With gravel of fine tabular mudstone gravel and sub-rounded siltstone. With rare coal. (GLACIAL TILL).
		Firm to stiff, brown, sandy CLAY. With rare gravel of rounded sandstone and siltstone. (GLACIAL TILL).
112 02	3 90	Firm, brown, slightly sandy, slightly gravelly CLAY. With gravel of rounded sandstone and siltstone. (GLACIAL TILL)
111 47	4 45	End of Probehole at 4 45 m

Water

Standpipe 12.00

SAMPLE/TEST KEY
B - Bulk Sample
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ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 4 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

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Project : Langley. Area F

Job Number : SS015173

Client : Lovells

Probehole Number
WS13
Sheet 1 of 1

E Coord : 385306 87 | N Coord : 406726 57 | G L. 115 03(m) ASD | Logged By: AJW

Date : 25/01/2006 | Method : | Checked By:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (m) ASD	Depth (m)	Description	Water	Standpipe
			114 53	0 50	Brown, slightly sandy, slightly gravelly clay. With gravel of brick fragments (TOPSOIL)		
1 00 - 1 45	S	N=4 (1.1.1.1.1.1)	114 13	0 90	Soft to firm, brown, slightly gravelly CLAY With rare gravel of rounded to sub-rounded medium siltstone and sandstone. (GLACIAL TILL)		
1 30 - 1 75	S	N=9 (2.2.1.3.2.3)	113 53	1 50	Soft to firm, orangey brown. slightly sandy. slightly gravelly CLAY Medium bedded gravel of rounded sandstone (GLACIAL TILL).		
			113 43	1 60			
2 30 - 2 75	S	N=18 (2.2.3.4.5.6)	112 93	2 10	Brown, slightly sandy. slightly gravelly CLAY. With gravel of rounded siltstone (GLACIAL TILL).		
			112 33	2 70	Brown. slightly gravelly CLAY With rare fine. tabular mudstone gravel (GLACIAL TILL).		
					Coarse, sandstone gravel (GLACIAL TILL)		
3 30 - 3 75	S	N=9 (2.1.2.2.2.3)	111 53	3 50	Soft brown, sandy CLAY Sand is red (GLACIAL TILL)		
					Wet running sand (GLACIAL TILL)		
			110 58	4 45	End of Probehole at 4 45 m		

SAMPLE/TEST KEY
B - Bulk Sample
D - Small Disturbed Sample
ES - Environmental Sample
U - Undisturbed Sample (& Blows)
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane Test, kPa
* - Partial Seating Penetration

▽ Water Strike
▼ Water Level

REMARKS
No recovery after 4 00m

Scale =1:50

Boring Progress & Water Strikes (m)

Date	Strike	Level	Minutes	Casing	Sealed

Groundwater Remarks:

Driller

Exploration Ltd

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Trial Pit Number	Sample Number	Depth m	Description of Sample
3		0.80	Dark brown gravelly sandy silty CLAY.
10		1.50	Brown very sandy silty CLAY.
11		2.00	Brown very sandy silty CLAY.
15		2.20	Brown slightly gravelly slightly clayey silty SAND.
16		0.60	Brown mottled grey slightly gravelly sandy silty CLAY.
18		1.30	Brown slightly gravelly very sandy silty CLAY.
18		2.00	Brown very sandy silty CLAY.
19		3.20	Dark brown gravelly silty SAND.

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Compiled by	Date	Checked by	Date	Approved by	Date
[illegible]	13/12/05	[illegible]	13/12/05	[illegible]	13/12/05

LANGLEY, AREA F.

Contract No. PSL05/1839

Client Ref:

SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

Trial Pit Number	Sample Number	Depth m	Moisture Content % Clause 3.2	Bulk Density Mg/m^3 Clause 7.2	Dry Density Mg/m^3 Clause 7.2	Particle Density Mg/m^3 Clause 8.	Liquid Limit % Clause 4.3/4.4	Plastic Limit % Clause 5.	Plasticity Index % Clause 6.	% Passing .425mm	Remarks
10		1.50	21			2.61	32	16	16	100	Low plasticity CL.
11		2.00	20			2.66	34	17	17	100	Low plasticity CL.
18		1.30	20			2.65	33	17	16	97	Low plasticity CL.
18		2.00	15			2.64	28	15	13	100	Low plasticity CL.

SYMBOLS : NP ; Non Plastic * : Liquid Limit and Plastic Limit Wet Sieved.

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Compiled by	Date	Checked by	Date	Approved by	Date
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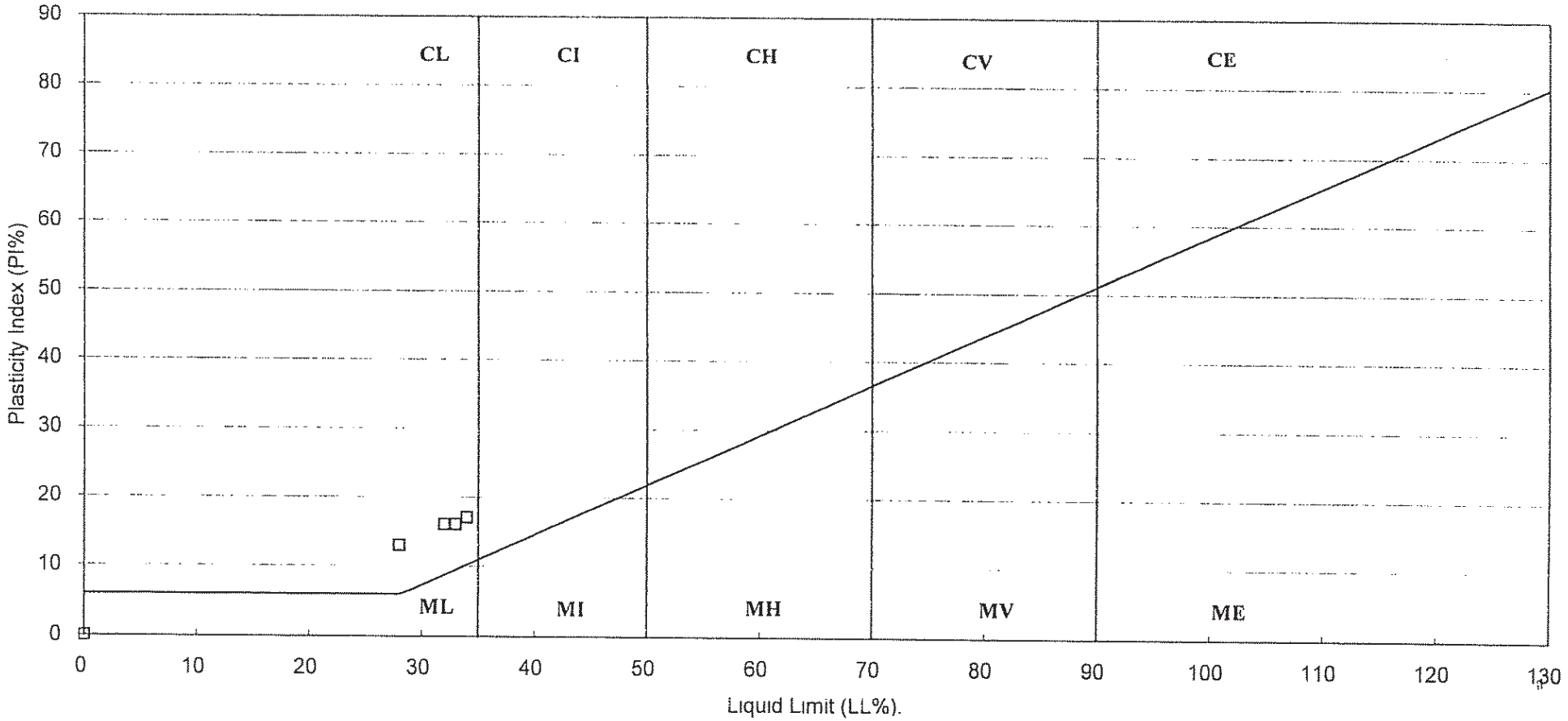
LANGLEY, AREA F.

Contract No: PSL05/1839

Client Ref:

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



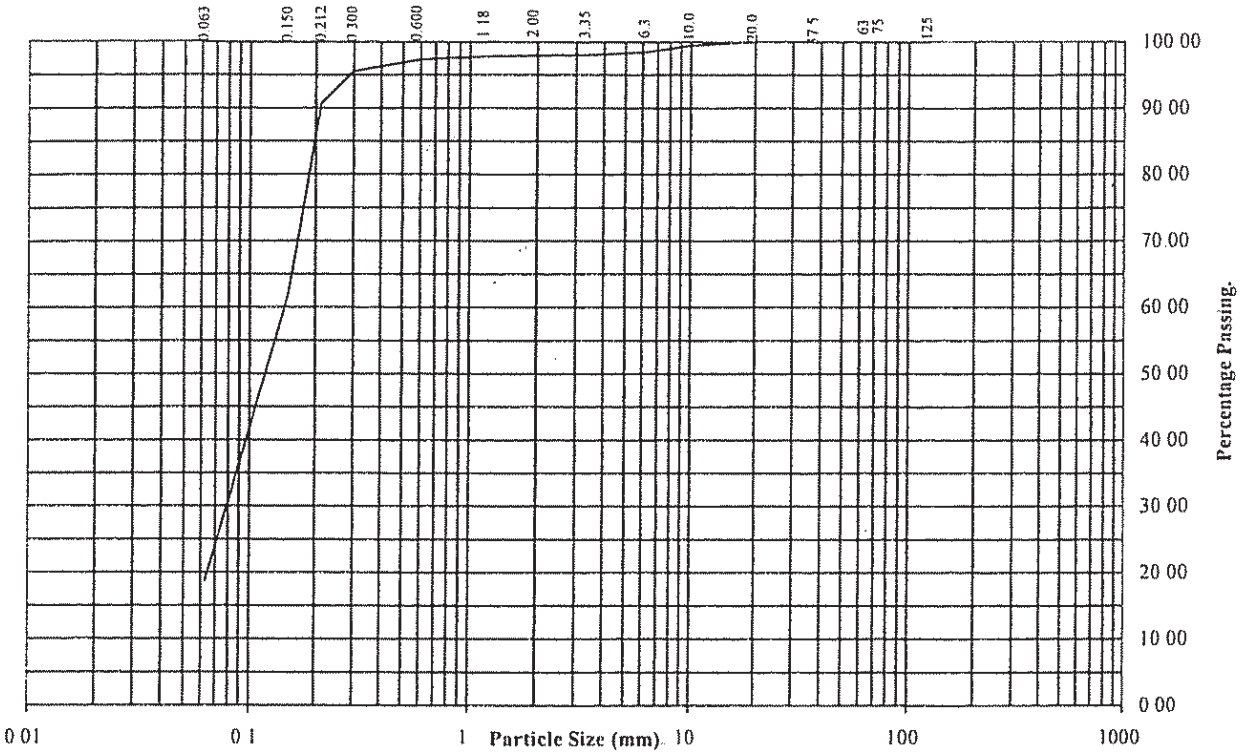
PSL Professional Soils Laboratory	Compiled by	Date	Checked by	Date	Approved by	Date
	[illegible]	13/12/05	[illegible]	13/12/05	[illegible]	13/12/05
	LANGLEY, AREA F.				Contract No: PSL05/1839	
					Client Ref:	

PARTICLE SIZE DISTRIBUTION TEST

BS1377:Part 2:1990

Wet Sieve: Clause 9.2

Trial Pit /Sample Number: 15 **Depth (m):** 2.20



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	98
3.35	98
2	98
1.18	98
0.6	97
0.3	96
0.212	91
0.15	62
0.063	19

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	79
Silt/Clay	19

Remarks:
See summary of soil descriptions.

Checked By	Date	Approved By	Date
[signature]	13/12/05	[signature]	13/12/05

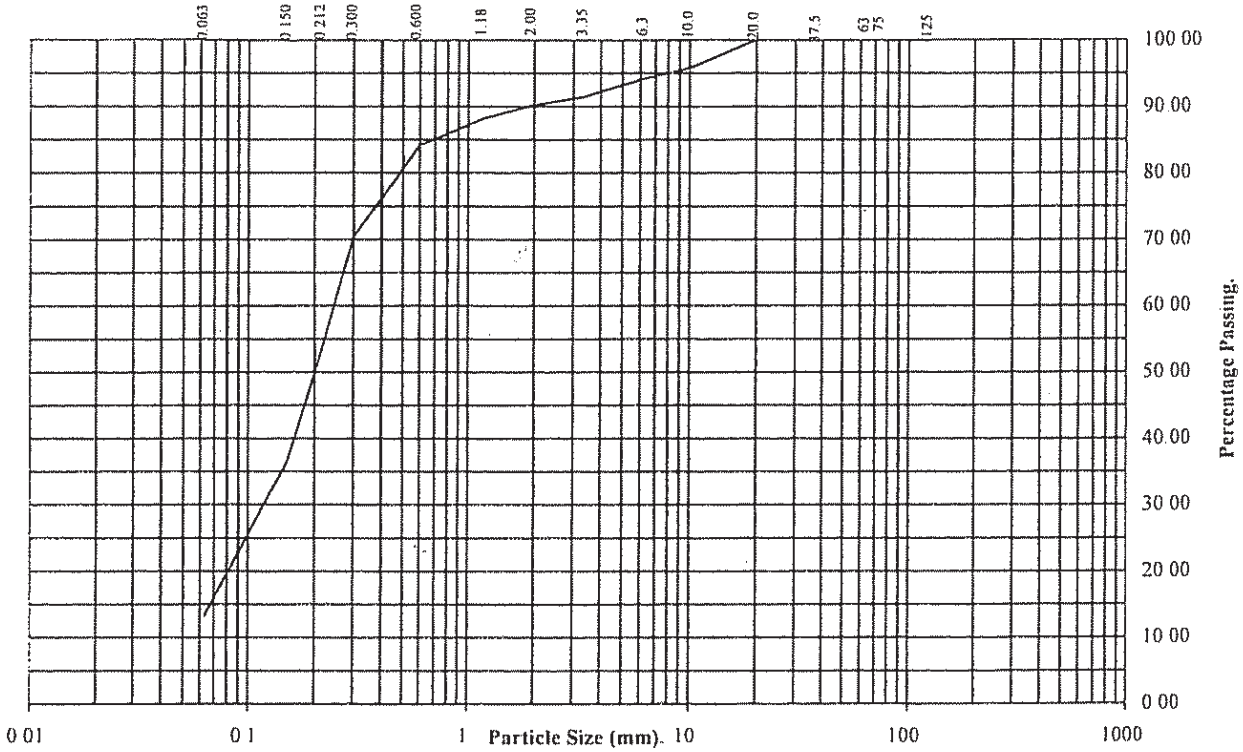
PSL Professional Soils Laboratory	LANGLEY, AREA F.	Contract No.: PSL05/1839

PARTICLE SIZE DISTRIBUTION TEST

BS1377:Part 2:1990

Wet Sieve: Clause 9.2

Trial Pit /Sample Number: 19 **Depth (m):** 3.20



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	96
6.3	94
3.35	91
2	90
1.18	88
0.6	84
0.3	70
0.212	52
0.15	36
0.063	13

Soil Fraction	Total Percentage
Cobbles	0
Gravel	10
Sand	77
Silt/Clay	13

Remarks:
See summary of soil descriptions.

Checked By	Date	Approved By	Date
[signature]	13/12/05	[signature]	13/12/05

PSL Professional Soils Laboratory

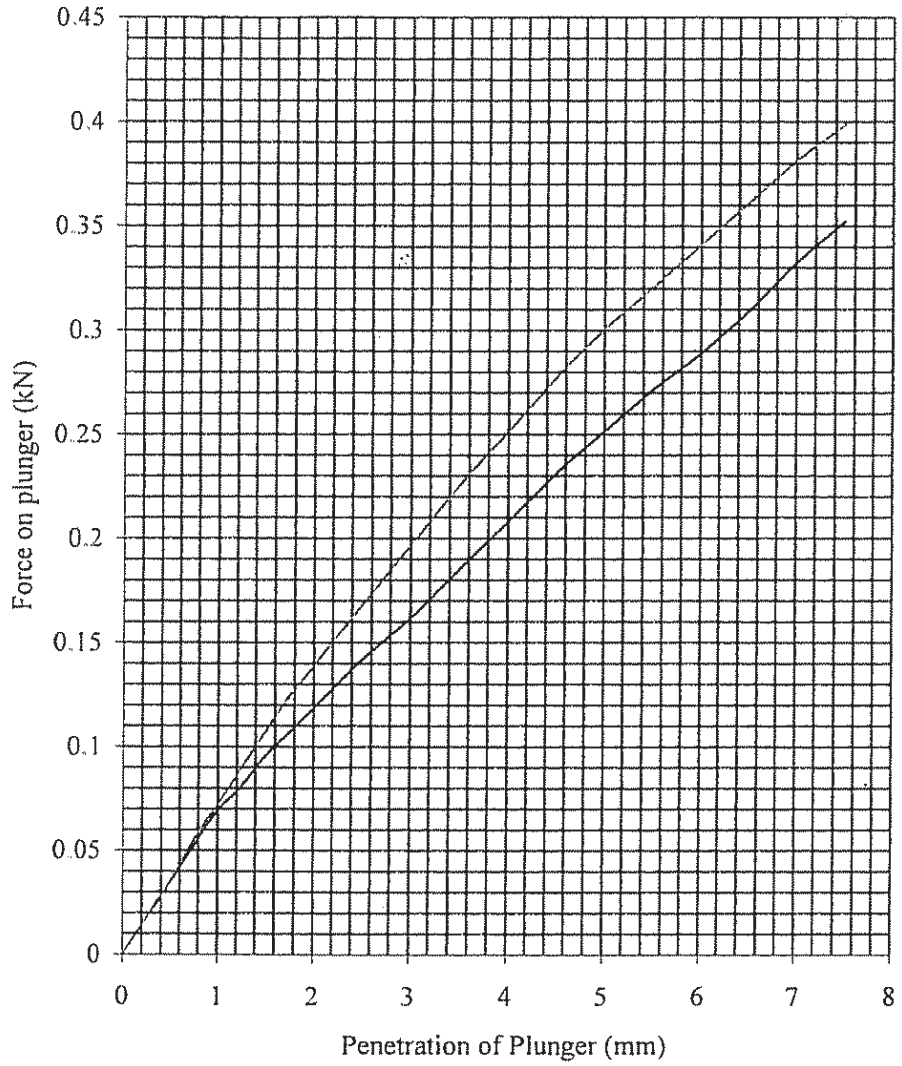
LANGLEY, AREA F.

Contract No.: PSL05/1839

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Trial Pit Number 3 Depth (m) : 0.80



Initial Sample Conditions		Test Conditions		Method of compaction		2.5 Kg Rammer	
Moisture Content:	25.4	Surcharge Kg:	4.00	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	1.97	Soaking Time hrs	0	Sample Top	24.3	Sample Top	1.3
Dry Density Mg/m3:	1.57	Swelling mm:	0	Sample Bottom	22.6	Sample Bottom	1.5
Percentage retained on 20mm BS test sieve:	0	Remarks:	See Summary of Soil Description				

Checked by	Date	Approved By	Date
	13/12/05		13/12/05

PSL Professional Soils Laboratory

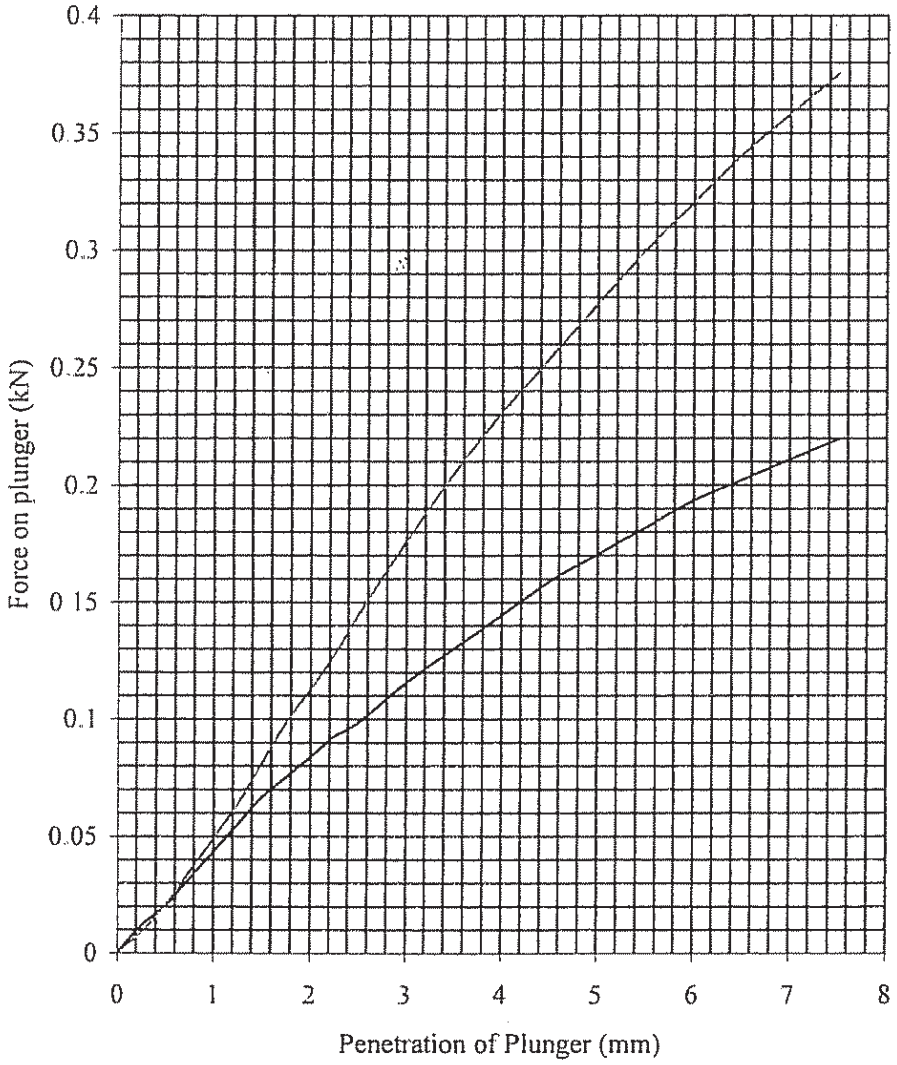
LANGLEY, AREA F.

Contract No. PSL05/1839

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Trial Pit Number 16 Depth (m) : 0.60



Initial Sample Conditions		Test Conditions		Method of compaction		2.5 Kg Rammer	
Moisture Content:	31.3	Surcharge Kg:	4.00	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	1.89	Soaking Time hrs	0	Sample Top	31.0	Sample Top	0.9
Dry Density Mg/m3:	1.44	Swelling mm:	0	Sample Bottom	30.5	Sample Bottom	1.4
Percentage retained on 20mm		Remarks:	See Summary of Soil Description				
BS test sieve:	0						

Checked by	Date	Approved By	Date
[signature]	13/12/05	[signature]	13/12/05

PSL Professional Soils Laboratory

LANGLEY, AREA F.

Contract No. PSL05/1839

UKAS TESTING
2139

Derwentside Environmental Testing Services

Certificate of Analysis

Certificate Number : 05-02746_M01

Client Reference:	PSL05/1839	**Date of issue:**	08/12/2005
Our Reference:	05-02746		
Clients Name:	Professional Soils Laboratory Ltd		
Clients Address:	5/7 Hexthorpe Road Hexthorpe DN4 0AG		

Contract Title:	Langley, Area F
Description:	4 soil samples
Date Received:	30/11/2005
Date Commenced:	30/11/2005
Date Completed:	08/12/2005
Notes:	Test procedures are identified by prefix DETSn (details available upon request) Observations and Interpretations are outside the UKAS Accreditation * Denotes test not included in laboratory scope of accreditation $ Denotes test carried out by approved subcontractor

Approved By:

Rob Brown
Business Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service The results reported herein relate only to the material supplied to the laboratory This certificate shall not be reproduced except in full. without the prior written approval of the laboratory

Derwentside Environmental Testing Services Limited
Unit 2a/2b, Park road Industrial Estate, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 Fax: 01207 582444 EMail: info@dets co uk www dets co uk
Registered in England No 370 5645 VAT No 708 978 678

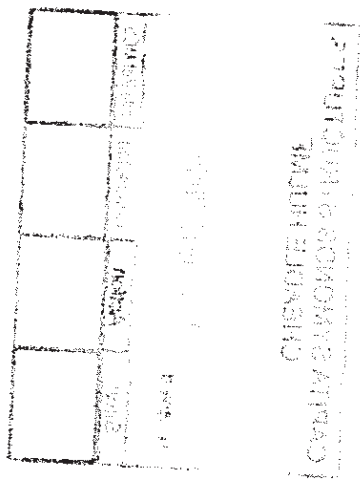
Client Reference PSL05/1839

Laboratory Reference 05-02746

Langley, Area F

Summary of Chemical Analysis

Borehole or Trial Pit	Depth	Sample No	Sample Type	Lab Ref No	DETS 076* Sulphate Aqueous Extract g/l as SO4	DETS 008 pH
TP10	1.50	D3	Soil	18376	0.02	8.2
TP11	2.00	D3	Soil	18377	0.02	8.9
TP18	1.30	D1	Soil	18378	0.02	8.2
TP18	2.00	D2	Soil	18379	0.03	8.6



SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Trial Pit Number	Sample Number	Depth m	Description of Sample
20		0.80	Brown slightly gravelly slightly sandy silty CLAY.
22		1.70	Brown slightly clayey silty SAND.
23		0.60	Brown mottled grey slightly gravelly sandy silty CLAY.
24		0.80	Brown slightly gravelly sandy silty CLAY.
24		2.60	Brown slightly gravelly very sandy very silty CLAY.
26		0.50	Brown sandy silty CLAY.
28		1.70	Brown slightly gravelly very sandy silty CLAY.
29		1.70	Brown slightly gravelly very sandy silty CLAY.

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Compiled by	Date	Checked by	Date	Approved by	Date
	22/12/06		22/12/06		22/12/06

LANGLEY, AREA F.

Contract No: PSL06/260

Client Ref: SS015173

SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

Trial Pit Number	Sample Number	Depth m	Moisture Content % Clause 3.2	Bulk Density Mg/m^3 Clause 7.2	Dry Density Mg/m^3 Clause 7.2	Particle Density Mg/m^3 Clause 8.	Liquid Limit % Clause 4.3/4.4	Plastic Limit % Clause 5.	Plasticity Index % Clause 6.	% Passing .425mm	Remarks
20		0.80	29			2.67	52	24	28	98	High plasticity CH.
22		1.70	16			2.70		NP			
24		0.80	17			2.62	37	16	21	98	Intermediate plasticity CI.
24		2.60	24			2.66	32	16	16	99	Low plasticity CL.
28		1.70	17			2.63	33	13	20	98	Low plasticity CL.
29		1.70	15			2.63	34	15	19	97	Low plasticity CL.

SYMBOLS : NP : Non Plastic * : Liquid Limit and Plastic Limit Wet Sieved.

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Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	22/12/06		22/12/06		22/12/06

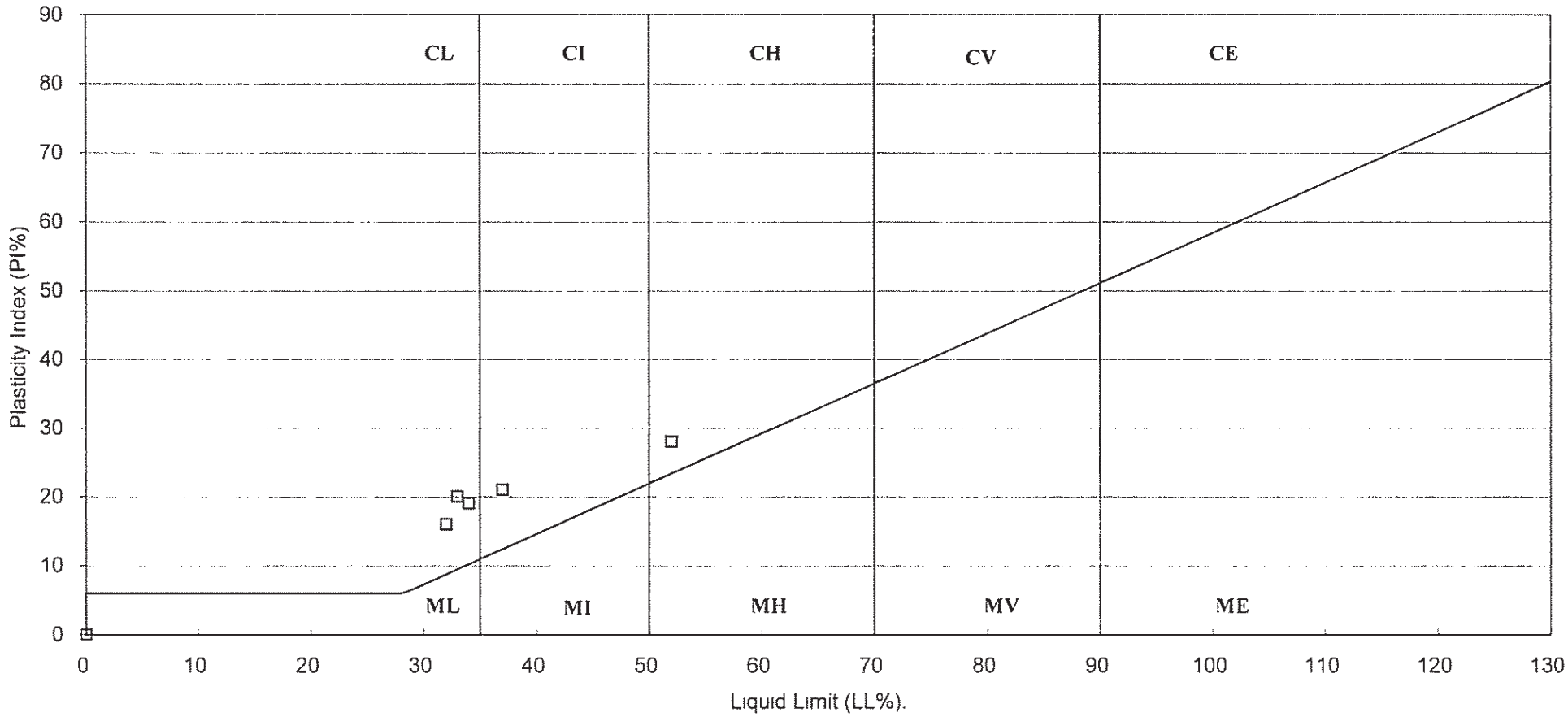
LANGLEY, AREA F.

Contract No: PSL06/260

Client Ref: SS015173

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



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Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	22/2/06		22/2/06		22/2/06

LANGLEY, AREA F.

Contract No: PSL06/260

Client Ref: SS015173

SUMMARY OF CHEMICAL ANALYSES

(B.S. 1377 : PART 3 : 1990 AND BRE CP2/79)

Borehole Number	Sample Number	Depth m	Sulphate Content SO3 (as SO_4)			Chloride Content		pH Value @ 25°C	Organic Matter Content %	Loss on Ignition %	Remarks
			Acid Soluble Sulphate as % SO_4	Aqueous Extract Sulphate as g/l SO_4	Ground-water g/l	Soluble Chloride as % equiv. NaCl	Ground-water g/l				
			Clause 5.5.	Clause 5.5.	Clause 5.4.	Clause 7.3	Clause 7.2	Clause 9.	Clause 3.	Clause 4.	
TP29		1.70		0.01 (0.02)				7.83			
TP22		1.70		0.04 (0.05)				6.52			
TP20		0.80		0.01 (0.02)				4.48			
TP28		1.70		0.14 (0.16)				6.69			
TP24		0.80		0.01 (0.02)				6.00			
TP24		2.60		0.02 (0.02)				7.57			

Dr Walker — Checked By

23/2/06 — Date

Dr Walker — Approved By

23/2/06 — Date

LABORATORY TESTING SERVICES LTD

Langley, Area F

Contract No. GEO/1831/06

Client Ref No. PSL06/260

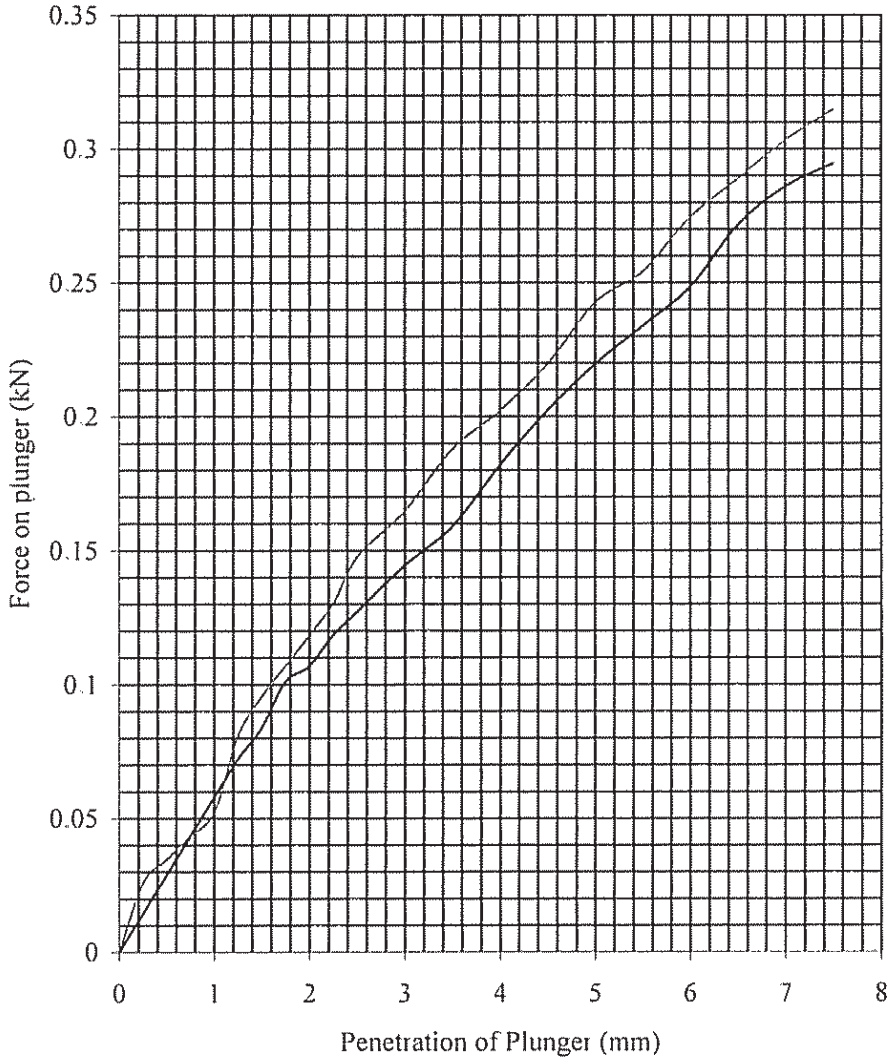
Page of

Bynea, Llanelli, SA14 9SU.

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Trial Pit Number 23 Depth (m) : 0.60



Initial Sample Conditions		Test Conditions		Method of compaction		2.5 Kg Rammer	
Moisture Content:	23.8	Surcharge Kg:	4.00	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	1.99	Soaking Time hrs	0	Sample Top	23.2	Sample Top	1.1
Dry Density Mg/m3:	1.61	Swelling mm:	0	Sample Bottom	24.0	Sample Bottom	1.2
Percentage retained on 20mm BS test sieve:	0	Remarks:	See Summary of Soil Description				

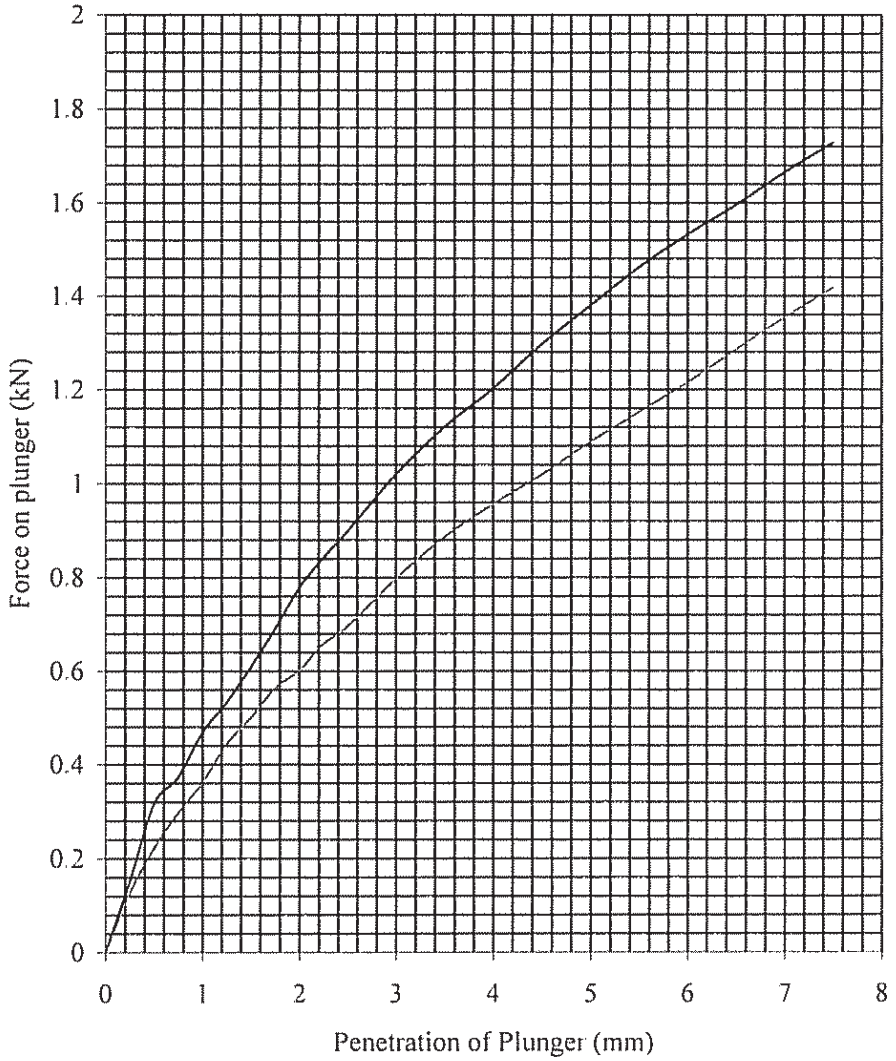
Checked by	Date	Approved By	Date
	22/1/06		22/1/06

PSL Professional Soils Laboratory	LANGLEY, AREA F.	Contract No. PSL06/260

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Trial Pit Number 26 Depth (m) : 0.50



Initial Sample Conditions		Test Conditions		Method of compaction	2.5 Kg Rammer		
Moisture Content:	17.6	Surcharge Kg:	4.00	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	2.06	Soaking Time hrs	0	Sample Top	16.9	Sample Top	6.9
Dry Density Mg/m3:	1.75	Swelling mm:	0	Sample Bottom	17.8	Sample Bottom	5.4
Percentage retained on 20mm BS test sieve:	0	Remarks:	See Summary of Soil Description				

Checked by	Date	Approved By	Date
	11/2/06		14/2/06

PSL Professional Soils Laboratory	LANGLEY, AREA F.	Contract No. PSL06/260

The Heath Business & Technical Park, PO Box 13, Runcorn, Cheshire WA7 4QX
T +44 (0)1928 517 800 F +44 (0)1928 517 830 E info@casellagroup.com

CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 29/11/05, 01/12/05, 02/12/05, 05/12/05, 08/12/05
Methodology: Asb vis, CTP01, CTP07, CTP09a, CTP09c, CTP11a, CTP11b, CTP11c, CTP11h, CTP11i, CTP18c, CTP20, CTP22, SOP04 SVOC, Stones
Date Reported: 8 December, 2005
Date Received: 25 November, 2005
Sample Type: Solid

Certificate No: 05/5963/50/C1
File No: 05/5963/50
Client Ref: SS015173

Lab sample ref	N303217	N303218	N303219	N303220	N303221	N303222
Client sample ref	TP08 0.60m	TP10 0.10m	TP11 0.50m	TP14 0.10m	TP17 0.10m	TP18 0.60m
Date sampled						
Sample matrix (see notes page)	S	S	S	S	S	S

Analyte	Units	ISO17025	MCERTS	LOD						
pH		Y	Y		6.4	6.7	7.1	7.8	7.5	7.6
Nitrate (water soluble) $_S$	mg/l	N	N/A	10	<10	<10	18	<10	<10	<10
Sulphate (water soluble) $_S$	g/l	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
Sulphur (total) $_S$	mg/kg	N	N/A	100	564	485	567	475	540	737
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10	<10	<10	<10	<10	<10
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	<1	<1	<1	<1	<1	<1
Organic Matter $_S$	g/kg	N	N/A	0.1	72.4	58.7	64.7	63.8	71.0	74.1
Arsenic $_S$	mg/kg	Y	N	5	14	22	16	16	17	16
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5	0.9	<0.5	0.6	0.8	0.6
Chromium (total) $_S$	mg/kg	Y	N	5	15	23	48	23	22	23
Copper $_S$	mg/kg	Y	N	5	41	61	33	50	49	36
Lead $_S$	mg/kg	Y	N	5	81	89	99	105	89	88
Mercury $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	<0.5	2.7	0.8
Nickel $_S$	mg/kg	Y	N	5	8	18	10	16	19	22
Selenium $_S$	mg/kg	Y	N	5	<5	<5	<5	<5	<5	<5
Zinc $_S$	mg/kg	Y	N	5	59	97	44	93	148	111
Asbestos Screen		N	N/A		ND	ND	ND	ND	ND	ND
PAH (USEPA 16) $_{SM}$		Y	N		#	#	#	#	#	#

Notes
1 Analyses suffixed 'S' were performed on the sample dried at 35°C
2 Analyses suffixed 'SM' were performed on the sample as received
3 All results are expressed as dry weight
4 MCERTS accreditation applicable to Sample Matrix 'S' only
5 Natural stones (pebbles, gravels etc) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly
6 # indicates separate report appended
7 Tests marked * indicate subcontracted analyses
8 ND Denotes None Detected

Prepared by:

L Carolan
Account Manager

Approved by:

P Chadwick
Operations Director

MCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

UKAS TESTING 0871

Casella Seal is a trading name of Casella Analytic Ltd
Company Registration No: 02823669 Registered Office: Regent House Wolseley Road Kempston Bedford MK42 7JY

Casella Analytic A division of CASELLA Group
www.casellagroup.com
Think environment Think Casella

The Heath Business & Technical Park, PO Box 13, Runcorn, Cheshire WA7 4QX
T +44 (0)1928 517 800 F +44 (0)1928 517 830 E info@casellagroup.com

CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 29/11/05, 01/12/05, 02/12/05, 05/12/05, 08/12/05
Methodology: Asb vis, CTP01, CTP07, CTP09a, CTP09c, CTP11a, CTP11b, CTP11c, CTP11h, CTP11i, CTP18c, CTP20, CTP22, SOP04 SVOC, Stones
Date Reported: 8 December, 2005
Date Received: 25 November, 2005
Sample Type: Solid

Certificate No: 05/5963/50/C1
File No: 05/5963/50
Client Ref: SS015173

Lab sample ref	N303237
Client sample ref	TP01 0.40m
Date sampled	
Sample matrix (see notes page)	S

Analyte	Units	ISO17025	MCERTS	LOD	
pH		Y	Y		8.6
Nitrate (water soluble) $_S$	mg/l	N	N/A	10	<10
Sulphate (water soluble) $_S$	g/l	Y	Y	0.1	0.2
Sulphur (total) $_S$	mg/kg	N	N/A	100	447
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	<1
Organic Matter $_S$	g/kg	N	N/A	0.1	28.1
Arsenic $_S$	mg/kg	Y	N	5	9
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5
Chromium (total) $_S$	mg/kg	Y	N	5	20
Copper $_S$	mg/kg	Y	N	5	13
Lead $_S$	mg/kg	Y	N	5	28
Mercury $_S$	mg/kg	Y	N	0.5	<0.5
Nickel $_S$	mg/kg	Y	N	5	12
Selenium $_S$	mg/kg	Y	N	5	<5
Zinc $_S$	mg/kg	Y	N	5	50
Asbestos Screen		N	N/A		ND
PAH (USEPA 16) $_{SM}$		Y	N		#

Notes
1 Analyses suffixed 'S' were performed on the sample dried at 35°C
2 Analyses suffixed 'SM' were performed on the sample as received
3 All results are expressed as dry weight
4 MCERTS accreditation applicable to Sample Matrix 'S' only
5 Natural stones (pebbles, gravels etc) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly
6 # indicates separate report appended
7 Tests marked * indicate subcontracted analyses
8 ND Denotes None Detected

Prepared by:

L Carolan
Account Manager

Approved by:

P Chadwick
Operations Director

MCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

UKAS TESTING 0871

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The Heath Business & Technical Park, PO Box 13, Runcorn, Cheshire WA7 4QX
T +44 (0)1928 517 800 F +44 (0)1928 517 830 E info@casellagroup.com

CASELLA SEAL

Client	Capita Symonds : Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire SK8 5AU
Contract / Site	Langley, Area F - SS015173
Sample Matrix	Solid
File Number	05/5963/50/C1
Date Received	25/11/05
Date Tested	28/11/05
Methodology	Laboratory Developed In-House Method - 'Determination of SVOC' by GC-MS

Analysis : **POLYNUCLEAR AROMATIC HYDROCARBONS**

All Values in mg/kg

Sample Ref.	303217	303218	303219	303220	303221	303222	303237
Client Ref	TP 08 0 60m	TP 10 0.10m	TP 11 0 50m	TP 14 0 10m	TP 17 0 10m	TP 18 0 60m	TP 01 0.40m
Name							
naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
acenaphthylene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
acenaphthene	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
fluorene	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
phenanthrene	<0.1	0.5	<0.1	1.0	0.3	0.4	0.1
anthracene	<0.1	0.2	<0.1	0.4	<0.1	0.2	<0.1
fluoranthene	0.3	0.9	0.2	2.4	0.7	1.0	0.3
pyrene	0.2	0.7	0.2	1.9	0.5	0.8	0.3
benz[a]anthracene	0.1	0.5	<0.1	1.0	0.3	0.4	0.2
chrysene	0.2	0.5	<0.1	1.1	0.3	0.5	0.2
benzo[b]fluoranthene	0.2	0.6	0.1	1.1	0.3	0.6	0.2
benzo[k]fluoranthene	0.1	0.3	<0.1	0.5	0.2	0.3	<0.1
benzo[a]pyrene	0.2	0.6	<0.1	1.3	0.3	0.3	0.2
indeno[1,2,3-cd]pyrene	0.2	0.4	<0.1	0.8	0.2	0.4	0.1
dibenz[a,h]anthracene	<0.1	0.2	<0.1	0.4	<0.1	0.2	<0.1
benzo[ghi]perylene	0.2	0.4	0.1	1.0	0.2	0.4	0.1

Analysed by:

Dwalton.

Dean Walton
Chemist

Authorised by:

M.W.P

Mike Parry
Section Leader

UKAS TESTING
0871

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Company Registration No: 02823669 Registered Office: Regent House Wolseley Road Kempston Bedford MK42 7JY

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 29/11/05, 05/12/05
Methodology: ICPMS 0.1ppb, ICPMS 0.5ppb, ICPMS 1ppb
Date Reported: 5 December, 2005
Date Received: 28 November, 2005
Sample Type: Solid

Certificate No: 05/5972/50/C1
File No: 05/5972/50
Client Ref: SS/015173

Lab sample ref	N303400
Client sample ref	TP18 0.60m
Date sampled	
Sample matrix (see notes page)	S

Analyte	Units	ISO17025	MCERTS	LOD	
Arsenic leachable MS	µg/l	N	N/A	1	<1
Cadmium leachable MS	µg/l	N	N/A	0.5	<0.5
Chromium leachable MS	µg/l	N	N/A	0.5	<0.5
Copper leachable MS	µg/l	N	N/A	0.1	2.0
Lead leachable MS	µg/l	N	N/A	1	<1
Mercury leachable MS	µg/l	N	N/A	0.1	<0.1
Nickel leachable MS	µg/l	N	N/A	1	1
Selenium leachable MS	µg/l	N	N/A	1	<1
Zinc leachable MS	µg/l	N	N/A	1	8

Notes
1 Analyses suffixed 'S' were performed on the sample dried at 35°C
2 Analyses suffixed 'SM' were performed on the sample as received
3 All results are expressed as dry weight
4 MCERTS accreditation applicable to Sample Matrix 'S' only
5 Natural stones (pebbles, gravels etc.) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly
6 # indicates separate report appended
7 Tests marked * indicate subcontracted analyses

Prepared by:

L Carolan
Account Manager

Approved by:

A Young
Section Leader

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 17/01/06, 18/01/06, 19/01/06, 20/01/06, 26/01/06
Methodology: Asb vis, CTP01, CTP07, CTP09a, CTP09c, CTP11a, CTP11b, CTP11c, CTP11h, CTP11i, CTP18c, CTP20, CTP22, SOP04 SVOC, Stones
Date Reported: 27 January, 2006
Date Received: 16 January, 2006
Sample Type: Solid

Certificate No: 06/0205/50/C1
File No: 06/0205/50
Client Ref: SS015173

Lab sample ref	N308959	N308960	N308961	N308962	N308963
Client sample ref	TP05 0.10m	TP06 0.50m	TP08 0.10m	TP09 0.10m	TP14 0.40m
Date sampled					
Sample matrix (see notes page)	S	S	S	S	S

Analyte	Units	ISO17025	MCERTS	LOD					
pH		Y	Y		7.7	6.4	7.2	7.6	7.4
Nitrate (water soluble) $_S$	mg/l	N	N/A	10	<10	<10	<10	<10	<10
Sulphate (water soluble) $_S$	g/l	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphur (total) $_S$	mg/kg	N	N/A	100	291	542	641	494	357
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10	<10	<10	<10	<10
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	1	<1	<1	<1	3
Organic Matter $_S$	g/kg	N	N/A	0.1	46.5	118	94.0	85.1	77.3
Arsenic $_S$	mg/kg	Y	Y	5	14	14	17	16	16
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	0.8	1.5	<0.5
Chromium (total) $_S$	mg/kg	Y	Y	5	26	16	28	24	23
Copper $_S$	mg/kg	Y	Y	5	34	27	58	105	46
Lead $_S$	mg/kg	Y	Y	5	78	68	357	197	122
Mercury $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	0.8	<0.5
Nickel $_S$	mg/kg	Y	Y	5	19	10	21	20	15
Selenium $_S$	mg/kg	Y	N	5	<5	<5	<5	<5	<5
Zinc $_S$	mg/kg	Y	N	5	87	52	153	410	104
Asbestos Screen		N	N/A		ND	ND	ND	ND	ND
PAH (USEPA 16) $_{SM}$		Y	N		#	#	#	#	#

Notes
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Prepared by:

L Carolan
Account Manager

Approved by:

P Chadwick
Operations Director

MCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

UKAS TESTING 0871

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CASELLA SEAL

Client	Capita Symonds : Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire SK8 5AU
Contract / Site	Langley, Area F - SS015173
Sample Matrix	Solid
File Number	06/0205/50/C1
Date Received	16/01/06
Date Tested	19/01/06
Methodology	Laboratory Developed In-House Method - 'Determination of SVOC' by GC-MS Test included on current UKAS schedule

Analysis : **POLYNUCLEAR AROMATIC HYDROCARBONS**

All Values in mg/kg

Sample Ref.	308959	308960	308961	308962	308963
Client Ref	TP 05 0.10m	TP 06 0.50m	TP 08 0.10m	TP 09 0.10m	TP 14 0.40m
Name					
naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1
acenaphthylene	<0.1	<0.1	<0.1	<0.1	<0.1
acenaphthene	<0.1	<0.1	0.2	0.2	<0.1
fluorene	<0.1	<0.1	<0.1	0.2	<0.1
phenanthrene	0.5	0.1	1.3	2.1	0.5
anthracene	0.1	<0.1	0.3	0.5	<0.1
fluoranthene	0.9	0.3	2.1	3.1	1.4
pyrene	0.8	0.3	2.1	2.9	1.2
benz[a]anthracene	0.4	0.2	1.0	1.3	0.7
chrysene	0.4	0.2	1.1	1.5	0.8
benzo[b]fluoranthene	0.7	0.3	1.6	2.0	1.1
benzo[k]fluoranthene	0.3	<0.1	0.6	0.8	0.5
benzo[a]pyrene	0.6	0.2	1.4	1.7	1.0
indeno[1,2,3-cd]pyrene	0.3	0.1	0.7	0.9	0.6
dibenz[a,h]anthracene	0.2	<0.1	0.3	0.4	0.3
benzo[ghi]perylene	0.4	0.2	0.9	1.1	0.7

Analysed by:

D Walton

Dean Walton
Chemist

Authorised by:

M W P

Mike Parry
Section Leader

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0871

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 17/01/06, 25/01/06
Methodology: ICPMS 0.1ppb, ICPMS 0.5ppb, ICPMS 1ppb
Date Reported: 27 January, 2006
Date Received: 16 January, 2006
Sample Type: Solid

Certificate No: 06/0206/50/C1
File No: 06/0206/50
Client Ref: SS015173

Lab sample ref	N308964	N308965	N308966
Client sample ref	TP09 0.60m	TP13 0.40m	TP15 0.40m
Date sampled			
Sample matrix (see notes page)	S	S	S

Analyte	Units	ISO17025	MCERTS	LOD			
Arsenic leachable MS	µg/l	N	N/A	1	5	4	6
Cadmium leachable MS	µg/l	N	N/A	0.5	<0.5	<0.5	<0.5
Chromium leachable MS	µg/l	N	N/A	0.5	4.7	3.4	6.0
Copper leachable MS	µg/l	N	N/A	0.1	1.9	47.5	2.5
Lead leachable MS	µg/l	N	N/A	1	12	15	10
Mercury leachable MS	µg/l	N	N/A	0.1	<0.1	<0.1	<0.1
Nickel leachable MS	µg/l	N	N/A	1	2	<1	1
Selenium leachable MS	µg/l	N	N/A	1	<1	<1	<1
Zinc leachable MS	µg/l	N	N/A	1	4	<1	<1

Notes
1 Analyses suffixed 'S' were performed on the sample dried at 35°C
2 Analyses suffixed 'SM' were performed on the sample as received
3 All results are expressed as dry weight
4 MCERTS accreditation applicable to Sample Matrix 'S' only
5 Natural stones (pebbles, gravels etc) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly
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Prepared by:

L Carolan
Account Manager

Approved by:

P Chadwick
Operations Director

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 10/02/06, 13/02/06, 14/02/06, 16/02/06, 17/02/06, 20/02/06
Methodology: Asb vis, CTP01, CTP07, CTP09a, CTP09c, CTP11a, CTP11b, CTP11c, CTP11h, CTP11i, CTP18c, CTP20, CTP22, SOP04 SVOC, Stones
Date Reported: 20 February, 2006
Date Received: 7 February, 2006
Sample Type: Solid

Certificate No: 06/0618/50/C1
File No: 06/0618/50
Client Ref: SS015173

Lab sample ref	N311870	N311871	N311872	N311873
Client sample ref	TP20 0.20m	TP22 0.50m	TP27 0.40m	TP29 0.10m
Date sampled				
Sample matrix (see notes page)	S	S	S	S

Analyte	Units	ISO17025	MCERTS	LOD				
pH		Y	Y		6.2	7.0	6.8	7.7
Nitrate (water soluble) $_S$	mg/l	N	N/A	10	<10	83	<10	<10
Sulphate (water soluble) $_S$	g/l	Y	Y	0.1	<0.1	0.4	<0.1	<0.1
Sulphur (total) $_S$	mg/kg	N	N/A	100	369	772	290	697
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10	<10	<10	<10
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	<1	<1	<1	2
Organic Matter $_S$	g/kg	N	N/A	0.1	66.2	128	52.0	96.0
Arsenic $_S$	mg/kg	Y	Y	5	15	24	17	27
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	0.8
Chromium (total) $_S$	mg/kg	Y	Y	5	23	20	25	22
Copper $_S$	mg/kg	Y	Y	5	27	57	35	127
Lead $_S$	mg/kg	Y	Y	5	69	155	64	558
Mercury $_S$	mg/kg	Y	N	0.5	<0.5	<0.5	<0.5	<0.5
Nickel $_S$	mg/kg	Y	Y	5	17	18	23	32
Selenium $_S$	mg/kg	Y	N	5	<5	<5	<5	<5
Zinc $_S$	mg/kg	Y	N	5	68	73	76	174
Asbestos Screen		N	N/A		ND	ND	ND	ND
PAH (USEPA 16) $_{SM}$		Y	N		#	#	#	#

Notes
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7 Tests marked * indicate subcontracted analyses

Prepared by:

pp L Carolan
Account Manager

Approved by:

P Chadwick
Operations Director

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CASELLA SEAL

Client	Capita Symonds : Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire SK8 5AU
Contract / Site	Langley, Area F - SS015173
Sample Matrix	Solid
File Number	06/0618/50/C1
Date Received	07/02/06
Date Tested	13/02/06
Methodology	Laboratory Developed In-House Method - 'Determination of SVOC' by GC-MS

Analysis : **POLYNUCLEAR AROMATIC HYDROCARBONS**

All Values in mg/kg

Sample Ref.	311870	311871	311872	311873
Client Ref	TP 20 0 20m	TP 22 0 50m	TP 27 0 40m	TP 29 0 10m
Name				
naphthalene	<0.1	<0.1	<0.1	0.6
acenaphthylene	<0.1	<0.1	<0.1	<0.2
acenaphthene	<0.1	0.2	<0.1	2.0
fluorene	0.2	0.1	<0.1	1.4
phenanthrene	<0.1	1.6	<0.1	12.7
anthracene	<0.1	0.5	<0.1	3.6
fluoranthene	0.3	2.1	<0.1	15.7
pyrene	0.2	2.0	<0.1	16.8
benz[a]anthracene	0.1	1.0	<0.1	7.2
chrysene	0.2	1.0	<0.1	7.7
benzo[b]fluoranthene	0.2	1.0	<0.1	9.0
benzo[k]fluoranthene	<0.1	0.4	<0.1	3.5
benzo[a]pyrene	0.2	0.8	<0.1	7.5
indeno[1,2,3-cd]pyrene	<0.1	0.4	<0.1	3.4
dibenz[a,h]anthracene	<0.1	0.2	<0.1	1.5
benzo[ghi]perylene	<0.1	0.4	<0.1	4.0

Analysed by:

Dean Walton
Chemist

Authorised by:

Mike Parry
Section Leader

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 09/02/06, 20/02/06
Methodology: ICPMS 0.1ppb, ICPMS 0.5ppb, ICPMS 1ppb
Date Reported: 20 February, 2006
Date Received: 7 February, 2006
Sample Type: Solid

Certificate No: 06/0619/50/C1
File No: 06/0619/50
Client Ref: SS015173

Lab sample ref	N311874	N311875
Client sample ref	TP24 0.20m	TP29 0.30m
Date sampled		
Sample matrix (see notes page)	S	S

Analyte	Units	ISO17025	LOD		
Arsenic leachable MS	µg/l	N	1	2	3
Cadmium leachable MS	µg/l	N	0.5	<0.5	<0.5
Chromium leachable MS	µg/l	N	0.5	1.5	1.2
Copper leachable MS	µg/l	N	0.1	5.1	6.5
Lead leachable MS	µg/l	N	1	2	10
Mercury leachable MS	µg/l	N	0.1	<0.1	<0.1
Nickel leachable MS	µg/l	N	1	3	1
Selenium leachable MS	µg/l	N	1	<1	<1
Zinc leachable MS	µg/l	N	1	8	4

Notes
1 # indicates separate report appended
2 Tests marked * indicate subcontracted analyses

Prepared by:

S Blemings
Account Manager

Approved by:

P Chadwick
Operations Director

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CASELLA SEAL

Chemistry Laboratory Certificate

Client: Capita Symonds
Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire, SK8 5AU
Site: Langley, Area F - SS015173
Date Tested: 14/02/06, 15/02/06, 16/02/06, 20/02/06
Methodology: Asb vis, CTP01, CTP07, CTP09a, CTP09c, CTP11a, CTP11b, CTP11c, CTP11h, CTP11i, CTP18c, CTP20, CTP22, SOP04 SVOC, Stones
Date Reported: 20 February, 2006
Date Received: 13 February, 2006
Sample Type: Solid

Certificate No: 06/0758/50/C1
File No: 06/0758/50
Client Ref: SS015173

Lab sample ref	N312532	N312533
Client sample ref	TP21 0.80m	TP28 1.10m
Date sampled		
Sample matrix (see notes page)	S	S

Analyte	Units	ISO17025	MCERTS	LOD		
pH		Y	Y		7.6	5.7
Nitrate (water soluble) $_S$	mg/l	N	N/A	10	<10	<10
Sulphate (water soluble) $_S$	g/l	Y	Y	0.1	<0.1	<0.1
Sulphur (total) $_S$	mg/kg	N	N/A	100	<100	148
Cyanide (total) $_{SM}$	mg/kg	Y	Y	10	<10	<10
Phenols (screen) $_{SM}$	mg/kg	Y	Y	1	<1	<1
Organic Matter $_S$	g/kg	N	N/A	0.1	13.4	18.5
Arsenic $_S$	mg/kg	Y	Y	5	7	<5
Cadmium $_S$	mg/kg	Y	N	0.5	<0.5	<0.5
Chromium (total) $_S$	mg/kg	Y	Y	5	23	25
Copper $_S$	mg/kg	Y	Y	5	14	34
Lead $_S$	mg/kg	Y	Y	5	14	11
Mercury $_S$	mg/kg	Y	N	0.5	<0.5	<0.5
Nickel $_S$	mg/kg	Y	Y	5	20	21
Selenium $_S$	mg/kg	Y	N	5	<5	<5
Zinc $_S$	mg/kg	Y	N	5	28	35
Asbestos Screen		N	N/A		ND	ND
PAH (USEPA 16) $_{SM}$		Y	N		#	#

Notes
1 Analyses suffixed 'S' were performed on the sample dried at 35°C
2 Analyses suffixed 'SM' were performed on the sample as received
3 All results are expressed as dry weight
4 MCERTS accreditation applicable to Sample Matrix 'S' only
5 Natural stones (pebbles, gravels etc) which do not pass a 10mm sieve are excluded from air dried analyses and results corrected accordingly
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Prepared by:

S Blemings
Account Manager

Approved by:

P Chadwick
Operations Director

MCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

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CASELLA SEAL

Client	Capita Symonds : Prospect House, 20 Mellor Road, Cheadle Hulme, Cheshire SK8 5AU
Contract / Site	Langley, Area F - SS015173
Sample Matrix	Solids
File Number	06/0758/50/C1
Date Received	13/02/06
Date Tested	20/02/06
Methodology	Laboratory Developed In-House Method - 'Determination of SVOC' by GC-MS

Analysis : **POLYNUCLEAR AROMATIC HYDROCARBONS**

All Values in mg/kg

Sample Ref.	312532	312533
Client Ref.	TP 21 0 80m	TP 28 1 10m
Name		
naphthalene	<0.1	<0.1
acenaphthylene	<0.1	<0.1
acenaphthene	<0.1	<0.1
fluorene	<0.1	<0.1
phenanthrene	<0.1	<0.1
anthracene	<0.1	<0.1
fluoranthene	<0.1	<0.1
pyrene	<0.1	<0.1
benz[a]anthracene	<0.1	<0.1
chrysene	<0.1	<0.1
benzo[b]fluoranthene	<0.1	<0.1
benzo[k]fluoranthene	<0.1	<0.1
benzo[a]pyrene	<0.1	<0.1
indeno[1,2,3-cd]pyrene	<0.1	<0.1
dibenz[a,h]anthracene	<0.1	<0.1
benzo[ghi]perylene	<0.1	<0.1

Analysed by:

Dean Walton
Chemist

Authorised by:

Mike Parry
Section Leader

UKAS TESTING
0871

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* Subcontracted test
» Shown on prev report

Job Number: 06/02739/02/01 **Matrix:** LIQUID
Client: Capita Symonds **Location:** LANGLEY AREA F
Client Ref. No.: SS015173 **Client Contact:** Andrew Warren

Sample Identity	WS7	WS10								Method Code	LoD/Units
Depth (m)											
Sample Type	WATER	WATER									
Sampled Date	10 02 06	10 02 06									
Sample Received Date	14 02 06	14 02 06									
Batch	1	1									
Sample Number(s)	1-4	5-8									
Arsenic Dissolved (ICP-MS)	<1	<1								TM152#	<1 ug/l
Boron Dissolved (ICP-MS)	276	86								TM152#	<10 ug/l
Cadmium Dissolved (ICP-MS)	<0 4	<0 4								TM152#	<0 4 ug/l
Chromium Dissolved (ICP-MS)	<1	<1								TM152#	<1 ug/l
Copper Dissolved (ICP-MS)	2	<1								TM152#	<1 ug/l
Lead Dissolved (ICP-MS)	<1	<1								TM152#	<1 ug/l
Nickel Dissolved (ICP-MS)	36	30								TM152#	<1 ug/l
Selenium Dissolved (ICP-MS)	<1	<1								TM152#	<1 ug/l
Zinc Dissolved (ICP-MS)	50	17								TM152#	<3 ug/l
Mercury Dissolved (CVAA)	<0 05	<0 05								TM127#	<0 05 ug/l
Sulphate (soluble)	110	115								TM098#	<3 mg/l
Sulphide	<0 50	<0 50								TM101#	<0 5 mg/l
Hexavalent Chromium	0 04	<0 03								TM151#	<0 03 mg/l
Phenols Total Monohydric	<0 01	<0 01								TM062#	<0 01 mg/l
Thiocyanate	<0 05	<0 05								TM153#	<0 05 mg/l
Total Cyanide	<0 05	<0 05								TM153#	<0 05 mg/l
Free Cyanide	<0 05	<0 05								TM153#	<0 05 mg/l
Free Sulphur	<0 05	<0 05								TM136#	<0 05 mg/l
pH Value	8 34	8 00								TM133#	<1 00 pH Units

Date 07.03.2006

Validated ☑
Preliminary ☐

ALcontrol Geochem Analytical Services
Table Of Results

ISO 17025 accredited
M MCERTS accredited
* Subcontracted test
» Shown on prev report

Job Number: 06/02739/02/01 **Matrix:** LIQUID
Client: Capita Symonds **Location:** LANGLEY AREA F
Client Ref. No.: SS015173 **Client Contact:** Andrew Warren

Sample Identity	WS7	WS10								Method Code	LoD/Units
Depth (m)											
Sample Type	WATER	WATER									
Sampled Date	10 02 06	10 02 06									
Sample Received Date	14 02 06	14 02 06									
Batch	1	1									
Sample Number(s)	1-4	5-8									
PAH by GCMS											
Naphthalene	<10	<10								TM074	<10 ng/l
Acenaphthylene	<10	<10								TM074	<10 ng/l
Acenaphthene	<10	<10								TM074	<10 ng/l
Fluorene	<10	<10								TM074	<10 ng/l
Phenanthrene	<10	<10								TM074	<10 ng/l
Anthracene	<10	<10								TM074	<10 ng/l
Fluoranthene	<10	<10								TM074	<10 ng/l
Pyrene	<10	<10								TM074	<10 ng/l
Benz(a)anthracene	<10	<10								TM074	<10 ng/l
Chrysene	<10	<10								TM074	<10 ng/l
Benzo(b)fluoranthene	<10	<10								TM074	<10 ng/l
Benzo(k)fluoranthene	<10	<10								TM074	<10 ng/l
Benzo(a)pyrene	<10	<10								TM074	<10 ng/l
Indeno(123cd)pyrene	<10	<10								TM074	<10 ng/l
Dibenzo(ah)anthracene	<10	<10								TM074	<10 ng/l
Benzo(ghi)perylene	<10	<10								TM074	<10 ng/l
PAH 16 Total	<10	<10								TM074	<10 ng/l

Date 07.03.2006

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 13/01/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: WET GRASS
WEATHER CONDITIONS: CLOUDY, +06°C
PRESSURE AT:
Start: 996 mb at 11:40 hrs
Finish: 995 mb at 15:30 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak $C0_2$ %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.8	BD	0.7	21.0	BD	BD	2.16	4.07
WS 2	BD	BD	21.7	BD	1.5	19.8	BD	BD	1.65	3.43
WS 3	BD	BD	21.7	BD	0.1	21.1	BD	BD	1.93	4.12
WS 4	BD	BD	21.8	BD	BD	21.8	BD	BD	0.94	4.08
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.7	BD	BD	21.7	BD	BD	1.15	3.90
WS 7										
WS 8										
WS 9										
WS 10										
WS 11										
WS 12										

Notes:

All monitoring points are at ground level
WS5 Destroyed by excavator
MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

Water samples taken from WS1,2,3,4 & 6

Steady state Concentration (%v/v) — CH_4 | $C0_2$ | O_2 | H_2S | CO

(If different from peak)

	$C0_2$	O_2
WS1	0	21.7
WS3	0	21.3

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 20/01/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: WET GRASS
WEATHER CONDITIONS: CLOUDY, +05°C
PRESSURE AT:
Start: 991 mb at 11:15 hrs
Finish: 992 mb at 12:00 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak CO_2 %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.2	BD	0.1	21.1	BD	BD	0.53	4.10
WS 2	BD	BD	21.3	BD	1.5	18.9	BD	BD	1.38	3.53
WS 3	BD	BD	21.6	BD	0.2	19.8	BD	BD	0.95	4.11
WS 4	BD	BD	21.6	BD	1.9	19.9	BD	BD	1.56	4.10
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.7	BD	0.1	21.6	BD	BD	0.80	3.66
WS 7										
WS 8										
WS 9										
WS 10										
WS 11										
WS 12										

Notes:
WS5 DESTROYED BY EXCAVATOR

MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

Steady state Concentration (%v/v) CH_4 CO_2 O_2 H_2S CO
(If different from peak)

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

CAPITA SYMONDS STRUCTURES

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 27/01/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: WET GRASS
WEATHER CONDITIONS: SHOWERS, +04°C
PRESSURE AT:
Start: 1009 mb at 14:00 hrs
Finish: 1009 mb at 14:50 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak CO_2 %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.5	BD	0.8	20.7	BD	BD	1.96	4.10
WS 2	BD	BD	21.3	BD	2.3	17.0	BD	BD	1.97	3.51
WS 3	BD	BD	21.2	0.1	0.1	19.1	BD	BD	1.40	4.10
WS 4	BD	BD	21.5	BD	0.6	21.0	BD	BD	1.10	4.11
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.3	BD	BD	21.3	BD	BD	1.29	3.66
WS 7										
WS 8										
WS 9										
WS 10										
WS 11										
WS 12										

Notes:
WS5 DESTROYED BY EXCAVATOR
WS3-LEL-2.7%
MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

Steady state Concentration (%v/v) CH_4 CO_2 O_2 H_2S CO
(If different from peak)

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

CAPITA SYMONDS STRUCTURES

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 09/02/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: GRASS
WEATHER CONDITIONS: SUNNY, +02°C
PRESSURE AT:
Start: 1001 mb at 11:45 hrs
Finish: 1001 mb at 13:15 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak $C0_2$ %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.3	BD	0.7	20.4	BD	BD	2.10	4.09
WS 2	BD	BD	21.2	BD	3.1	14.1	BD	BD	2.09	3.51
WS 3	BD	BD	21.1	BD	BD	20.0	BD	BD	1.52	4.10
WS 4	BD	BD	21.4	BD	BD	21.3	BD	BD	1.11	3.10
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.3	BD	0.4	20.7	BD	BD	1.47	3.57
WS 7	BD	BD	21.1	BD	0.2	20.9	BD	BD	1.53	3.21
WS 8	BD	BD	21.1	BD	0.7	20.3	BD	BD	1.97	2.37
WS 9	BD	BD	21.1	BD	BD	21.1	BD	BD	2.30	3.02
WS 10	BD	BD	21.3	BD	0.1	21.1	BD	BD	1.23	3.90
WS 11	BD	BD	21.1	BD	0.6	20.9	BD	BD	1.23	3.90
WS 12	BD	BD	21.1	BD	0.2	20.9	BD	BD	0.30	3.90

Notes:

WS5 DESTROYED
WS3 -LEL-0.4%

MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

WATER SAMPLES TAKEN FROM WS7,10,11 & 12 3 BOTTLES, 1 VIAL EACH

Steady state Concentration (%v/v)		CH_4	$C0_2$	O_2	H_2S	CO
(If different from peak)	WS12		0	21		

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

CAPITA SYMONDS STRUCTURES

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 16/02/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: GRASS
WEATHER CONDITIONS: CLOUDY, +05°C
PRESSURE AT:
Start: 960 mb at 10:35 hrs
Finish: 962 mb at 12:05 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak CO_2 %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.6	BD	BD	21.5	BD	BD	0.66	4.10
WS 2	BD	BD	21.1	BD	0.6	19.3	BD	BD	1.44	3.52
WS 3	BD	BD	21.1	BD	0.1	20.5	BD	BD	1.44	4.10
WS 4	BD	BD	21.4	BD	BD	21.3	BD	BD	0.15	3.10
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.3	BD	BD	21.2	BD	BD	0.87	3.59
WS 7	BD	BD	20.9	BD	BD	20.3	BD	BD	1.40	3.26
WS 8	BD	BD	21.1	BD	2.8	14.7	BD	BD	1.56	2.38
WS 9	BD	BD	21.1	BD	BD	21.0	BD	BD	1.13	3.04
WS 10	BD	BD	21.1	BD	BD	21.1	BD	BD	0.98	3.94
WS 11	BD	BD	21.2	BD	0.6	20.8	BD	BD	0.86	3.90
WS 12	BD	BD	21.1	BD	BD	21.1	BD	BD	0.15	3.90

Notes:

MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

Steady state Concentration (%v/v)		CH_4	CO_2	O_2	H_2S	CO
(If different from peak)	WS2		0	20 3		

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

GAS MONITORING RECORD SHEET

JOB NAME: Langley, Area F.
JOB NO: SS015173
DATE: 24/02/2006
INSTRUMENT: Gas Data Ltd. LMS xi Multi Gas Analyser

GROUND CONDITIONS: WET GRASS
WEATHER CONDITIONS: CLOUDY
PRESSURE AT:
Start: 1004 mb at 14:00 hrs
Finish: 1003 mb at 15:30 hrs

Exploratory Hole Reference BH/WS No	Flow l/hr	PD mb	BG O2 %v/v	Peak CH_4 %v/v	Peak CO_2 %v/v	Min O_2 %v/v	Peak H_2S ppm	Peak CO ppm	Water Level (m)	MP base (m)
WS 1	BD	BD	21.6	BD	BD	21.6	BD	BD	0.68	4.10
WS 2	BD	BD	21.3	BD	0.6	20.2	BD	BD	1.80	3.50
WS 3	BD	BD	21.2	BD	BD	21.2	BD	BD	1.17	4.10
WS 4	BD	BD	21.6	BD	BD	21.4	BD	BD	0.10	3.10
WS 5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
WS 6	BD	BD	21.4	BD	BD	21.4	BD	BD	1.21	3.59
WS 7	BD	BD	21.2	BD	BD	20.4	BD	BD	1.42	3.25
WS 8	BD	BD	21.2	BD	1.2	19.4	BD	BD	1.75	2.36
WS 9	BD	BD	21.3	BD	BD	21.2	BD	BD	2.13	2.93
WS 10	BD	BD	21.4	BD	0.1	21.2	BD	BD	1.13	3.93
WS 11	BD	BD	21.2	BD	BD	21.2	BD	BD	0.80	3.90
WS 12	BD	BD	21.3	BD	BD	21.2	BD	BD	0.10	2.93

Notes:
BH5 DESTROYED

MP Condition: (Good/ Flooded / Damaged / No Bung / Open etc)

Steady state Concentration (%v/v)		CH_4	CO_2	O_2	H_2S	CO
(If different from peak)	BH2		0	21		

Key: - BD = Below Detection; NR = Not Recorded; MP = Monitoring Point

OPERATOR: NF

CAPITA SYMONDS STRUCTURES

APPENDIX 04

EXPLORATORY HOLE RECORDS

Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 101

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.05	D				(0.10) 0.10	MADE GROUND : brown soil fill with fragments of broken brick			
0.20	D					Stiff grey brown CLAY			
1.00-1.45	SPT(C) N=14		2,3/3,4,4,3		(2.35)				
1.00	D								
2.00-2.45	SPT(C) N=16		3,3/3,4,4,5		2.45				
						Complete at 2.45m			

Remarks
No recovery below 1.50m
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 112

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Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 102

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.20	D				(1.00)	MADE GROUND : black soil fill with fragments of broken brick and wood			
0.50	D								
1.00-1.45	SPT(C) N=4		1,1/1,1,1,1		1.00				
1.00	D				(0.40)	Firm brown CLAY / SILT (Made Ground?)			
1.50	D				1.40	Stiff grey / brown CLAY			
2.00-2.45	SPT(C) N=11		1,2/3,2,3,3		(1.60)				
2.00	D								
3.00-3.45	SPT(C) N=13		2,2/2,3,4,4		3.00	Stiff / very stiff grey / brown CLAY			
3.00	D				(1.45)				
4.00-4.45	SPT(C) N=13		2,2/2,3,4,4						
4.00	D				4.45	Complete at 4.45m			

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No.
14-991.WS 109

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Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 103

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30	D				(0.90)	MADE GROUND : brown / black sand, ash, clay fill with fragments of broken brick		
1.00-1.45 1.00	SPT(C) N=9 D		2,2/2,2,3,2		0.90	Stiff grey / brown CLAY		
2.00-2.45 2.00	SPT(C) N=11 D		1,2/2,3,3,3		(2.55)			
3.00-3.45 3.00	SPT(C) N=18 D		4,4/5,5,4,4		3.45	Complete at 3.45m		

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 109

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Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 104

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
					(0.50)	MADE GROUND : brown clay / sand fill with fragments of broken brick and tile			
0.20	D				0.50				
0.50	D				(0.60)	Stiff yellow / brown sandy CLAY			
1.00-1.45	SPT(C) N=13		2,2/2,3,4,4		1.10				
1.10	D				(1.00)	Stiff grey / brown sandy CLAY			
2.00-2.45	SPT(C) N=12		1,2/2,3,3,4		2.10				
2.10	D				(1.35)	Stiff / very stiff grey CLAY			
3.00-3.45	SPT(C) N=18		4,4/4,4,5,5		3.45				
3.00	D					Complete at 3.45m			

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 109

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Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	**WS 105**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D				(0.60)	MADE GROUND : black sand, soil fill with fragments of broken brick		
0.60	D				0.60	Firm yellow / grey CLAY		
1.00-1.45 1.00	SPT(C) N=5 D		1,1/1,1,1,2		(1.40)			
2.00-2.45 2.00	SPT(C) N=11 D		2,2/2,3,3,3		2.00	Stiff grey / brown CLAY		
2.50	D				(1.00)			
3.00-3.45 3.00	SPT(C) N=8 D		1,1/2,2,2,2		3.00 (0.45)	Loose brown fine / medium SAND		
					3.45	Complete at 3.45m		

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 109

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Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 106

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.20	D				(1.00)	MADE GROUND : black /grey soil fill			
1.00-1.45 1.00	SPT(C) N=7 D		1,1/1,2,2,2		1.00	Firm stiff to stiff brown CLAY			
2.00-2.45 2.00	SPT(C) N=10 D		2,2/2,3,3,2		(2.45)				
3.00-3.45 3.00	SPT(C) N=14 D		2,3/3,4,3,4		3.45	Complete at 3.45m			

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No.
14-991.WS 109

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Geotechnical and Environmental Services

Site	Number
Langley Site F	**WS 107**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D				(0.90)	MADE GROUND : black soil fill with fragments of broken brick		
0.50	D				0.90			
1.00-1.45	SPT(C) N=7		1,1/2,1,2,2		(1.10)	Stiff grey / brown CLAY		
1.00	D				2.00			
2.00-2.45	SPT(C) N=19		3,3/5,4,5,5		(1.45)	Stiff / very stiff brown slightly sandy CLAY		
2.00	D				3.45			
3.00-3.45	SPT(C) N=46		2,3/33,4,5,4			Complete at 3.45m		
3.00	D							

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 109

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Site	Number
Langley Site F	**WS 108**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.10	D					MADE GROUND : black soil fill			
0.50	D				(0.90)				
1.00-1.45	SPT(C) N=6		1,2/1,2,2,1		0.90	Stiff yellow / brown very sandy CLAY			
1.00	D				(1.10)				
2.00-2.45	SPT(C) N=12		3,3/2,3,3,4		2.00	Brown SILT			
2.00	D				(0.40)				
2.50	D				2.40	Firm / stiff brown sandy CLAY			
3.00-3.45	SPT(C) N=15		3,2/3,3,4,5		(1.05)				
					3.45	Complete at 3.45m			

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No.
14-991.WS 109

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Site	Number
Langley Site F	WS 109

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 25/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	MADE GROUND : brown / black soil fill with fragments of broken brick		
0.20	D				0.30			
0.30	D					Brown fine SAND		
					(0.70)			
1.00-1.45	SPT(C) N=8		1,2/2,2,2,2		1.00	Firm / stiff grey / brown CLAY		
1.00	D				(1.00)			
2.00-2.45	SPT(C) N=11		2,2/2,3,3,3		2.00	Stiff grey / brown CLAY		
2.00	D				(1.45)			
3.00-3.45	SPT(C) N=15		2,2/3,4,4,4					
3.00	D				3.45	Complete at 3.45m		

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 109

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Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 110

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.10	D				(0.50)	MADE GROUND : brown /black sand, soil and clay fill with fragments of broken brick			
0.60	D				0.50 (0.50)	Yellow / brown slightly clayey fine SAND			
1.00-1.45	SPT(C) N=16		2,3/4,4,4,4		1.00	Firm to firm / stiff brown CLAY			
1.10	D				(1.00)				
2.00-2.45	SPT(C) N=16		3,3/3,4,4,5		2.00	Firm / stiff to stiff brown CLAY			
2.00	D				(1.45)				
3.00-3.45	SPT(C) N=18		3,4/5,4,4,5						
3.00	D				3.45	Complete at 3.45m			

Remarks
No recovery below 1.50m
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 112

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Geotechnical and Environmental Services

Site	Number
Langley Site F	**WS 111**

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D				(0.70)	MADE GROUND : brown clay and sand fill with fragments of broken brick		
0.50	D				0.70			
					(0.30)	Brown fine SAND		
1.00-1.45	SPT(C) N=11		2,3/3,2,3,3		1.00	Medium dense brown silty fine SAND		
1.00	D							
2.00-2.45	SPT(C) N=14		3,4/3,4,4,3					
2.00	D				(2.45)			
3.00-3.45	SPT(C) N=18		3,4/4,5,4,5					
3.00	D				3.45	Complete at 3.45m		

Remarks
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 112

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Geotechnical and Environmental Services

Site	Number
Langley Site F	WS 112

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Drive-in Window Sampler				14-991
	Location	**Dates** 26/07/2014	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D				(0.60)	MADE GROUND : brown sand and broken sandstone fill		
0.50	D				0.60			
0.90	D				(0.50)	Brown fine SAND		
1.00-1.45	SPT(C) N=8		1,2/2,2,2,2		1.10			
1.20	D				(0.90)	Loose grey / brown slightly silty fne SAND		
2.00-2.45	SPT(C) N=7		1,1/1,2,2,2		2.00			
2.20	D				(1.45)	Firm / firm stiff brown sandy CLAY		
3.00-3.45	SPT(C) N=12		2,2/3,3,3,3		3.45			
3.00	D					Complete at 3.45m		

Remarks
Borehole collapsed below 2.50m
Services inspection pit excavated by hand to 1.00m

Scale (approx)	Logged By
1:50	Dr J Crook

Figure No. 14-991.WS 112

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Geotechnical and Environmental Services

	Site Langley Site F		**Borehole Number** WS 101
Installation Type Single Installation	**Dimensions** Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm	**Client**	**Job Number** 14-991
	Location	**Ground Level (mOD)**	**Engineer** Wright Mottershaw Lydon Consulting Limited	**Sheet** 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description
				0.10	Concrete
				1.00	Bentonite Seal
				1.50	Well Screen
				2.45	Bottom Fill

Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

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Site	Borehole Number
Langley Site F	WS 102

Installation Type	Dimensions	Client	Job Number
Single Installation	Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm		14-991

Location	Ground Level (mOD)	Engineer	Sheet
		Wright Mottershaw Lydon Consulting Limited	1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description
				0.10	Concrete
					Bentonite Seal
				1.00	
					Well Screen
				2.50	
					Bottom Fill
				3.45	

Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

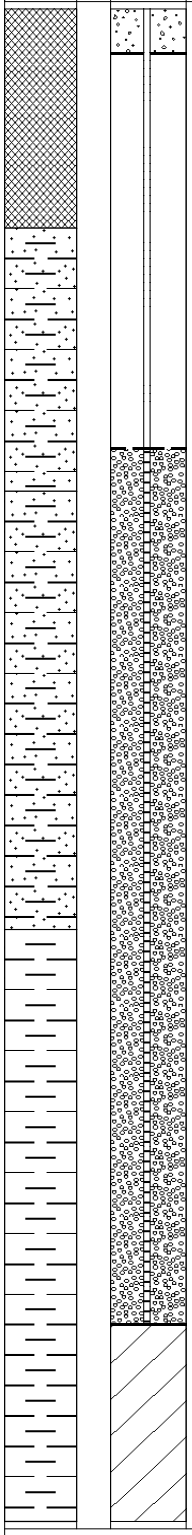
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Geotechnical and Environmental Services

Site	Borehole Number
Langley Site F	WS 104

Installation Type	Dimensions	Client	Job Number
Single Installation	Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm		14-991

Location	Ground Level (mOD)	Engineer	Sheet
		Wright Mottershaw Lydon Consulting Limited	1/1



Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

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Site	Borehole Number
Langley Site F	WS 106

Installation Type	Dimensions	Client	Job Number
Single Installation	Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm		14-991

Location	Ground Level (mOD)	Engineer	Sheet
		Wright Mottershaw Lydon Consulting Limited	1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description
				0.10	Concrete
					Bentonite Seal
				1.00	
				3.00	Well Screen
				3.45	Bottom Fill

Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

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Geotechnical and Environmental Services

Site	Borehole Number
Langley Site F	WS 108

Installation Type	Dimensions	Client	Job Number
Single Installation	Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm		14-991

Location	Ground Level (mOD)	Engineer	Sheet
		Wright Mottershaw Lydon Consulting Limited	1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description
				0.10	Concrete
					Bentonite Seal
				1.00	
				3.00	Well Screen
					Bottom Fill
				3.45	

Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

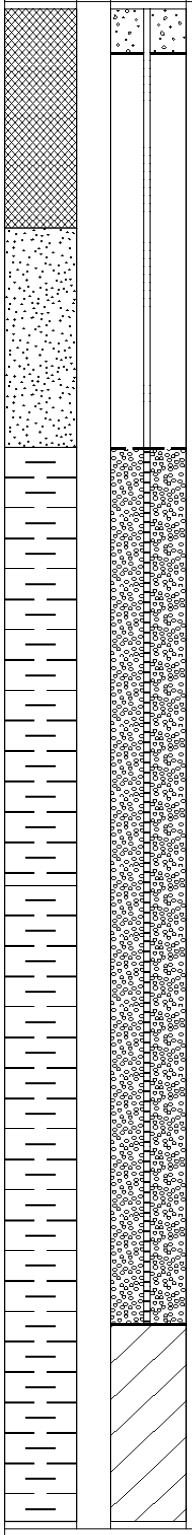
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Site	Borehole Number
Langley Site F	WS 110

Installation Type	Dimensions	Client	Job Number
Single Installation	Internal Diameter of Tube [A] = 35 mm Diameter of Filter Zone = 70 mm		14-991

Location	Ground Level (mOD)	Engineer	Sheet
		Wright Mottershaw Lydon Consulting Limited	1/1



Groundwater Strikes During Drilling

Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings 5 min	Readings 10 min	Readings 15 min	Readings 20 min	Depth Sealed (m)

Groundwater Observations During Drilling

Date	Start of Shift Time	Start of Shift Depth Hole (m)	Start of Shift Casing Depth (m)	Start of Shift Water Depth (m)	Start of Shift Water Level (mOD)	End of Shift Time	End of Shift Depth Hole (m)	End of Shift Casing Depth (m)	End of Shift Water Depth (m)	End of Shift Water Level (mOD)

Instrument Groundwater Observations

Inst. [A] Type : Slotted Standpipe

Date	Instrument [A] Time	Instrument [A] Depth (m)	Instrument [A] Level (mOD)	Remarks

Remarks

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Standard Penetration Test Results

Site : Langley Site F

Client :

Engineer : Wright Mottershaw Lydon Consulting Limited

Job Number 14-991

Sheet 1 / 1

Borehole Number	Base of Borehole (m)	End of Seating Drive (m)	End of Test Drive (m)	Test Type	Seating Blows per 75mm		Blows for each 75mm penetration				Result	Comments
					1	2	1	2	3	4		
WS 101	1.00	1.15	1.45	CPT	2	3	3	4	4	3	N=14	
WS 101	2.00	2.15	2.45	CPT	3	3	3	4	4	5	N=16	
WS 102	1.00	1.15	1.45	CPT	1	1	1	1	1	1	N=4	
WS 102	2.00	2.15	2.45	CPT	1	2	3	2	3	3	N=11	
WS 102	3.00	3.15	3.45	CPT	2	2	2	3	4	4	N=13	
WS 102	4.00	4.15	4.45	CPT	2	2	2	3	4	4	N=13	
WS 103	1.00	1.15	1.45	CPT	2	2	2	2	3	2	N=9	
WS 103	2.00	2.15	2.45	CPT	1	2	2	3	3	3	N=11	
WS 103	3.00	3.15	3.45	CPT	4	4	5	5	4	4	N=18	
WS 104	1.00	1.15	1.45	CPT	2	2	2	3	4	4	N=13	
WS 104	2.00	2.15	2.45	CPT	1	2	2	3	3	4	N=12	
WS 104	3.00	3.15	3.45	CPT	4	4	4	4	5	5	N=18	
WS 105	1.00	1.15	1.45	CPT	1	1	1	1	1	2	N=5	
WS 105	2.00	2.15	2.45	CPT	2	2	2	3	3	3	N=11	
WS 105	3.00	3.15	3.45	CPT	1	1	2	2	2	2	N=8	
WS 106	1.00	1.15	1.45	CPT	1	1	1	2	2	2	N=7	
WS 106	2.00	2.15	2.45	CPT	2	2	2	3	3	2	N=10	
WS 106	3.00	3.15	3.45	CPT	2	3	3	4	3	4	N=14	
WS 107	1.00	1.15	1.45	CPT	1	1	2	1	2	2	N=7	
WS 107	2.00	2.15	2.45	CPT	3	3	5	4	5	5	N=19	
WS 107	3.00	3.15	3.45	CPT	2	3	33	4	5	4	N=46	
WS 108	1.00	1.15	1.45	CPT	1	2	1	2	2	1	N=6	
WS 108	2.00	2.15	2.45	CPT	3	3	2	3	3	4	N=12	
WS 108	3.00	3.15	3.45	CPT	3	2	3	3	4	5	N=15	
WS 109	1.00	1.15	1.45	CPT	1	2	2	2	2	2	N=8	
WS 109	2.00	2.15	2.45	CPT	2	2	2	3	3	3	N=11	
WS 109	3.00	3.15	3.45	CPT	2	2	3	4	4	4	N=15	
WS 110	1.00	1.15	1.45	CPT	2	3	4	4	4	4	N=16	
WS 110	2.00	2.15	2.45	CPT	3	3	3	4	4	5	N=16	
WS 110	3.00	3.15	3.45	CPT	3	4	5	4	4	5	N=18	
WS 111	1.00	1.15	1.45	CPT	2	3	3	2	3	3	N=11	
WS 111	2.00	2.15	2.45	CPT	3	4	3	4	4	3	N=14	
WS 111	3.00	3.15	3.45	CPT	3	4	4	5	4	5	N=18	
WS 112	1.00	1.15	1.45	CPT	1	2	2	2	2	2	N=8	
WS 112	2.00	2.15	2.45	CPT	1	1	1	2	2	2	N=7	
WS 112	3.00	3.15	3.45	CPT	2	2	3	3	3	3	N=12	

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APPENDIX 05

GEOTECHNICAL TEST RESULTS

PSL
Professional Soils Laboratory

LABORATORY REPORT

UKAS TESTING
4043

Contract Number: PSL14/3945

Client's Reference: Report Date: 27 August 2014

Client Name: WML Consulting
No 8 Oak Green Earl Road
Stanley Green Business Park
Cheadle Hulme
Cheshire
SK8 6QL

For the attention of: Sam Seddon

Contract Title: Langley Site F

Date Received: 6/8/2014
Date Commenced: 6/8/2014
Date Completed: 27/8/2014

Notes: Observations and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson (Director)
A Watkins (Director)
M Beastall (Laboratory Manager)

D Lambe (Senior Technician)
S Royle (Senior Technician)

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awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m	Description of Sample
TP102			1.00	Brown slightly gravelly sandy CLAY.
TP105			1.50	Brown slightly gravelly very sandy CLAY.
TP106			1.30	Brown gravelly very sandy CLAY.
TP109			1.00	Brown slightly gravelly very sandy CLAY.
TP112			0.90	Brown very sandy CLAY.
TP113			0.00-0.50	MADE GROUND dark brown gravelly sandy clay.
TP115			1.00	Brown slightly sandy CLAY.
TP119			2.00	Brown very sandy CLAY.
TP120			0.00-0.50	MADE GROUND dark brown gravelly sandy clay.
TP128			1.00	Brown sandy CLAY.
WS102			1.00	Brown gravelly sandy CLAY.
WS105			0.60	Brown slightly sandy CLAY.
WS106			1.00	Brown slightly gravelly slightly sandy CLAY.
WS110			1.10	Brown very sandy CLAY.

PSL
Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	27/08/14		27/08/14		27/08/14

LANGLEY SITE F.

Contract No: PSL14/3945

Client Ref: 5956G

SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Depth m	Moisture Content % Clause 3.2	Bulk Density Mg/m^3 Clause 7.2	Dry Density Mg/m^3 Clause 7.2	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4.4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	% Passing .425mm	Remarks
TP102			1.00	21				40	21	19	94	Intermediate plasticity CI.
TP105			1.50	17				27	16	11	91	Low plasticity CL.
TP106			1.30	14				31	17	14	87	Low plasticity CL.
TP109			1.00	15				31	18	13	93	Low plasticity CL.
TP112			0.90	17				30	17	13	96	Low plasticity CL.
TP115			1.00	24				48	23	25	100	Intermediate plasticity CI.
TP119			2.00	18				29	17	12	97	Low plasticity CL.
TP128			1.00	20				40	20	20	100	Intermediate plasticity CI.
WS102			1.00	23				41	20	21	86	Intermediate plasticity CI.
WS105			0.60	37				49	23	26	100	Intermediate plasticity CI.
WS106			1.00	27				48	22	26	95	Intermediate plasticity CI.
WS110			1.10	18				29	17	12	95	Low plasticity CL.

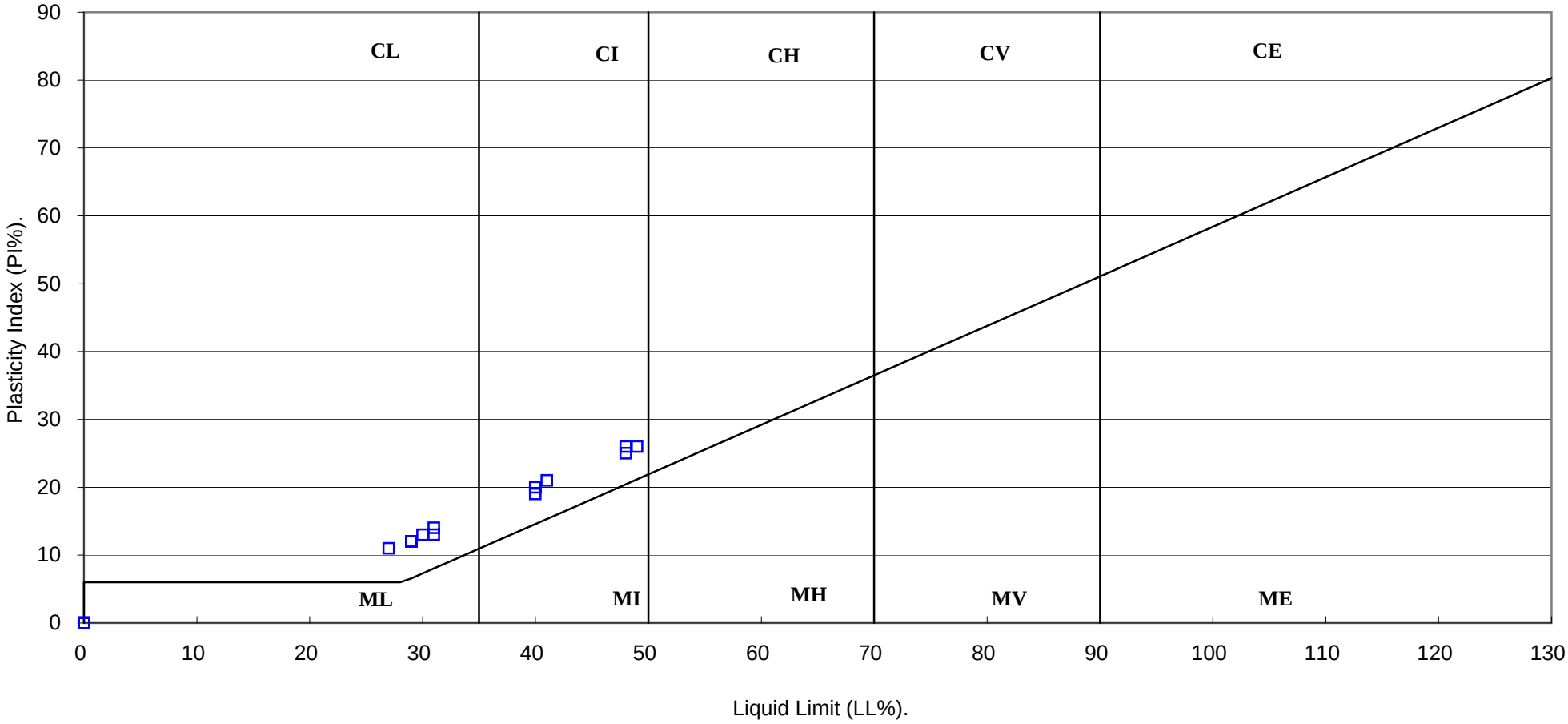
SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

PSL Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	27/08/14		27/08/14		27/08/14
LANGLEY SITE F.				Contract No:	PSL14/3945
				Client Ref:	5956G

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



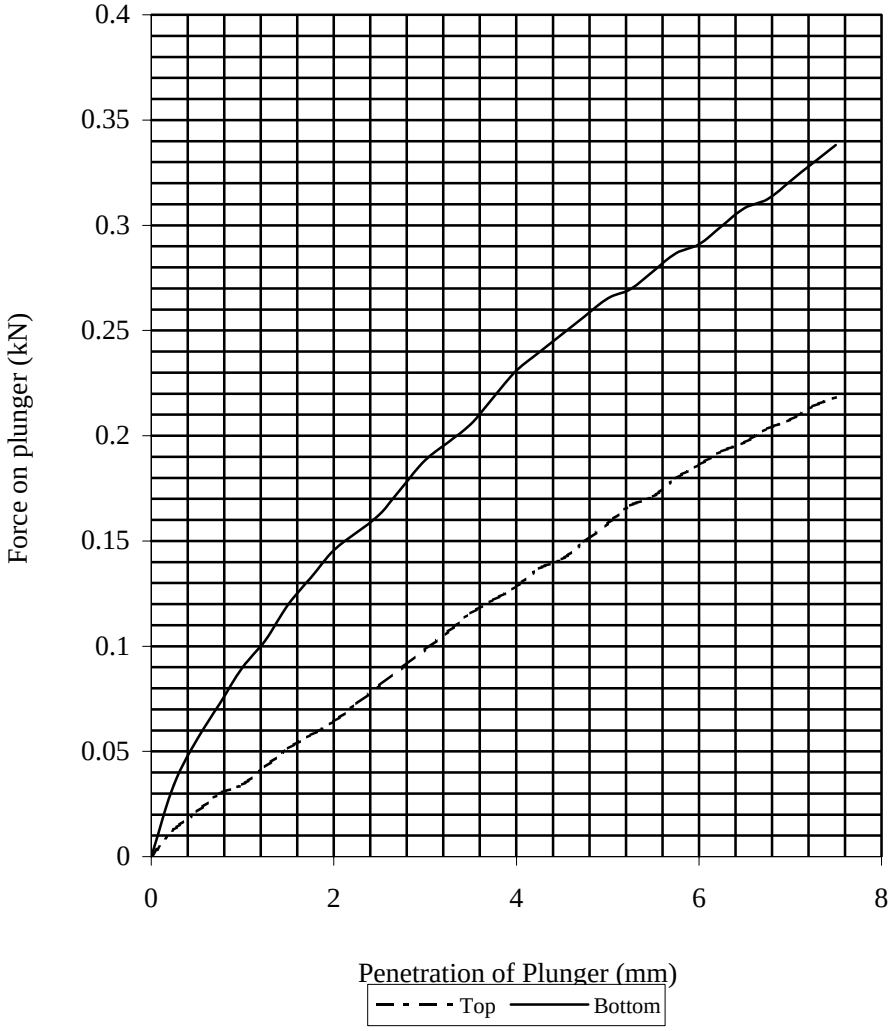
PSL Professional Soils Laboratory	Compiled by	Date	Checked by	Date	Approved by	Date
		27/08/14		27/08/14		27/08/14
	LANGLEY SITE F.				Contract No:	PSL14/3945
					Client Ref:	5956G

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Hole Number: **TP113** **Depth (m):** **0.00-0.50**

Sample Number: **Sample Type:** **B**



Initial Sample Conditions		Test Conditions		Method of compaction	2.5Kg Rammer		
Moisture Content:	24	Surcharge Kg:	4.20	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	1.90	Soaking Time hrs	0	Sample Top	25	Sample Top	0.8
Dry Density Mg/m3:	1.53	Swelling mm:	0	Sample Bottom	24	Sample Bottom	1.3
Percentage retained on 20mm BS test sieve:	18	Remarks:	See Summary of Soil Description.				

Checked by	Date	Approved By	Date
	27/08/14		27/08/14

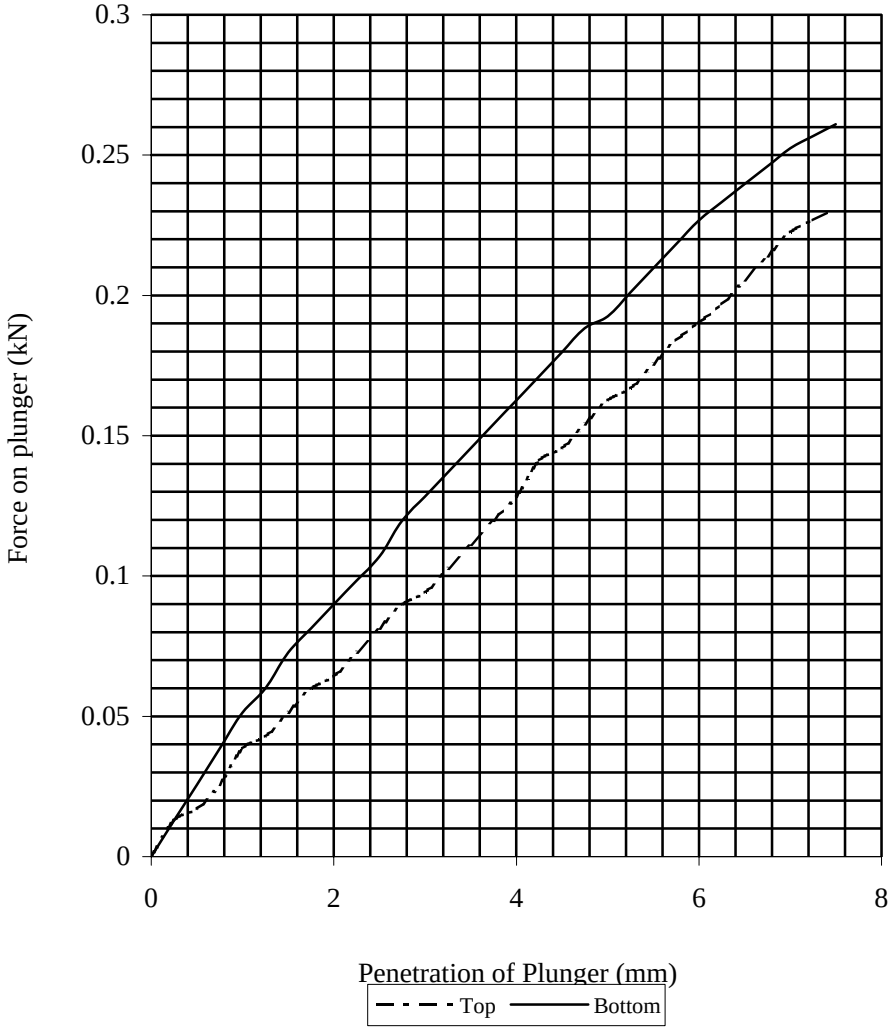
PSL Professional Soils Laboratory	**LANGLEY SITE F.**	**Contract No. PSL14/3945**

California Bearing Ratio Test.

BS 1377 : Part 4 : 1990

Hole Number: **TP120** **Depth (m):** **0.00-0.50**

Sample Number: **Sample Type:** **B**



Initial Sample Conditions		Test Conditions		Method of compaction	2.5Kg Rammer		
Moisture Content:	21	Surcharge Kg:	4.20	Final Moisture Content %		C.B.R. Value %	
Bulk Density Mg/m3:	1.96	Soaking Time hrs	0	Sample Top	21	Sample Top	0.8
Dry Density Mg/m3:	1.62	Swelling mm:	0	Sample Bottom	21	Sample Bottom	1.0
Percentage retained on 20mm BS test sieve:	6	Remarks:	See Summary of Soil Description.				

Checked by	Date	Approved By	Date
	27/08/14		27/08/14

PSL Professional Soils Laboratory	**LANGLEY SITE F.**	**Contract No. PSL14/3945**

WML CONSULTING

APPENDIX 06

CHEMICAL ANALYSIS RESULTS

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley F - Ref 5956G - Soil samples
Date Tested: 30/06/14
Date Reported: 2 July, 2014
Date Received: 30 June, 2014
Sample Type: Solid

Certificate No: 14/2563/RG/S/C1
File No: 14/2563/RG/S
Client Ref: 5356G

Lab sample ref:	**C182732**	**C182733**	**C182734**
Client sample ref:	**TP101 0.10m**	**TP103 0.70m**	**TP104 0.60m**
Date sampled:	**26/06/14**	**26/06/14**	**26/06/14**
Sample matrix (see notes page):	**S**	**S**	**S**

Determinand	Method	Units	ISO17025	MCERTS	LOD			
Deviation Assessment								
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Metals (soil)								
Arsenic	AN8b	mg/kg	Y	Y	2	12.9	7.5	8.8
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.4	0.3	0.3
Cadmium	AN8a	mg/kg	Y	Y	1	<1.0	<1.0	<1.0
Chromium (total)	AN8b	mg/kg	Y	Y	2	33.9	22.8	30.8
Copper	AN8b	mg/kg	Y	Y	2	40.3	21.5	18.0
Lead	AN8b	mg/kg	Y	Y	2	384.2	31.6	37.7
Mercury	AN8a	mg/kg	Y	Y	1	<1.0	<1.0	<1.0
Nickel	AN8b	mg/kg	Y	Y	2	13.5	23.3	15.3
Selenium	AN8a	mg/kg	Y	Y	1	<1.0	<1.0	<1.0
Zinc	AN8b	mg/kg	Y	Y	2	68.5	46.0	45.1
Sample Prep(C)								
EMR	EMR	%	N	N/A	0.1	<0.1	<0.1	<0.1
% Stones	Stones	%	N	N/A	0.1	20.6	9.3	18.7
Moisture Content @ <30°C	AN1	%	Y	N/A	0.1	13.2	13.6	17.8
Sample Description	MCERTS ver4.		N	N/A		2A	3A	5A
Misc								
pH	AN5a	Units	Y	Y	0.1	7.68	7.82	6.95
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.02	0.03	0.02
Sulphur (total)	an8i	mg/kg	N	N	10	245	517	408
Cyanide (total) M	AN45f	mg/kg	Y	Y	1	<1	<1	<1
Phenols (screen) M	AN45d	mg/kg	Y	N	1	<1	<1	<1
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1.0	<1.0	<1.0
Vanadium	AN8b	mg/kg	Y	Y	2	20.6	19.6	19.2
Asbestos	ASB001	%	Y	N/A	0.001	NAD	-	-
PAH (USEPA16)								
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	0.5	<0.1	<0.1
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	1.0	<0.1	<0.1
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	1.7	<0.1	0.2
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	1.2	<0.1	0.2
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	1.5	<0.1	0.2
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.7	<0.1	0.1
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.6	<0.1	0.1
Chrysene M	GCM501	mg/kg	Y	Y	0.1	1.7	<0.1	0.4
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.1	<0.1	<0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	4.5	0.1	0.5
Fluorene M	GCM501	mg/kg	Y	Y	0.1	0.3	<0.1	<0.1
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	0.6	<0.1	0.1
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	4.1	0.1	0.2
Pyrene M	GCM501	mg/kg	Y	Y	0.1	3.8	0.1	0.4
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	22.2	<1	2.6

Notes
1. All analyses performed on the sample dried at <30ºC, except analyses suffixed with 'M'.
2. Analyses suffixed 'M' were performed on the sample as received and corrected for '% moisture at <30ºC' where applicable.
3. All results are expressed as dry weight.
4. MCERTS accreditation applicable to Sample Matrix 'S' only.
5. Natural stones (pebbles, gravels etc.) which do not pass a 2mm sieve are excluded from dried analyses.
6. Tests marked * indicate subcontracted analyses.
7. NAD denotes 'No Asbestos Detected'.
8. The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.
9. ^Sample Description key: 1. - Sand, 2. Loam, 3. Clay, 4. Sand/loam mix, 5. Sand/clay mix, 6. Clay/loam mix, 7. Other.
suffixed with: A - Stones, B - Construction rubble, C - Visible Hydrocarbons, D - Vegetation, E - Glass/metal, F - Strong odour, G - Other.
10. Leachate preparation is not included in our UKAS accreditation.
11. Dates of testing for all parameters are available upon request.

Signed for, and on behalf of Exova (UK) Ltd.

Prepared by:
F Barr
Administrator

Approved by:
J McEleny
Laboratory Manager

0568

The contents of this document are governed by the terms and conditions overleaf.
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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - TP samples
Date Tested: 15/08/14, 19/08/14, 20/08/14
Date Reported: 20 August, 2014
Date Received: 11 August, 2014
Sample Type: Solid

Certificate No: 14/3196/RG/S/C1
File No: 14/3196/RG/S
Client Ref: 5956G

					Lab sample ref:	**C186114**	**C186115**	**C186116**	**C186117**	**C186118**
					Client sample ref:	**TP102 0.20m**	**TP103 1.00m**	**TP104 0.30m**	**TP104 2.00m**	**TP106 0.20m**
					Date sampled:					
					Sample matrix (see notes page):	**OW**	**OW**	**OW**	**OW**	**OW**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Deviation Assessment										
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4	4	4	4
Metals (soil)										
Arsenic	AN8b	mg/kg	Y	Y	2	11	-	19	-	89
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.8	-	0.4	-	0.9
Cadmium	AN8a	mg/kg	Y	Y	1	<1	-	3	-	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	22	-	29	-	27
Copper	AN8b	mg/kg	Y	Y	2	54	-	55	-	57
Lead	AN8b	mg/kg	Y	Y	2	401	-	76	-	84
Mercury	AN8a	mg/kg	Y	Y	1	<1	-	<1	-	<1
Nickel	AN8b	mg/kg	Y	Y	2	19	-	23	-	22
Selenium	AN8a	mg/kg	Y	Y	1	<1	-	<1	-	3
Zinc	AN8b	mg/kg	Y	Y	2	156	-	214	-	140
Sample Prep(C)										
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	29.3	16.1	36.2	22.0	32.5
Moisture Content @ <30°C	AN1	% w/w	Y	N/A	0.1	15.0	17.5	8.5	11.2	14.0
Sample Description	MCERTS ver4.		N	N/A		2AD	3A	2AD	6A	2AD
Misc										
pH	AN5a	Units	Y	Y	0.1	8.53	6.35	6.81	7.15	8.02
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.04	0.10	0.02	0.01	0.29
Sulphur (total)	an8i	mg/kg	N	N	10	431	158	225	-	1740
Cyanide (total) M	AN45f	mg/kg	Y	Y	1	<1	-	2	-	<1
Phenols (screen) M	AN45d	mg/kg	Y	N	1	<1	-	<1	-	<1
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	-	<1	-	<1
Vanadium	AN8b	mg/kg	Y	Y	2	22	-	28	-	26
Asbestos	ASB001	%	Y	N/A	0.001	NAD	-	-	-	-
PAH (USEPA16)										
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.3
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.6
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.1	-	0.1	-	1.3
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	0.1	-	0.1	-	1.3
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.2	-	0.1	-	1.2
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.1	-	<0.1	-	0.7
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.7
Chrysene M	GCM501	mg/kg	Y	Y	0.1	0.2	-	0.1	-	1.5
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.4	-	0.2	-	2.9
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.2
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.6
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1	-	<0.1	-	0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	0.1	-	0.1	-	2.1
Pyrene M	GCM501	mg/kg	Y	Y	0.1	0.4	-	0.2	-	2.6
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	0.1	1.8	-	1.1	-	16.2

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - TP samples
Date Tested: 15/08/14, 19/08/14, 20/08/14
Date Reported: 20 August, 2014
Date Received: 11 August, 2014
Sample Type: Solid

Certificate No: 14/3196/RG/S/C1
File No: 14/3196/RG/S
Client Ref: 5956G

					Lab sample ref:	**C186119**	**C186120**	**C186121**	**C186122**	**C186123**
					Client sample ref:	**TP107 0.40m**	**TP110 0.30m**	**TP111 0.80m**	**TP113 0.20m**	**TP113 1.60m**
					Date sampled:					
					Sample matrix (see notes page):	**OW**	**OW**	**OW**	**OW**	**OW**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Deviation Assessment										
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4	4	4	4
Metals (soil)										
Arsenic	AN8b	mg/kg	Y	Y	2	30	17	3	13	-
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.7	0.7	0.3	1.4	-
Cadmium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	-
Chromium (total)	AN8b	mg/kg	Y	Y	2	23	34	18	19	-
Copper	AN8b	mg/kg	Y	Y	2	166	63	10	33	-
Lead	AN8b	mg/kg	Y	Y	2	120	83	5	47	-
Mercury	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	-
Nickel	AN8b	mg/kg	Y	Y	2	46	25	13	15	-
Selenium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	-
Zinc	AN8b	mg/kg	Y	Y	2	110	122	35	99	-
Sample Prep(C)										
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	27.7	21.0	13.3	29.3	15.0
Moisture Content @ <30°C	AN1	% w/w	Y	N/A	0.1	11.6	13.3	9.9	18.3	11.2
Sample Description	MCERTS ver4.		N	N/A		2AD	2AD	5A	2AD	6A
Misc										
pH	AN5a	Units	Y	Y	0.1	7.76	8.16	7.82	7.81	5.47
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.05	0.40	0.05	0.12	0.07
Sulphur (total)	an8i	mg/kg	N	N	10	670	714	86	407	159
Cyanide (total) M	AN45f	mg/kg	Y	Y	1	<1	<1	<1	<1	-
Phenols (screen) M	AN45d	mg/kg	Y	N	1	<1	<1	<1	2	-
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	<1	<1	<1	-
Vanadium	AN8b	mg/kg	Y	Y	2	45	32	19	24	-
Asbestos	ASB001	%	Y	N/A	0.001	Chrysotile (Loose fibres)	-	-	-	-
PAH (USEPA16)										
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	0.1	0.5	<0.1	<0.1	-
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	-
Anthracene M	GCM501	mg/kg	Y	Y	0.1	0.2	0.8	<0.1	<0.1	-
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.7	1.7	<0.1	0.2	-
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	0.7	2.0	<0.1	0.2	-
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.9	2.3	<0.1	0.2	-
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.5	1.2	<0.1	0.1	-
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.3	0.9	<0.1	<0.1	-
Chrysene M	GCM501	mg/kg	Y	Y	0.1	0.9	2.2	<0.1	0.2	-
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	0.2	<0.1	<0.1	-
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	1.6	4.5	<0.1	0.5	-
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1	0.3	<0.1	<0.1	-
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	0.3	0.9	<0.1	<0.1	-
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1	0.1	<0.1	<0.1	-
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	1.0	3.2	<0.1	0.2	-
Pyrene M	GCM501	mg/kg	Y	Y	0.1	1.5	3.9	<0.1	0.5	-
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	8.7	25.1	<1	2.3	-

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - TP samples
Date Tested: 15/08/14, 19/08/14, 20/08/14
Date Reported: 20 August, 2014
Date Received: 11 August, 2014
Sample Type: Solid

Certificate No: 14/3196/RG/S/C1
File No: 14/3196/RG/S
Client Ref: 5956G

					Lab sample ref:	**C186124**	**C186125**	**C186126**	**C186127**	**C186128**
					Client sample ref:	**TP114 1.00m**	**TP115 0.40m**	**TP116 1.00m**	**TP119 1.00m**	**TP120 0.50m**
					Date sampled:					
					Sample matrix (see notes page):	**OW**	**OW**	**OW**	**OW**	**OW**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Deviation Assessment										
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4	4	4	4
Metals (soil)										
Arsenic	AN8b	mg/kg	Y	Y	2	15	13	-	-	13
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	1.4	0.4	-	-	0.5
Cadmium	AN8a	mg/kg	Y	Y	1	<1	<1	-	-	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	22	20	-	-	40
Copper	AN8b	mg/kg	Y	Y	2	70	29	-	-	76
Lead	AN8b	mg/kg	Y	Y	2	66	43	-	-	92
Mercury	AN8a	mg/kg	Y	Y	1	<1	<1	-	-	<1
Nickel	AN8b	mg/kg	Y	Y	2	32	14	-	-	21
Selenium	AN8a	mg/kg	Y	Y	1	<1	<1	-	-	<1
Zinc	AN8b	mg/kg	Y	Y	2	156	66	-	-	170
Sample Prep(C)										
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	20.3	15.8	18.0	24.0	23.1
Moisture Content @ <30°C	AN1	% w/w	Y	N/A	0.1	37.8	10.9	14.7	13.2	9.7
Sample Description	MCERTS ver4.		N	N/A		2DA	2DA	6DA	6A	2AD
Misc										
pH	AN5a	Units	Y	Y	0.1	7.26	7.29	7.55	5.73	8.46
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.09	0.02	0.02	0.04	0.04
Sulphur (total)	an8i	mg/kg	N	N	10	524	227	-	88	396
Cyanide (total) M	AN45f	mg/kg	Y	Y	1	<1	<1	-	-	<1
Phenols (screen) M	AN45d	mg/kg	Y	N	1	6	2	-	-	<1
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	<1	-	-	<1
Vanadium	AN8b	mg/kg	Y	Y	2	30	21	-	-	32
Asbestos	ASB001	%	Y	N/A	0.001	-	NAD	-	-	-
PAH (USEPA16)										
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	0.3
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	0.4
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.3	0.2	-	-	1.6
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	0.3	0.2	-	-	1.6
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.5	0.2	-	-	1.8
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.3	0.1	-	-	0.9
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	-	-	0.7
Chrysene M	GCM501	mg/kg	Y	Y	0.1	0.5	0.2	-	-	1.8
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.6	0.3	-	-	3.2
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	0.2
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	0.2	<0.1	-	-	0.8
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	-	-	<0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	0.3	0.2	-	-	2.0
Pyrene M	GCM501	mg/kg	Y	Y	0.1	0.6	0.4	-	-	3.0
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	3.7	2.1	-	-	18.1

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - TP samples
Date Tested: 15/08/14, 19/08/14, 20/08/14
Date Reported: 20 August, 2014
Date Received: 11 August, 2014
Sample Type: Solid

Certificate No: 14/3196/RG/S/C1
File No: 14/3196/RG/S
Client Ref: 5956G

Lab sample ref:	**C186129**	**C186130**	**C186131**	**C186132**
Client sample ref:	**TP125 0.20m**	**TP126 0.20m**	**TP127 0.10m**	**TP129 1.00m**
Date sampled:				
Sample matrix (see notes page):	**OW**	**OW**	**OW**	**OW**

Determinand	Method	Units	ISO17025	MCERTS	LOD				
Deviation Assessment									
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4	4	4
Metals (soil)									
Arsenic	AN8b	mg/kg	Y	Y	2	11	9	13	5
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.5	1.0	0.5	0.9
Cadmium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	20	17	22	20
Copper	AN8b	mg/kg	Y	Y	2	37	29	63	14
Lead	AN8b	mg/kg	Y	Y	2	43	51	83	5
Mercury	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1
Nickel	AN8b	mg/kg	Y	Y	2	18	15	18	12
Selenium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1
Zinc	AN8b	mg/kg	Y	Y	2	100	99	123	30
Sample Prep(C)									
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	18.2	30.2	33.5	24.2
Moisture Content @ <30°C	AN1	% w/w	Y	N/A	0.1	11.5	11.3	10.4	13.3
Sample Description	MCERTS ver4.		N	N/A		2DA	2AD	2AD	2A
Misc									
pH	AN5a	Units	Y	Y	0.1	8.05	8.59	8.50	8.26
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.01	0.08	0.02	0.08
Sulphur (total)	an8i	mg/kg	N	N	10	178	313	414	185
Cyanide (total) M	AN45f	mg/kg	Y	Y	1	<1	<1	<1	<1
Phenols (screen) M	AN45d	mg/kg	Y	N	1	<1	<1	<1	<1
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	<1	<1	<1
Vanadium	AN8b	mg/kg	Y	Y	2	27	22	23	18
Asbestos	ASB001	%	Y	N/A	0.001	NAD	-	NAD	-
PAH (USEPA16)									
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	0.6	<0.1
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	0.1	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	1.0	<0.1
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	2.0	<0.1
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	1.9	<0.1
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	1.9	<0.1
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.1	<0.1	1.1	<0.1
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	0.9	<0.1
Chrysene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	2.3	<0.1
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	0.2	<0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.5	<0.1	5.4	<0.1
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	0.4	<0.1
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	0.1	<0.1	0.9	<0.1
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	0.8	<0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	4.1	<0.1
Pyrene M	GCM501	mg/kg	Y	Y	0.1	0.5	<0.1	4.8	<0.1
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	2.4	<1	28.5	<1

Notes
1. All analyses performed on the sample dried at <30ºC, except analyses suffixed with 'M'.
2. Analyses suffixed 'M' were performed on the sample as received and corrected for '% moisture at <30ºC' where applicable.
3. All results are expressed as dry weight.
4. MCERTS accreditation applicable to Sample Matrix 'S' only.
5. Natural stones (pebbles, gravels etc.) which do not pass a 2mm sieve are excluded from dried analyses.
6. Tests marked * indicate subcontracted analyses.
7. NAD denotes 'No Asbestos Detected'.
8. The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.
9. ^Sample Description key: 1. - Sand, 2. Loam, 3. Clay, 4. Sand/loam mix, 5. Sand/clay mix, 6. Clay/loam mix, 7. Other.
suffixed with: A - Stones, B - Construction rubble, C - Visible Hydrocarbons, D - Vegetation, E - Glass/metal, F - Strong odour, G - Other.
10. Leachate preparation is not included in our UKAS accreditation.
11. Dates of testing for all parameters are available upon request.
12. Where a deviation has been found in relation to the sample(s) submitted for testing, the test result may be compromised. Reasons for deviating samples are denoted by means of a number 1, 2, 3, 4, 5, 6 or 7 under the analyte 'Deviation(s)'. Explanation of this number coding as follows: 1. Inappropriate sample container for organic testing, 2. Inappropriate sample container for inorganic testing, 3. Inappropriate container for all analysis, 4. No sample date provided, 5. Sample stability time exceeded, 6. Inappropriate storage during transport to the laboratory, and 7. Other (please contact the laboratory for further information)

Signed for, and on behalf of Exova (UK) Ltd.

Prepared by:
F Barr
Administrator

Approved by:
J McEleny
Laboratory Manager

0568

The contents of this document are governed by the terms and conditions overleaf.
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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - WS Soil samples
Date Tested: 22/08/14, 23/08/14, 25/08/14, 26/08/14
Date Reported: 26 August, 2014
Date Received: 19 August, 2014
Sample Type: Solid

Certificate No: 14/3311/RG/S/C1
File No: 14/3311/RG/S
Client Ref: 5956G

Lab sample ref:						**C186905**	**C186906**	**C186907**	**C186908**	**C186909**
Client sample ref:						**WS102 0.50m**	**WS103 0.30m**	**WS104 2.10m**	**WS107 0.50m**	**WS109 0.30m**
Date sampled:						**Not Provided**	**Not Provided**	**Not Provided**	**Not Provided**	**Not Provided**
Sample matrix (see notes page):						**S**	**S**	**S**	**S**	**S**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Deviation Assessment										
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4	4	4	4
Metals (soil)										
Arsenic	AN8b	mg/kg	Y	Y	2	10	10	7	13	9
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	3.4	0.9	0.5	0.6	0.6
Cadmium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Chromium (total)	AN8b	mg/kg	Y	Y	2	16	20	24	37	22
Copper	AN8b	mg/kg	Y	Y	2	35	28	22	24	13
Lead	AN8b	mg/kg	Y	Y	2	90	30	<2	51	<2
Mercury	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Nickel	AN8b	mg/kg	Y	Y	2	14	17	25	8	14
Selenium	AN8a	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Zinc	AN8b	mg/kg	Y	Y	2	113	55	49	54	30
Sample Prep(C)										
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	24.8	12.4	16.7	21.6	11.0
Moisture Content @ <30°C	AN1	% w/w	Y	N/A	0.1	17.7	16.6	13.7	23.0	14.5
Sample Description	MCERTS ver4.		N	N/A		4A	5A	3A	4A	3A
Misc										
pH	AN5a	Units	Y	Y	0.1	7.91	7.97	8.30	6.42	7.14
Sulphate (total)	AN49	% w/w	Y	Y	0.02	-	-	<0.02	-	-
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	1.71	0.11	0.02	0.02	0.01
Sulphur (total)	an8i	mg/kg	N	N	10	5162	282	58	375	63
Cyanide (total) $_{M}$	AN45f	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Phenols (screen) $_{M}$	AN45d	mg/kg	Y	N	1	<1	<1	<1	8	<1
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Vanadium	AN8b	mg/kg	Y	Y	2	19	21	21	19	18

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - WS Soil samples
Date Tested: 22/08/14, 23/08/14, 25/08/14, 26/08/14
Date Reported: 26 August, 2014
Date Received: 19 August, 2014
Sample Type: Solid

Certificate No: 14/3311/RG/S/C1
File No: 14/3311/RG/S
Client Ref: 5956G

Lab sample ref:	**C186905**	**C186906**	**C186908**	**C186909**
Client sample ref:	**WS102 0.50m**	**WS103 0.30m**	**WS107 0.50m**	**WS109 0.30m**
Date sampled:	**Not Provided**	**Not Provided**	**Not Provided**	**Not Provided**
Sample matrix (see notes page):	**S**	**S**	**S**	**S**

Determinand	Method	Units	ISO17025	MCERTS	LOD				
PAH (USEPA16)									
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	<0.1	<0.1
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	0.6	<0.1	0.3	<0.1
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	0.5	<0.1	0.3	<0.1
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.7	<0.1	0.3	<0.1
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	0.4	<0.1	0.3	<0.1
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	0.4	<0.1	0.1	<0.1
Chrysene M	GCM501	mg/kg	Y	Y	0.1	0.7	<0.1	0.3	<0.1
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	1.2	<0.1	0.4	<0.1
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	0.2	<0.1	0.1	<0.1
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	0.2	<0.1	<0.1	<0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	0.7	<0.1	0.3	<0.1
Pyrene M	GCM501	mg/kg	Y	Y	0.1	1.1	<0.1	0.4	<0.1
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	6.9	<1	2.7	<1

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - WS Soil samples
Date Tested: 22/08/14, 23/08/14, 25/08/14, 26/08/14
Date Reported: 26 August, 2014
Date Received: 19 August, 2014
Sample Type: Solid

Certificate No: 14/3311/RG/S/C1
File No: 14/3311/RG/S
Client Ref: 5956G

Lab sample ref:	**C186910**	**C186911**
Client sample ref:	**WS111 0.50m**	**WS112 0.90m**
Date sampled:	**Not Porvided**	**Not Porvided**
Sample matrix (see notes page):	**S**	**S**

Determinand	Method	Units	ISO17025	MCERTS	LOD		
Deviation Assessment							
Deviation(s)	C. Review	N/A	N/A	N/A	N/A	4	4
Metals (soil)							
Arsenic	AN8b	mg/kg	Y	Y	2	6	-
Boron (water soluble)	AN03	mg/kg	Y	N	0.1	0.4	-
Cadmium	AN8a	mg/kg	Y	N	1	<1	-
Chromium (total)	AN8b	mg/kg	Y	Y	2	14	-
Copper	AN8b	mg/kg	Y	Y	2	8	-
Lead	AN8b	mg/kg	Y	Y	2	<2	-
Mercury	AN8a	mg/kg	Y	N	1	<1	-
Nickel	AN8b	mg/kg	Y	Y	2	11	-
Selenium	AN8a	mg/kg	Y	N	1	<1	-
Zinc	AN8b	mg/kg	Y	Y	2	18	-
Sample Prep(C)							
EMR	EMR	% w/w	N	N/A	0.1	<0.1	<0.1
% Stones	Stones	% w/w	N	N/A	0.1	17.9	18.8
Moisture Content @ <30℃	AN1	% w/w	Y	N/A	0.1	12.8	14.4
Sample Description	MCERTS ver4.		N	N/A		5A	5A
Misc							
pH	AN5a	Units	Y	Y	0.1	6.99	6.79
Sulphate (water soluble)	CTP 29	g/l	N	N	0.01	0.05	0.01
Sulphur (total)	an8i	mg/kg	N	N	10	106	-
Cyanide (total) $_{M}$	AN45f	mg/kg	Y	Y	1	<1	-
Phenols (screen) $_{M}$	AN45d	mg/kg	Y	N	1	<1	-
Chromium (VI)	AN7	mg/kg	Y	Y	1	<1	-
Vanadium	AN8b	mg/kg	Y	Y	2	16	-

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Test Certificate

Client: Wright Mottershaw Lydon Consulting Ltd
Earl Road, No. 8 Oak Green, Stanley Green Business park, Cheadle Hulme, Cheshire, SK8 6QL
Site: Langley Site F - WS Soil samples
Date Tested: 22/08/14, 23/08/14, 25/08/14, 26/08/14
Date Reported: 26 August, 2014
Date Received: 19 August, 2014
Sample Type: Solid

Certificate No: 14/3311/RG/S/C1
File No: 14/3311/RG/S
Client Ref: 5956G

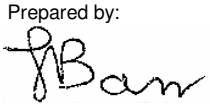
Lab sample ref:	**C186910**
Client sample ref:	**WS111 0.50m**
Date sampled:	**Not Provided**
Sample matrix (see notes page):	**S**

Determinand	Method	Units	ISO17025	MCERTS	LOD	
PAH (USEPA16)						
Acenaphthene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Acenaphthylene M	GCM501a	mg/kg	Y	Y	0.1	<0.1
Anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benz(a)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(a)pyrene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(b)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(ghi)perylene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Benzo(k)fluoranthene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Chrysene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Dibenz(a,h)anthracene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Fluoranthene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Fluorene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Indeno(1,2,3-cd)pyrene M	GCM501a	mg/kg	Y	Y	0.1	<0.1
Naphthalene (PAH) M	GCM501	mg/kg	Y	Y	0.1	<0.1
Phenanthrene M	GCM501	mg/kg	Y	Y	0.1	<0.1
Pyrene M	GCM501	mg/kg	Y	Y	0.1	<0.1
PAH (USEPA16) Total M	GCM501	mg/kg	Y	Y	1	<1

Notes
1. All analyses performed on the sample dried at <30ºC, except analyses suffixed with 'M'.
2. Analyses suffixed 'M' were performed on the sample as received and corrected for "% moisture at <30ºC' where applicable.
3. All results are expressed as dry weight.
4. MCERTS accreditation applicable to Sample Matrix 'S' only.
5. Natural stones (pebbles, gravels etc.) which do not pass a 2mm sieve are excluded from dried analyses.
6. Tests marked * indicate subcontracted analyses.
7. The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.
8. ^Sample Description key: 1. - Sand, 2. Loam, 3. Clay, 4. Sand/loam mix, 5. Sand/clay mix, 6. Clay/loam mix, 7. Other.
suffixed with: A - Stones, B - Construction rubble, C - Visible Hydrocarbons, D - Vegetation, E - Glass/metal, F - Strong odour, G - Other.
9. Leachate preparation is not included in our UKAS accreditation.
10. Dates of testing for all parameters are available upon request.
11. Where a deviation has been found in relation to the sample(s) submitted for testing, the test result may be compromised. Reasons for deviating samples are denoted by means of a number 1, 2, 3, 4, 5, 6 or 7 under the analyte 'Deviation(s)'. Explanation of this number coding as follows: 1. Inappropriate sample container for organic testing, 2. Inappropriate sample container for inorganic testing, 3. Inappropriate container for all analysis, 4. No sample date provided, 5. Sample stability time exceeded, 6. Inappropriate storage during transport to the laboratory, and 7. Other (please contact the laboratory for further information)

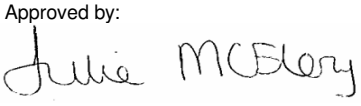
Signed for, and on behalf of Exova (UK) Ltd.

Prepared by:



F Barr
Administrator

Approved by:



J McEleny
Laboratory Manager

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Registered Office: Exova (UK) Ltd. Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL United Kingdom. Reg No. SC 70429

WML CONSULTING

APPENDIX 07
GROUND GAS MONITORING

Ground Gas Monitoring Record

Borehole	Gas Flow (l/hr)	Borehole Pressure (Pa)	Methane (% v/v)		Methane (%LEL*)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		Nitrogen (%v/v)		Depth to water (m bgl)	Atmospheric Pressure (mB)	Comments
			Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady			
WS101	0.0	0	0.1				0.7		19.3		79.9		DRY	1002	
WS104	0.0	0	1.0				4.3		19.2		75.4		DRY	1002	
WS106	0.0	0	0.0				1.3		19.7		78.9		1.35	1002	
WS108	0.0	0	0.0				1.3		19.2		79.4		1.95	1002	
WS110	0.0	0	0.1				1.1		19.3		79.4		1.74	1002	
WS112	0.0	0	0.0				1.6		18.7		79.6		1.68	1002	

Notes:

Monitoring should be for not less than 3 Minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 mins.
* LEL = Explosive Limit = 5%v/v
ND - Not Detected

Relevant Information at times of monitoring

Monitored by:	P.Platt	Contract: **Langley Site F**
Weather :	Dry	
Equipment used:	LMS Type G3 xi Gas Meter	Date: **05/08/14**
Visible signs of vegetation stress:		
Boreholes sampled for laboratory analysis:		Job No.
Other comments / observations:		Sheet No. **1**

Geo-Ventures (UK) Limited
70 Riverside Close, Waterside, Howley, Warrington, Cheshire WA1 2JD
Tel. 01925 240476 email: paul.platt@geoventures.co.uk

Ground Gas Monitoring Record

Borehole	Gas Flow (l/hr)	Borehole Pressure (Pa)	Methane (% v/v)		Methane (%LEL*)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		Nitrogen (%v/v)		Depth to water (m bgl)	Atmospheric Pressure (mB)	Comments
			Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady			
WS101	0.0	0	0.0				0.8		19.1		80.0		DRY	1000	
WS104	0.0	0	0.2				3.1		18.5		78.1		DRY	1000	
WS106	0.0	0	0.0				1.3		19.7		78.9		1.38	1000	
WS108	0.0	0	0.0				1.8		18.8		79.3		1.80	1000	
WS110	0.0	0	0.1				0.7		19.1		80.0		1.65	1000	
WS112	0.0	0	0.0				1.4		18.9		79.6		1.67	1000	

Notes:

Monitoring should be for not less than 3 Minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 mins.
* LEL = Explosive Limit = 5%v/v
ND - Not Detected

Relevant Information at times of monitoring

Monitored by:	P.Platt	Contract: **Langley Site F**
Weather :	Overcast	
Equipment used:	LMS Type G3 xi Gas Meter	Date: **19/08/14**
Visible signs of vegetation stress:		
Boreholes sampled for laboratory analysis:		Job No.
Other comments / observations:		Sheet No. **2**

Geo-Ventures (UK) Limited
70 Riverside Close, Waterside, Howley, Warrington, Cheshire WA1 2JD
Tel. 01925 240476 email: paul.platt@geoventures.co.uk

Ground Gas Monitoring Record

Borehole	Gas Flow (l/hr)	Borehole Pressure (Pa)	Methane (% v/v)		Methane (%LEL*)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		Nitrogen (%v/v)		Depth to water (m bgl)	Atmospheric Pressure (mB)	Comments
			Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady			
WS101	0.0	0	0.0				0.7		19.3		79.9		1.54	1000	
WS104	0.0	0	0.0				0.0		19.9		80.0		0.50	1000	
WS106	0.0	0	0.0				0.8		19.9		79.2		1.40	1000	
WS108	0.0	0	0.0				2.7		18.3		78.9		1.71	1000	
WS110	0.0	0	0.0				0.4		20.0		79.5		1.45	1000	
WS112	0.0	0	0.0				1.2		19.1		79.6		1.65	1000	

Notes:

Monitoring should be for not less than 3 Minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 mins.
* LEL = Explosive Limit = 5%v/v
ND - Not Detected

Relevant Information at times of monitoring

Monitored by:	S Edwards	Contract: **Langley Site F**
Weather :	Dry	
Equipment used:	LMS Type G3 xi Gas Meter	Date: **06/09/14**
Visible signs of vegetation stress:		
Boreholes sampled for laboratory analysis:		Job No.
Other comments / observations:		Sheet No. **3**

Geo-Ventures (UK) Limited
70 Riverside Close, Waterside, Howley, Warrington, Cheshire WA1 2JD
Tel. 01925 240476 email: paul.platt@geoventures.co.uk

Ground Gas Monitoring Record

Borehole	Gas Flow (l/hr)	Borehole Pressure (Pa)	Methane (% v/v)		Methane (%LEL*)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		Nitrogen (%v/v)		Depth to water (m bgl)	Atmospheric Pressure (mB)	Comments
			Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady			
WS101	0.0	0	0.0				0.7		19.2		80.1		DRY	1010	
WS104	0.0	0	0.0				0.3		19.4		80.2		DRY	1010	
WS106	0.0	0	0.0				0.9		19.3		79.7		1.38	1010	
WS108	0.0	0	0.0				2.3		19.1		78.6		1.74	1010	
WS110	0.0	0	0.0				0.5		20.1		79.3		1.50	1010	
WS112	0.0	0	0.0				1.0		19.3		79.6		1.66	1010	

Notes:

Monitoring should be for not less than 3 Minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 mins.
* LEL = Explosive Limit = 5%v/v
ND - Not Detected

Relevant Information at times of monitoring

Monitored by:	J Crook	Contract: **Langley Site F**
Weather :		
Equipment used:	LMS Type G3 xi Gas Meter	Date: **17/09/14**
Visible signs of vegetation stress:		
Boreholes sampled for laboratory analysis:		Job No.
Other comments / observations:		Sheet No. **4**

Geo-Ventures (UK) Limited
70 Riverside Close, Waterside, Howley, Warrington, Cheshire WA1 2JD
Tel. 01925 240476 email: paul.platt@geoventures.co.uk

Ground Gas Monitoring Record

Borehole	Gas Flow (l/hr)	Borehole Pressure (Pa)	Methane (% v/v)		Methane (%LEL*)		Carbon Dioxide (%v/v)		Oxygen (%v/v)		Nitrogen (%v/v)		Depth to water (m bgl)	Atmospheric Pressure (mB)	Comments
			Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady			
WS101	0.0	0	0.0				0.0		20.4		79.5		0.55	988	
WS104	0.0	0	0.0				0.3		19.1		80.5		0.40	988	
WS106	0.0	0	0.0				1.2		20.3		78.4		1.10	988	
WS108	0.0	0	0.0				1.4		19.4		79.1		1.60	988	
WS110	0.0	0	0.0				1.3		21.2		77.5		1.47	988	
WS112	0.0	0	0.0				1.8		20.4		77.8		0.90	988	

Notes:

Monitoring should be for not less than 3 Minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 mins.
* LEL = Explosive Limit = 5%v/v
ND - Not Detected

Relevant Information at times of monitoring

Monitored by:	P. Platt / S. Edwards	Contract: **Langley Site F**
Weather :	Overcast, slight rain	
Equipment used:	LMS Type G3 xi Gas Meter	Date: **09/10/14**
Visible signs of vegetation stress:		
Boreholes sampled for laboratory analysis:		Job No.
Other comments / observations:		Sheet No. **5**

Geo-Ventures (UK) Limited
70 Riverside Close, Waterside, Howley, Warrington, Cheshire WA1 2JD
Tel. 01925 240476 email: paul.platt@geoventures.co.uk

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APPENDIX 08

GENERIC ASSESSMENT CRITERIA

Site Specific Assessment Criteria for Residential End Use

Contaminant	Generic Assessment Criteria for Residential End Use (mg/kg)
Metals	
Arsenic SGV	32
Boron	291
Cadmium SGV	10
Chromium VI	4.3
Copper	2330
Lead	450
Mercury SGV	170
Nickel SGV	130
Selenium SGV	350
Vanadium	75
Zinc	3750
Non - Metals	
Inorganic Cyanide	780
Semi Volatile Organic Compounds - SVOCs	
Benz[a]anthracene	3.1
Benzo[a]pyrene	0.8
Benzo[b]fluoranthene	5.6
Benzo[ghi]perylene	44
Benzo[k]fluoranthene	8.5
Chrysene	6.0
Dibenz[ah]anthracene	0.76
Fluoranthene	260
Indeno[123-cd]pyrene	3.2
Naphthalene	1.5
Phenol SGV	420
Pyrene	560

Site Specific Assessment Criteria for Residential End Use

Contaminant	Generic Assessment Criteria for Residential End Use (mg/kg)
Volatile Organic Compounds - VOCs	
Benzene	0.054
Ethylbenzene	42
Toluene	120
Xylene	20
Total Petroleum Hydrocarbons - TPH	
Aliphatic C5-6	30
Aliphatic C6-8	73
Aliphatic C8-10	19
Aliphatic C10-12	93
Aliphatic C12-16	740
Aliphatic C16-35	45000
Aliphatic C35 - 44	45000
Aromatic C5 - 7	65
Aromatic C7 - 8	120
Aromatic C8-10	27
Aromatic C10-12	69
Aromatic C12-16	140
Aromatic C16-21	250
Aromatic C21-35	890
Aromatic C35 - 44	890

The GACs used in the assessment primarily comprise published Soil Guideline Values (SGV) and values that have been derived using the Contaminated Land Exposure Assessment (CLEA) guidance as provided by DEFRA and the EA. In the latter case, values derived by Land Quality Management Limited (LQM) on behalf of the Chartered Institute of Environmental Health (CIEH) and presented in their publication 'Generic Assessment Criteria for Human Health Risk Assessment', 2009, have been used. Where contaminants are not covered by the above guidelines, GAC have been sourced from previously withdrawn SGV's.