

SIRIUS DRILLING SERVICES LIMITED

Openhole Drill Log

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

SIRIUS
DRILLING
SERVICES

Job No SDS 2385 Contract Name PAUL STREET Rig Type SM 400Date 29/03/2011 Client SGE Crew Details JOSHSheet 1 of 2 Working Day N° NATH

BH	From	To	Strata Description	BH	From	To	Strata Description
H1	GL	4.80	Flu	I1	GL	4.80	Flu
	4.80	11.40	Mudstone / Sandstone		4.80	12.10	Mudstone / Sandstone
	11.40	13.00	Coal		12.10	13.60	Coal
	13.00	14.00	Mudstone		13.60	14.60	Mudstone
			Cased to 5M.				Cased to 5M.
I5	GL	4.90	Flu	J4	GL	4.70	Flu
	4.90	14.60	Mudstone / Sandstone		4.70	14.60	Mudstone / Sandstone
	14.60	16.30	Coal		14.60	16.20	Coal
	16.30	17.30	Mudstone		16.20	17.70	Mudstone
			Cased to 5M.				Cased to 5M.
I4	GL	4.80	Flu	J3	GL	4.90	Flu
	4.80	13.90	Mudstone / Sandstone		4.90	14.20	Mudstone / Sandstone
	13.90	15.50	Coal		14.20	16.00	Coal
	15.50	16.50	Mudstone		16.00	17.00	Mudstone
			Cased to 5M.				Cased to 5M.
I3	GL	4.70	Flu	J2	GL	4.90	Flu
	4.70	13.30	Mudstone / Sandstone		4.90	13.20	Mudstone / Sandstone
	13.30	14.90	Coal		13.20	15.00	Coal
	14.90	15.90	Mudstone		15.00	16.00	Mudstone
			Cased to 5M.				Cased to 5M.
I2	GL	4.80	Flu	J1	GL	4.90	Flu
	4.80	12.50	Mudstone / Sandstone		4.90	12.40	Mudstone / Sandstone
	12.50	14.10	Coal		12.40	14.10	Coal
	14.10	15.10	Mudstone		14.10	15.10	Mudstone
			Cased to 5M.				Cased to 5M.
Remarks.				Totals	Boreholes	Drilled	Cased
				Today			
Signed by SDS.....	Date.....			Previous			
Signed by Client.....	Date.....			To Date			

SIRIUS DRILLING SERVICES LIMITED

Openhole Drill Log

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

SIRIUS
DRILLING
SERVICES

Job No. SOS.2385 Contract Name PEL STREET Rig Type BORETTA TH4Date 29/03/2011 Client SGE Crew Details TomSheet 1 of 2 Working Day N^o JAMES

BH	From	To	Strata Description	BH	From	To	Strata Description
F5	GL	4.80	Fill	F4	GL	5.00	Fill
	4.80	12.80	Mudstone / Sandstone		5.00	12.50	Mudstone / Sandstone
	12.80	14.30	Coal		12.80	14.30	Coal
	14.30	15.30	Mudstone		14.30	15.30	Mudstone
			Cased to 5m				Cased to 5m
D4	GL	4.10	Fill	F3	GL	4.70	Fill
	4.10	11.80	Mudstone / Sandstone		4.70	11.40	Mudstone / Sandstone
	11.80	13.40	Coal		11.40	12.90	Coal
	13.40	14.40	Mudstone		12.90	13.90	Mudstone
			Cased to 4.5m				Cased to 5m
G4	GL	5.10	Fill	F2	GL	4.70	Fill
	5.10	12.00	Mudstone / Sandstone		4.70	11.00	Mudstone / Sandstone
	12.00	13.50	Coal		11.00	12.50	Coal
	13.50	14.50	Mudstone		12.50	13.50	Mudstone
			Cased to 5.5m				Cased to 5m
G3	GL	5.10	Fill	E4	GL	5.00	Fill
	5.00	11.80	Mudstone / Sandstone		5.00	11.90	Mudstone / Sandstone
	11.80	13.30	Coal		11.90	13.40	Coal
	13.30	14.30	Mudstone		13.40	14.40	Mudstone
			Cased to 5m				Cased to 5m
G1	GL	4.90	Fill	E3	GL	5.00	Fill
	4.90	12.00	Mudstone / Sandstone		5.00	11.60	Mudstone / Sandstone
	12.00	12.50	Coal		11.60	13.10	Coal
	12.50	13.50	Mudstone		13.10	14.10	Mudstone
			Cased to 5m				Cased to 5m
Remarks.				Totals			
				Boreholes			
				Drilled			
				Cased			
				Today			
Signed by SDS..... Date.....				Previous			
Signed by Client..... Date.....				To Date			

SIRIUS DRILLING SERVICES LIMITED

Openhole Drill Log

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

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DRILLING
SERVICES

Job No SDS 2385 Contract Name PEEL STREET Rig Type SM400Date 30/03/2011 Client SGE Crew Details JoshSheet 1 of 2 Working Day No NATH

BH	From	To	Strata Description	BH	From	To	Strata Description
K4	GL	4.80	Run	K8	GL	4.80	Run
	4.80	15.40	Mudstone/Sandstone		4.80	15.20	Mudstone/Sandstone
	15.40	16.80	Coal		15.20	17.20	Coal
	16.80	17.80	Mudstone		17.20	18.20	Mudstone
			Cased to SM.				Cased to SM.
K5	GL	4.70	Run	L8	GL	4.90	Run
	4.70	15.20	Mudstone/Sandstone		4.90	15.60	Mudstone/Sandstone
	15.20	16.90	Coal		15.60	17.60	Coal
	16.90	17.90	Mudstone		17.60	18.60	Mudstone
			Cased to SM.				Cased to SM.
K6	GL	4.90	Run	K9	GL	3.50	Run
	4.90	15.10	Mudstone/Sandstone		3.50	15.20	Mudstone/Sandstone
	15.10	17.10	Coal		15.20	17.20	Coal
	17.10	18.10	Mudstone		17.20	18.20	Mudstone
			Cased to SM.				Cased to 4M.
K7	GL	5.00	Run	L9	GL	3.60	Run
	5.00	15.10	Mudstone/Sandstone		3.60	15.50	Mudstone/Sandstone
	15.10	17.10	Coal		15.50	17.50	Coal
	17.10	18.10	Mudstone		17.50	18.50	Mudstone
			Cased to SM.				Cased to 4M.
L7	GL	5.40	Run	K10	GL	3.00	Run
	5.40	15.40	Mudstone/Sandstone		3.00	15.20	Mudstone/Sandstone
	15.40	17.40	Coal		15.20	17.20	Coal
	17.40	18.40	Mudstone		17.20	18.20	Mudstone
			Cased to SM.				Cased to 3m.
Remarks.				Totals			
				Boreholes			
				Drilled			
				Cased			
				Today			
Signed by SDS..... Date.....				Previous			
Signed by Client..... Date.....				To Date			

SIRIUS DRILLING SERVICES LIMITED

Openhole Drill Log

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

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**DRILLING
SERVICES**

Job No. SDS 2385 Contract Name PEEL STREET Rig Type BRETTA T44Date 30/03/2011 Client SGE Crew Details TomSheet 1 of 2 Working Day N^o JANUS

BH	From	To	Strata Description	BH	From	To	Strata Description	
F1	GL	5.00	Fr	F11	GL	3.00	Fr	
	5.00	11.00	Mudstone / Sandstone		3.00	12.30	Mudstone / Sandstone	
	11.00	12.50	Coal		12.30	14.00	Coal	
	12.50	13.50	Mudstone		14.00	15.00	Mudstone	
			Cased to 5m.				Cased to 3m.	
	GL	5.00	Fr					
E1	GL	11.00	Mudstone / Sandstone	F12	GL	2.70	Fr	
	11.00	12.50	Coal		2.70	12.30	Mudstone / Sandstone	
	12.50	13.50	Mudstone		12.30	14.10	Coal	
			Cased to 5m.		14.10	15.10	Mudstone	
							Cased to 3m.	
Di	GL	4.70	Fr	A9	GL	3.50	Fr	
	4.70	10.80	Mudstone / Sandstone		3.50	8.80	Mudstone / Sandstone	
	10.80	12.40	Coal		8.80	10.40	Coal	
	12.40	13.40	Mudstone		10.40	11.40	Mudstone	
			Cased to 5m.				Cased to 4m.	
D2	GL	4.60	Fr					
	4.60	11.00	Mudstone / Sandstone	A10	GL	3.90	Fr	
	11.00	12.50	Coal		3.90	8.90	Mudstone / Sandstone	
	12.50	13.50	Mudstone		8.90	10.40	Coal	
			Cased to 5m.		10.40	11.40	Mudstone	
							Cased to 4m.	
D3	GL	4.60	Fr	A11	GL	3.70	Fr	
	4.60	11.40	Mudstone / Sandstone		3.70	10.80	Mudstone / Sandstone	
	11.40	12.90	Coal		10.80	11.40	Coal	
	12.90	13.90	Mudstone		11.40	12.40	Mudstone	
			Cased to 5m.				Cased to 4m.	
Remarks.				Totals		Boreholes	Drilled	Cased
				Today				
Signed by SDS..... Date.....				Previous				
Signed by Client..... Date.....				To Date				

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Openhole Drill Log

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

SIRIUS
DRILLING
SERVICES

Job No 503.2385 Contract Name PER STREET Rig Type SM400Date 31/03/2011 Client SGE Crew Details JOSHSheet 1 of 2 Working Day N^o NATH

BH	From	To	Strata Description	BH	From	To	Strata Description		
K 11	GL	2.90	Fin	L 13	GL	2.50	Fin		
	2.90	15.20	Mudstone / Sandstone		2.50	15.60	Mudstone / Sandstone		
	15.20	17.20	Coal		15.60	17.80	Coal		
	17.20	18.20	Mudstone		17.60	18.60	Mudstone		
			Cased to 3m.				Cased to 3m.		
L 11	GL	2.90	Fin	HI 9	GL	2.70	Fin		
	2.90	15.50	Mudstone / Sandstone		2.70	14.00	Mudstone / Sandstone		
	15.50	17.50	Coal		14.00	16.00	Coal		
	17.50	18.50	Mudstone		16.00	17.00	Mudstone		
			Cased to 3m.				Cased to 3m.		
K 12	GL	2.50	Fin	I 8/9	GL	2.70	Fin		
	2.50	15.30	Mudstone / Sandstone	I 8/9	2.70	13.90	Mudstone / Sandstone		
	15.30	17.30	Coal		13.90	15.80	Coal		
	17.30	18.30	Mudstone		15.80	16.80	Mudstone		
			Cased to 3m.				Cased to 3m.		
L 12	GL	2.80	Fin	I J 9	GL	2.90	Fin		
	2.80	15.50	Mudstone / Sandstone		2.90	14.20	Mudstone / Sandstone		
	15.50	17.50	Coal		14.20	16.00	Coal		
	17.50	18.50	Mudstone		16.00	17.00	Mudstone		
			Cased to 3m.				Cased to 3m.		
K 13	GL	2.10	Fin	I 9/10	GL	2.70	Fin		
	2.10	15.40	Mudstone / Sandstone		2.70	14.20	Mudstone / Sandstone		
	15.40	17.40	Coal		14.20	16.00	Coal		
	17.40	18.40	Mudstone		16.00	17.00	Mudstone		
			Cased to 3m.				Cased to 3m.		
Remarks.				Totals		Boreholes		Drilled	Cased
				Today					
Signed by SDS..... Date.....				Previous					
Signed by Client..... Date.....				To Date					

SIRIUS DRILLING SERVICES LIMITED

DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name PEEL STREET, BARNSELEY

Date 31/03/2011

Client SGE

Sheet 1 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details			
A13			0.15	0.01			0.16	Full	James			
A12			0.15	0.01			0.16	"	Tom			
A11			0.15	0.01			0.16	"				
A10			0.15	0.01			0.16	"				
A9			0.15	0.01			0.16	"				
A8			0.15	0.01			0.16	"				
A7			0.15	0.01			0.16	"				
B14			0.15	0.01			0.16	"				
B13			0.15	0.01			0.16	"				
B12			0.15	0.01			0.16	"				
B11			0.15	0.01			0.16	"				
B10			0.15	0.01			0.16	"				
B9			0.15	0.01			0.16	"				
B8			0.15	0.01			0.16	"				
B7			0.15	0.01			0.16	"				
B6			0.15	0.01			0.16	"				
Total Used									PFA	OPC	Sand	Gravel
Previous Total												
Total to Date												

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Date.....

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Date.....

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DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name RED STREET, BARNLEY

Date 31/03/2011

Client SGE

Sheet 2 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details				
C14			0.15	0.01			0.16		James				
C13			0.15	0.01			0.16		Tom				
C12			0.15	0.01			0.16						
C11			0.15	0.01			0.16						
C10			0.15	0.01			0.16		Materials Delivered Today				
C9			0.15	0.01			0.16		Item	Quant	Ticket N°		
C8			0.15	0.01			0.16						
C7			0.15	0.01			0.16						
D15			0.15	0.01			0.16						
D14			0.15	0.01			0.16						
D13			0.15	0.01			0.16						
D12			0.15	0.01			0.16						
D11			0.15	0.01			0.16						
D10			0.15	0.01			0.16						
D9			0.15	0.01			0.16						
D8			0.15	0.01			0.16						
Total Used									Today	PFA	OPC	Sand	Gravel
Previous Total									Previous				
Total to Date									Total Delivered				
									Total Used				
									Stock on Site				

Signed by SDS.....

Date.....

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Date.....

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SIRIUS DRILLING SERVICES LIMITED



DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name RED STREET, BARNLEY

Date

Client SGE

Sheet 3 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details		
D7			0.15	0.01			0.16		James		
D6			0.15	0.01			0.16		Tom		
D5			0.15	0.01			0.16				
D4			0.15	0.01			0.16				
D3			0.15	0.01			0.16				
D2			0.15	0.01			0.16				
D1			0.15	0.01			0.16				
E15			0.15	0.01			0.16				
E14			0.15	0.01			0.16				
E13			0.15	0.01			0.16				
E12			0.15	0.01			0.16				
E11			0.15	0.01			0.16				
E10			0.15	0.01			0.16				
E9			0.15	0.01			0.16				
E8			0.15	0.01			0.16				
E7			0.15	0.01			0.16				
Total Used											
Previous Total											
Total to Date											

	PFA	OPC	Sand	Gravel
Today				
Previous				
Total Delivered				
Total Used				
Stock on Site				

Signed by SDS

Date

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Date

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SIRIUS DRILLING SERVICES LIMITED



DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name POL STREET, BARNSLY

Date 31/03/2011

Client S.G.E

Sheet 4 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details				
E6			0.15	0.01			0.16		James				
E5			0.15	0.01			0.16		Sam				
E4			0.15	0.01			0.16						
E3			0.15	0.01			0.16						
E2			0.15	0.01			0.16		Materials Delivered Today				
E1			0.15	0.01			0.16		Item	Quant	Ticket N°		
F15			0.15	0.01			0.16						
F14			0.15	0.01			0.16						
F13			0.15	0.01			0.16						
F12			0.15	0.01			0.16						
F11			0.15	0.01			0.16						
F9			0.15	0.01			0.16						
F8			0.15	0.01			0.16						
F7			0.15	0.01			0.16						
F6			0.15	0.01			0.16						
F5			0.15	0.01			0.16						
Total Used									Today	PFA	OPC	Sand	Gravel
Previous Total									Previous				
Total to Date									Total Delivered				
									Total Used				
									Stock on Site				

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Date.....

Signed by Client.....

Date.....

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DRILLING SERVICES

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Contract Name ... POOL STREET, BARNESLEY

Client.....SGE.....

Working Day N°.....

Signed by SDS.....

Date.....

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Date.....

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SIRIUS DRILLING SERVICES LIMITED



DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No. SDS 2385

Contract Name POZ STREET, BARNSLAY

Date 31/03/2011

Client SGE

Sheet 6 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details			
G3			0.15	0.01			0.16		James			
G2			0.15	0.01			0.16		1.0M			
G1			0.15	0.01			0.16					
H15			0.15	0.01			0.16					
H14			0.15	0.01			0.16					
H13			0.15	0.01			0.16					
H12			0.15	0.01			0.16					
H11			0.15	0.01			0.16					
H10			0.15	0.01			0.16					
H9			0.15	0.01			0.16					
H8			0.15	0.01			0.16					
H7			0.15	0.01			0.16					
H6			0.15	0.01			0.16					
H5			0.15	0.01			0.16					
H4			0.15	0.01			0.16					
H3			0.15	0.01			0.16					
Total Used									PFA	OPC	Sand	Gravel
Previous Total												
Total to Date												

Signed by SDS.....

Date.....

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Date.....

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SIRIUS DRILLING SERVICES LIMITED



DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name POA STREET, BARNESLEY

Date 31/03/2011

Client SGE

Sheet 7 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details			
H2			0.15	0.01			0.16		JAMES Tom			
H1			0.15	0.01			0.16					
I14												
I13												
I12			0.90	0.06			0.96		Materials Delivered Today			
I11												
I10			0.90	0.06			0.96		Item	Quant	Ticket N°	
I9												
I8												
I7			0.90	0.06			0.96					
I6												
I5												
I4			0.45	0.03			0.48					
I3												
I2												
I1												
Total Used												
Previous Total												
Total to Date												
								Today	PFA	OPC	Sand	Gravel
								Previous				
								Total Delivered				
								Total Used				
								Stock on Site				

Signed by SDS

Date

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Date

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DRILLING
SERVICES

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Contract Name FOE STREET, BARNSELEY

Client.....SGE

Working Day N°.....

Signed by SDS.....

Date.....

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Date.....

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DRILLING
SERVICES

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Contract Name POOL STREET, BARNESLEY.....

Client.....SGL

Working Day N°.....

Signed by SDS.....

Date.....

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Date.....

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SIRIUS DRILLING SERVICES LIMITED



DAILY GROUTING RETURN

4245 Park Approach, Thorpe Park, Leeds, LS15 8GB Tel: 0113 264 9960 Fax: 0113 264 9962

Job No SDS 2385

Contract Name POA STREET, BARNSLLEY

Date 31/03/2011

Client SGE

Sheet 10 of 10

Working Day N°

Hole N°	Depth (m)	Press (psi)	PFA	OPC	Sand	Gravel	Total Grout	Remarks	Crew Details			
L10	}		0.90	0.06			0.96		JAMES			
L9									10.11			
L8												
L7												
I9(A).			0.15	0.01			0.16		Materials Delivered Today			
									Item	Quant	Ticket N°	
I8/9	}		0.90	0.06			0.96		CEM	FROM STOCK	10 Ton	
I9/10									ASH	19.94	619272	
HI9									ASH	19.54	619459	
II9												
Total Used			27.00	1.80			28.80	Today	PFA	OPC	Sand	Gravel
Previous Total			-	-			-	Previous	-	10.00		
Total to Date			27.00	1.80			28.80	Total Delivered	39.48	-		
								Total Used	39.48	10.00		
								Stock on Site	27.00	1.80		
									12.48	8.20		

Signed by SDS

Date 31/3/11

Signed by Client

Date

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ATTACHMENT C

CHEMICAL TEST RESULTS



2139

Certificate of Analysis

Certificate Number: 11-49086



Date: 03/05/2011

Client: Sirius Geotechnical & Environmental
4245 Park Approach
Thorpe Park
Leeds
LS15 8GB

Our Reference: 11-49086

Client Reference: C4013

Contract Title: Peel Street, Barnsley

Description: 3 soil samples

Date Received: 26/04/2011

Date Started: 26/04/2011

Date Completed: 03/05/2011

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation



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.

Information in Support of the Analytical Results

Analysis

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425um sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample.

Key

- * Denotes test not included in laboratory scope of accreditation
- # Denotes test that holds MCERTS accreditation, however, MCERTS accreditation is only implied if the report carries the MCERTS logo
- \$ Denotes tests completed by an approved subcontractor
- I/S Denotes insufficient sample to carry out test
- U/S Denotes that the sample is not suitable for testing

Deviating Samples

The laboratory cannot be held responsible for the integrity of sample(s) received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating.

Deviating Sample Criteria is based upon the UKAS note "Guidance on Deviating Samples".

Key

- ! Denotes sample may be deviating due to one or more of the following
- 1 Sample not received in appropriate containers
- 2 Sample exceeded holding times
- 3 Sample received without a Date Sampled
- 4 Sample received without a Time Sampled (Waters only)
- n/a Denotes sample is not deviating

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month

Liquids - 2 weeks

Asbestos (test portion) - 6 months

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Sample ID	Depth	Sample No	Completed	Matrix Description
TP102	0.30	327794	05/03/2011	brown gravelly clayey silty SAND
TP102	1.50	327795	05/03/2011	black slightly gravelly sandy CLAY
TP104	0.30	327796	05/03/2011	brown gravelly clayey silty SAND

Summary of Chemical Analysis Soil Samples

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Contract Title: Peel Street, Barnsley

			Lab No.	327794	327795	327796
			Sample ID	TP102	TP102	TP104
			Depth	0.30	1.50	0.30
			Sample Ref			
			Sample Type			
			Sampling Date	08/04/2011	08/04/2011	08/04/2011
			Sample Time			
Test	Units	DETSxx				
Deviating Sample			n/a	n/a	n/a	
Arsenic	mg/kg	DETS 042#	20			12
Cadmium	mg/kg	DETS 042#	0.7			0.6
Chromium	mg/kg	DETS 042#	21			26
Copper	mg/kg	DETS 042#	35			48
Lead	mg/kg	DETS 042#	75			63
Mercury	mg/kg	DETS 081#	0.07			0.17
Nickel	mg/kg	DETS 042#	16			14
Selenium	mg/kg	DETS 042#	0.7			0.7
Zinc	mg/kg	DETS 042#	81			51
Total Sulphate as SO4	%	DETS 075#	0.16			0.13
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	390			280
Total Organic Carbon	%	DETS 002	0.9			1.1
pH		DETS 008#	11.1			11.3
Aliphatic C5-C6	mg/kg	DETS 072*		< 0.01		
Aliphatic C6-C8	mg/kg	DETS 072*		< 0.01		
Aliphatic C8-C10	mg/kg	DETS 072*		< 0.01		
Aliphatic C10-C12	mg/kg	DETS 072#		6.5		
Aliphatic C12-C16	mg/kg	DETS 072#		48		
Aliphatic C16-C21	mg/kg	DETS 072#		15		
Aliphatic C21-C35	mg/kg	DETS 072*		8.1		
Aromatic C5-C7	mg/kg	DETS 072*		< 0.01		
Aromatic C7-C8	mg/kg	DETS 072*		< 0.01		
Aromatic C8-C10	mg/kg	DETS 072*		< 0.01		
Aromatic C10-C12	mg/kg	DETS 072#		1		
Aromatic C12-C16	mg/kg	DETS 072#		47		
Aromatic C16-C21	mg/kg	DETS 072#		89		
Aromatic C21-C35	mg/kg	DETS 072#		110		
Aliphatic C5-C35	mg/kg	DETS 072*		77		
Aromatic C5-C35	mg/kg	DETS 072*		250		
TPH Ali/Aro	mg/kg	DETS 072*		320		

Summary of Chemical Analysis Soil Samples

Our Ref: 11-49086

Client Ref: C4013

Contract Title: Peel Street, Barnsley

		Lab No.	327794	327795	327796
		Sample ID	TP102	TP102	TP104
		Depth	0.30	1.50	0.30
		Sample Ref			
		Sample Type			
		Sampling Date	08/04/2011	08/04/2011	08/04/2011
Acenaphthene	mg/kg	DETS 050	1.9		0.2
Acenaphthylene	mg/kg	DETS 050	3.6		0.4
Anthracene	mg/kg	DETS 050	9.9		2.1
Benzo(a)anthracene	mg/kg	DETS 050	23		5.6
Benzo(a)pyrene	mg/kg	DETS 050	23		5.3
Benzo(b)fluoranthene	mg/kg	DETS 050	15		3.2
Benzo(k)fluoranthene	mg/kg	DETS 050	8.6		1.9
Benzo(g,h,i)perylene	mg/kg	DETS 050	11		3.2
Chrysene	mg/kg	DETS 050	21		5.3
Dibenzo(a,h)anthracene	mg/kg	DETS 050	2.3		< 0.1
Fluoranthene	mg/kg	DETS 050	35		9.3
Fluorene	mg/kg	DETS 050	5.5		0.9
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	12		2.7
Naphthalene	mg/kg	DETS 050	5.5		< 0.1
Phenanthrene	mg/kg	DETS 050	19		3
Pyrene	mg/kg	DETS 050	30		6.7
PAH	mg/kg	DETS 050	230		50
Phenol - Monohydric	mg/kg	DETS 067#	< 0.3		< 0.3

Appendix A - Details of Analysis

Method details are shown only for those determinants listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS.
No Recovery Factors are used in the determination of results. Results reported assume 100% recovery
Full method statements are available on request.

<u>Method</u>	<u>Name of Parameter</u>	<u>Units</u>	<u>Limit of Detection</u>	<u>Sample Preparation</u>	<u>Sub-Contracted</u>	<u>UKAS</u>	<u>MCERTS</u>
DETS 002	Organic Matter	%	0.01	Air Dried	No	Yes	Yes
DETS 003	Loss on Ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 004	Total Sulphate	%	0.01	Air Dried	No	Yes	Yes
DETS 075	Total Sulphate	%	0.01	Air Dried	No	Yes	Yes
DETS 004	Water Soluble Sulphate	mg/l	10.00	Air Dried	No	Yes	Yes
DETS 076	Water Soluble Sulphate	mg/l	10.00	Air Dried	No	Yes	Yes
DETS 006	Chloride	mg/kg	0.01	Air Dried	No	Yes	Yes
DETS 008	pH	pH Units	0.10	Air Dried	No	Yes	Yes
DETS 042	Selenium	mg/kg	0.50	Air Dried	No	Yes	Yes
DETS 019	Ammonia	mg/kg	0.02	Air Dried	No	Yes	Yes
DETS 020	Boron (Water Soluble)	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 024	Sulphide	mg/kg	10.00	Air Dried	No	Yes	Yes
DETS 042	Antimony	mg/kg	1.00	Air Dried	No	No	No
DETS 042	Arsenic	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Barium	mg/kg	1.50	Air Dried	No	Yes	Yes
DET S 042	Beryllium	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Cadmium	mg/kg	0.10	Air Dried	No	Yes	Yes

DETS 042	Cobalt	mg/kg	0.70	Air Dried	No	Yes	Yes
DETS 042	Copper	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes
DETS 042	Iron	mg/kg	1.00	Air Dried	No	Yes	No
DETS 042	Lead	mg/kg	0.30	Air Dried	No	Yes	Yes
DETS 042	Manganese	mg/kg	20.00	Air Dried	No	Yes	Yes
DETS 081	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 042	Molybdenum	mg/kg	0.40	Air Dried	No	Yes	Yes
DETS 042	Nickel	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Thallium	mg/kg	1.00	Air Dried	No	No	No
DETS 042	Vanadium	mg/kg	0.80	Air Dried	No	Yes	Yes
DETS 042	Zinc	mg/kg	1.00	Air Dried	No	Yes	Yes
DETS 049	Sulphur (Free)	mg/kg	0.50	As Received	No	Yes	Yes
DETS 050	PAH	mg/kg	0.10	As Received	No	Yes	No
DETS 051	TPH (C10 - C40)	mg/kg	20.00	As Received	No	Yes	Yes
DETS 052	PCB	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 067	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes

DETS 067	Easily Liberatable Cyanide	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 067	Complex Cyanide	mg/kg	0.30	Air Dried	No	Yes	No
DETS 067	Total Cyanide	mg/kg	0.40	Air Dried	No	Yes	Yes
DETS 067	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 068	VOC	mg/kg	0.01	As Received	No	No	No

Mr W Norman
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LS15 9JN

28th March 2011

Ref. C4013/JW/4320

Dear Wayne

Re: Peel Street, Barnsley – Gas Risk Assessment

Please find enclosed the engineer's logs for the rotary boreholes (ref. RO101 to RO105 inclusive), drilled in order to replace the damaged wells, an updated exploratory hole location plan, in addition to the outstanding gas monitoring results, completed following the issue of our Geoenvironmental Appraisal Report.

Background

It is understood that Lidl UK GmbH (Lidl) are proposing to redevelop the site with two commercial units within the eastern area, with associated car parking within the western area, and peripheral areas of soft landscaping.

Our Geoenvironmental Appraisal (Sirius Report Ref: C4013) was issued in February 2011, and included a discussion of the findings of the investigation, and provided foundation recommendations, and advice on contamination remediation measures (soils, water and gas).

At the time of the issue of the geoenvironmental appraisal, two gas and groundwater monitoring visits had been undertaken. However, on the second monitoring visit, five out of the six monitoring installations were found to have been either damaged or buried during the demolition works being undertaken at the above site. Consequently, the monitoring wells were reinstated so that the gas monitoring programme could be completed.