

BOREHOLE LOG



Borehole No.

BH1004

Sheet 3 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.31mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
18							CHALK off white locally speckled black recovered as very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP) (continued from previous sheet)			
		D	18.50							
19		B	19.00 - 19.50							
20										
		SPT	20.50 - 20.95	S*158				20.50	17.81	
21		D	21.00				CHALK recovered as off white very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak medium and high density. (Dc) (WHITE CHALK SUBGROUP)			
22		SPT	22.00 - 22.45	S*75						
23		D	23.00							
		SPT	23.50 - 23.95	S*97						
24										
		D	24.50							
25		SPT	25.00 - 25.45	S*94						
26		D	26.00							
		SPT	26.50 - 26.95	S*107						
27										

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	20.50	20.40	4.80
07/02/2018 08:00	20.50	20.40	

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Sheet 4 of 4

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471494 N 174112	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.31mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 08/02/2018	Logged By MM/TH	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
28		D SPT	28.00 28.00 - 28.45	S*136			CHALK recovered as off white very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are weak medium and high density. (Dc) (WHITE CHALK SUBGROUP) (continued from previous sheet)	(14.50)		
29		D SPT	29.00 29.50 - 29.95	S*150						
30		D SPT	30.50 31.00 - 31.45	S*120			31.00-35.00m: Occasional rinded flints. 32.5m: Rinded flint cobbles.			
31		D SPT	32.00 32.50 - 32.95	S**						
32		B SPT	33.50 - 34.00 34.00 - 34.45	S*103						
33		D	35.00				Borehole completed at 35.00m	35.00	3.31	
34										
35										
36										
37										

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	28.00	28.00	3.10
08/02/2018 08:00	28.00	28.00	
08/02/2018 17:00	35.00	35.00	3.10

BOREHOLE LOG



Borehole No.

BH1005

Sheet 1 of 2

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471538 N 174120	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.69mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 31/01/2018 End: 01/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B ES	0.20 - 0.40 0.30				MADE GROUND: Grey ASPHALT.	0.10	38.59	
							MADE GROUND: Dark grey slightly silty angular fine to coarse GRAVEL of siliceous material and brick.	0.20 (0.40)	38.49	
		B ES	0.60 - 0.90 0.70				MADE GROUND: Reddish brown and grey sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick with medium cobble content. Cobbles are angular of brick.	0.60	38.09	
		B ES	0.90 - 1.20 1.00				MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material, sandstone and brick with low cobble content. Cobbles are angular of brick.	0.90	37.79	
		SPT	1.20 - 1.65	S 1			MADE GROUND: Very soft dark greyish brown slightly gravelly sandy CLAY. Gravel is angular fine to coarse of siliceous material, concrete and brick.	(1.00)		
2		D ES	2.00 2.00 - 2.45				Very soft greenish grey slightly sandy silty CLAY. (ALLUVIUM)	1.90 (0.90)	36.79	
		D	2.50							
		D	2.80							
3		B SPT C	3.00 - 3.50 3.00 - 3.45	S 11			Very soft grey mottled brown slightly gravelly sandy CLAY. Gravel is sub-angular fine to medium of siliceous material. (ALLUVIUM)	2.80 3.00	35.89 35.69	
4		B SPT C	4.00 - 4.50 4.00 - 4.45	S 25			Medium dense light brown to grey very sandy slightly silty angular to sub-rounded GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)			
5		B SPT C	5.00 - 5.50 5.00 - 5.45	S 30						
6										
7		B SPT C	6.50 - 7.00 6.50 - 6.95	S 33			6.50-6.95m: Very dense.	(6.70)		
8										

EQUIPMENT: Hand tools. Hydraulic breaker. Light cable percussion rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Cable percussion drilled using 250mm diameter clay cutter and bailer 1.20-2.00m and 200mm diameter clay cutter and bailer 1.20-9.00m, and 150mm diameter clay cutter and bailer 9.00-35.00m.

CASING: 250mm diameter to 2.00m, 200mm diameter to 9.00m, 150mm diameter to 35.00m.

GROUNDWATER: None recorded, however was added to assist drilling.

INSTALLATION: Borehole was backfilled with bentonite pellets: 12.00-7.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 7.00-2.80m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.80-0.20m. Flush 150mm steel cover set in concrete: 0.20-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Clean drilling techniques; bentonite seal from 1.50-2.00m. PID readings taken on all environmental samples. Results: 0.30m - 0.00ppm; 0.70m - 0.20ppm; 1.00m - 0.50ppm; 2.00m - 0.20ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
31/01/2018 17:00	5.50	4.00	
01/02/2018 08:00	5.50	6.10	

BOREHOLE LOG



Borehole No.

BH1005

Sheet 2 of 2

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471538 N 174120	Hole Type CP
Location: Vastern Road, Reading, RG1 8BU	Level: 38.69mAOD	Scale 1 : 50.00	
Client: SSE Plc	Dates: Start: 31/01/2018 End: 01/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
9		B SPT C	8.00 - 8.45	S 20			Medium dense light brown to grey very sandy slightly silty angular to sub-rounded GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) (continued from previous sheet) 8.50-9.70m: Very sandy.			
10		SPT D	9.50 - 9.95 9.70	S 7			CHALK recovered as off white locally speckled black very silty sub-angular to sub-rounded fine to coarse GRAVEL with rare rinded flints. Clasts are very weak and weak medium density. (Dc) (WHITE CHALK SUBGROUP)	9.70	28.99	
11		B U100	11.00 - 11.45					(2.30)		
12		SPT	11.50 - 11.95	S 36			Borehole completed at 12.00m	12.00	26.69	
13										
14										
15										
16										
17										

Groundwater:

Date Strike Depth (m) Casing Depth (m) Depth After Observation (m)

Hole Progress:

Date Hole Depth (m) Casing Depth (m) Water Depth (m)

ROTARY BOREHOLE LOG



Borehole No.

BH2001

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
Reading

Project No:

C5925

Co-ords: E 471586 N 174141

Hole Type
DS+RC

Location: Vastern Road, Reading, RG1 8BU

Level: 38.42mAOD

Scale
1 : 37.50

Client: SSE Plc

Dates: Start: 13/02/2018
End: 13/02/2018Logged By
TH

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1								MADE GROUND: Dark grey ASPHALT.	0.08	38.34	
								MADE GROUND: Light brown very sandy angular fine to coarse GRAVEL of siliceous material and brick.	0.30	38.12	
								MADE GROUND: Dark grey sandy silty (ashy) GRAVEL with low cobble content. Cobbles are angular of red brick.	0.55	37.87	
								MADE GROUND: CONCRETE.	0.80	37.62	
								MADE GROUND: Dark grey very sandy very clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material.	0.90	37.52	
2		C	0.60 - 1.20			100% 33% 33%		MADE GROUND: Very soft light greyish brown locally mottled orangish brown slightly gravelly slightly sandy CLAY. Gravel is sub-angular to sub-rounded fine to coarse of red brick and siliceous material.	(0.40)		
		ES	0.80					Very soft dark bluish green locally mottled light grey CLAY with rare partially decomposed organic material (<5mm) and occasional comminuted shell fragments (<3mm). (ALLUVIUM)	1.30	37.12	
		D	1.40								
		ES	1.50								
		D	2.00								
3								Very soft bluish green mottled brown slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (5mm) and a moderate organic odour. Gravel is sub-rounded to rounded fine to coarse siliceous material. (ALLUVIUM)	2.40	36.02	
		D	3.00						(1.20)		
4								Light brown very sandy slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.60	34.82	
		B	4.00 - 5.00					3.60-3.80m: Very clayey.	(1.40)		
5								Borehole completed at 5.00m	5.00	33.42	
6											

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit: See WS1008. Waterflush rotary coring (150mm): 0.60-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.

CASING: 140mm diameter to 4.00m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: Bentonite seal 5.00-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of WS1008. PID readings taken on all environmental samples. Results: 0.80m - 3.60ppm; 1.00m - 4.70ppm; 1.50m - 4.80ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
13/02/2018 10:30	5.00	4.00	

ROTARY BOREHOLE LOG



Borehole No.

BH2002

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471577 N 174143	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU	Level: 38.37mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 12/02/2018 End: 12/02/2018	Logged By TH	

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1		C	0.25 - 1.20			89% 13% 13%		MADE GROUND: Dark grey ASPHALT. MADE GROUND: Grey and brown very sandy silty angular fine to coarse GRAVEL of siliceous material and red brick. MADE GROUND: CONCRETE. 0.37-1.00m: recovered as very sandy silty angular fine to coarse gravel of concrete.	0.10 0.25 (0.75)	38.27 38.12	
		ES	1.00					MADE GROUND: Off white and dark grey slightly sandy very silty angular GRAVEL of chalk. 1.10m: 1no. bone fragment (<30mm).	1.00 (0.45)	37.37	1
		ES D	1.50 1.60					Very soft dark bluish green CLAY with rare partially decomposed organic material (<5mm) and occasional comminuted shell fragments (<3mm). (ALLUVIUM) 1.45-1.60m: Light brown. Occasional partially decomposed organic material (<5mm).	1.45 (0.65)	36.92	
2		ES D	2.20 2.30					Very soft bluish green mottled light grey slightly sandy silty calcareous CLAY with frequent lenses (<1mm) of light grey silt. (ALLUVIUM)	2.10 (0.80)	36.27	2
		D	3.00					Very soft dark bluish green slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm) and a slight organic odour. Gravel is sub-rounded fine to coarse siliceous material. (ALLUVIUM)	2.90 (0.70)	35.47	3
4		B	4.00 - 5.00					Light brown very sandy slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL) 3.60-3.80m: Very clayey.	3.60 (1.40)	34.77	4
								Borehole completed at 5.00m	5.00	33.37	5
6											6

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit: See WS1009. Waterflush rotary coring (150mm): 0.25-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00.

CASING: 140mm diameter to 4.00m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: Bentonite seal 5.00-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of WS1009. PID readings taken on all environmental samples. Results: 1.00m - 4.00ppm; 1.50m - 3.50ppm; 2.20m - 4.80ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
12/02/2018 17:00	5.00	4.00	

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
12/02/2018 17:00	5.00	4.00	

ROTARY BOREHOLE LOG



Borehole No.

BH2003

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471557 N 174145	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU	Level: 38.56mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 12/02/2018 End: 12/02/2018	Logged By TH	

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1								MADE GROUND: Grey ASPHALT.	0.10	38.46	
								MADE GROUND: Brownish grey slightly gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	0.20	38.36	
								MADE GROUND: Red brick MASONRY.	0.40	38.16	
								MADE GROUND: Brownish grey gravelly slightly silty SAND. Gravel is angular fine to coarse of siliceous material and brick.	(0.30) 0.70	37.86	
								MADE GROUND: Grey CONCRETE.	0.90	37.66	
								MADE GROUND: Loose brownish grey gravelly slightly silty (ashy) SAND with low cobble content. Gravel is angular fine to coarse of siliceous material and brick. Cobbles are angular of brick.	(0.60)		
		C	1.50 - 2.00			60% 0% 0%		MADE GROUND: CONCRETE recovered as dark grey, grey and reddish brown angular coarse gravel of red brick, siliceous material and concrete with 1no. cobble of angular concrete.	1.50	37.06	
2								MADE GROUND: Brownish grey very sandy silty angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including red brick, concrete and siliceous material.	2.00	36.56	
		D ES	2.30 2.40					Very soft greenish grey CLAY with a moderate hydrocarbon odour, occasional partially decomposed organic material (<5mm) and rare comminuted shell fragments (<5mm). (ALLUVIUM)	(0.80)		
3								2.90-3.00m: Slightly gravelly slightly sandy clay. Gravel is angular to sub-angular fine to coarse siliceous material.	3.00	35.56	
		ES	3.50					Light brown very sandy very clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material with a moderate hydrocarbon odour and free product (black). (KEMPTON PARK GRAVEL)	(0.80)		
4		B	3.80 - 4.50					3.50-3.80m: Dark grey with a strong hydrocarbon odour.	3.80	34.76	
		ES	4.20					Light brown very sandy silty angular to sub-angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	(0.70)		
								Borehole completed at 4.50m	4.50	34.06	
5											
6											

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit and geology to 1.50m: See BH1003A. Waterflush rotary coring (146mm) : 1.50-2.00m. Dynamic sampling using 128mm and 113mm sample barrels: 2.00-4.50m.

CASING: 140mm diameter to 4.50m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: Bentonite seal 4.50-4.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-3.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.00-2.80m, bentonite pellet seal: 2.80-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of BH1003A. PID readings taken on all environmental samples. Results: 2.40m - 5.70ppm; 3.50m - 5.80ppm; 4.20m - 6.90ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
12/02/2018 17:00	4.50	4.50	

ROTARY BOREHOLE LOG



Borehole No.

BH2004

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471544 N 174137	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU	Level: 38.76mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 13/02/2018 End: 13/02/2018	Logged By TH	

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1		C	0.50 - 1.80			100% 21% 0%		MADE GROUND: Dark grey ASPHALT. MADE GROUND: Brown very sandy slightly clayey angular to sub-rounded fine to coarse GRAVEL mixed lithologies including concrete, red brick, chalk and siliceous material. MADE GROUND: CONCRETE recovered as light brown very sandy silty angular to sub-angular cobbles of concrete, red brick and siliceous material. MADE GROUND: CONCRETE recovered as angular to sub-angular cobbles of concrete with little very sandy angular fine to coarse gravel of red brick, siliceous material and concrete. 1.40-1.60m: Red brick masonry recovered as reddish brown very sandy silty angular to sub-angular fine to coarse gravel of red brick.	0.10 (0.40) 0.50 (0.40) 0.90 (0.90)	38.66 38.26 37.86	
2		C	1.80 - 2.90			100% 100% 100%		MADE GROUND: Light grey matrix supported CONCRETE, Aggregate is angular to rounded fine to coarse of red brick and siliceous material. 1.80-3.40m: Drill induced discontinuities are horizontal closely to medium spaced undulating and stepped rough.	1.80 (1.70)	36.96	
3		C	2.90 - 3.50			100% 83% 83%					
4		B	3.50 - 5.00					3.40-3.50m: Recovered non intact as angular fine to coarse gravel of red brick and concrete. Light brown very sandy slightly silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.50 (1.50)	35.26	
5		ES	4.00					Borehole completed at 5.00m	5.00	33.76	
6											

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit: See BH1003C. Dry drill rotary coring using 150mm coring barrel: 0.50-1.80m. Waterflush rotary coring using T6-116 coring barrel: 1.80-3.50m. Dynamic sampling using 98mm sample barrels: 3.50-5.00m.

CASING: 140mm diameter to 1.80m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: 50mm ID HDPE slotted pipe with washed gravel response zone: 3.80-3.30m. Plain 50mm ID HDPE pipe with washed gravel response zone: 3.30-3.10m, bentonite pellet seal: 3.10-0.60m and gravel 0.60-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of BH1003C. On completion, hole collapsed to 3.80m as unable to advance casing. PID readings taken on all environmental samples. Results: 4.00m - 0.00ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
13/02/2018 17:00	5.00	1.80	

ROTARY BOREHOLE LOG



Borehole No.

BH2005

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading

Project No:

C5925

Co-ords: E 471552 N 174113

Hole Type
DS+RC

Location: Vastern Road, Reading, RG1 8BU

Level: 38.65mAOD

Scale
1 : 37.50

Client: SSE Plc

Dates: Start: 13/02/2018
End: 13/02/2018Logged By
TH

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1								MADE GROUND: Dark grey ASPHALT.	0.15	38.50	
								MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	(0.35)		
		C ES B	0.50 - 1.20 0.60 0.70 - 0.95			100% 0% 0%		MADE GROUND: Concrete and red brick cobbles recovered as greyish brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of concrete, red brick, siliceous material and asphalt with 2no. angular cobbles of red brick and concrete.	0.50 (0.45)	38.15	
		ES D	0.95 1.05					MADE GROUND: Very soft slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse chalk, siliceous material and red brick.	0.95 (0.90)	37.70	
2											
								MADE GROUND: Dark grey very sandy clayey angular to sub-angular fine to coarse GRAVEL of red brick and siliceous material with visible hydrocarbons.	1.85 (0.30)	36.80	
		ES ES	1.75 1.90					Very soft dark green locally dark grey slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm). Gravel is sub-rounded fine to medium of siliceous material. (ALLUVIUM)	2.15 (1.15)	36.50	
		D ES	2.30 2.40					2.50-3.30m: Limited recovery: slightly sandy gravelly clay. Gravel is angular to sub-rounded fine to coarse siliceous material.			
3											
								Light brown very sandy slightly silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.30 (1.70)	35.35	
		D B	3.20 3.30 - 5.00								
4											
5								Borehole completed at 5.00m	5.00	33.65	
6											

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit: See WS1018. Dry drill rotary coring using 150mm coring barrel: 0.50-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.

CASING: 150mm diameter casing to 1.20m and 140mm diameter casing to 4.00m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: Bentonite seal 3.00-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 4.00-1.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 1.00-0.95m and bentonite pellet seal: 0.95-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of WS1018. PID readings taken on all environmental samples. Results: 0.60m - 2.80ppm; 0.95m - 4.00ppm; 1.75m - 4.00ppm; 1.90m - 3.40ppm; 2.40m - 2.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
14/02/2018 17:00	5.00		

ROTARY BOREHOLE LOG



Borehole No.

BH2006

Sheet 1 of 1

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471564 N 174107	Hole Type DS+RC
Location: Vastern Road, Reading, RG1 8BU	Level: 38.49mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 14/02/2018 End: 14/02/2018	Logged By TH	

(m)	Water Levels	Core Run, Samples & Testing			Core Run & Sample	TCR SCR RQD	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result							
1		C	0.00 - 1.20			100% 0% 0%		MADE GROUND: Light grey CONCRETE.	0.12	38.37	
								MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	(0.38)		
		ES	0.60					MADE GROUND: Concrete and red brick cobbles recovered as greyish brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of concrete, red brick, siliceous material and asphalt with 3no. angular cobbles of concrete.	0.50	37.99	
		B	0.70 - 0.90						(0.40)		
		B	0.90 - 1.20					MADE GROUND: Dark grey and off white very sandy very silty angular to sub-angular fine to coarse GRAVEL of chalk, siliceous material, concrete and red brick.	0.90	37.59	
2		ES	1.00					MADE GROUND: Very soft slightly gravelly slightly sandy CLAY. Gravel is angular to rounded fine to coarse chalk, siliceous material and red brick.	(0.30)		
									1.20	37.29	
		ES	1.40					MADE GROUND: Dark grey very sandy clayey angular to sub-angular fine to coarse GRAVEL of red brick and siliceous material with visible hydrocarbons.	(0.50)		
		D	1.50						1.70	36.79	
		ES	1.80					Very soft dark green locally dark grey slightly gravelly slightly sandy CLAY with rare partially decomposed organic material (<5mm). Gravel is sub-rounded fine to medium of siliceous material. (ALLUVIUM)	1.95	36.54	
3		ES	2.00					2.50-3.00m: Limited recovery; slightly sandy gravelly clay. Gravel is angular to sub-rounded fine to coarse of siliceous material.	(1.05)		
		D	2.20								
		ES	2.40					Light brown very sandy silty angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.00	35.49	
		B	3.30 - 5.00					3.00-3.20m: Very clayey.			
								3.20-3.30m: Clayey.			
4								3.30-3.40m: Slightly clayey.			
5											
6											
								Borehole completed at 5.00m	5.00	33.49	

EQUIPMENT: Hand digging tools. Comacchio Fraste Multi-drill ML track mounted rig.

METHOD: Hand dug inspection pit: See WS1019. Dry drill rotary coring using 150mm coring barrel: 0.50-1.20m. Dynamic sampling using 128mm and 113mm sample barrels: 1.20-5.00m.

CASING: 140mm diameter casing to 4.00m.

GROUNDWATER: None encountered prior to using water flush.

INSTALLATION: Bentonite seal 2.00-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 2.00-1.00m. Plain 50mm ID HDPE pipe with washed gravel response zone: 1.00-0.95m and bentonite pellet seal: 0.95-0.40m. Flush cover set in concrete: 0.40-0.10m. Gas valve fitted. Surface reinstated with tarmacadam 0.10-0.00m.

REMARKS: Drilled at location of WS1017. PID readings taken on all environmental samples. Results: 0.60m - 1.80ppm; 1.00m - 1.60ppm; 1.40m - 2.30ppm; 1.80m - 3.10ppm; 2.00m - 3.20ppm; 2.40m - 2.30ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
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Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
14/02/2018 17:00	5.00	4.00	

WINDOWLESS SAMPLE LOG



Borehole No.

WS1002

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471584 N 174194	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.26mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.10 - 0.20				MADE GROUND: Black ASPHALT.	0.10	38.16	
		ES	0.20				MADE GROUND: Reddish brown and grey sandy slightly silty angular fine to coarse GRAVEL of siliceous material and concrete.	0.20	38.06	
		B	0.30 - 0.50				MADE GROUND: Greyish brown very sandy clayey angular fine to coarse GRAVEL of brick and concrete. Cobbles are angular of concrete.	0.50	37.76	
		D	0.50				MADE GROUND: Brown to grey slightly sandy gravelly CLAY. Gravel is angular to sub-angular fine to medium of brick, siliceous material and concrete.	(1.20)		
		ES	0.80 - 1.00							
		B	1.00							
		D	1.00							
		ES	1.20 - 1.65	S 5						
		SPT								
		ES	1.70				1.70m: Slow groundwater seepage. Borehole completed at 1.70m	1.70	36.56	
2										
3										
4										
5										
6										

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-1.70m.

CASING: None used.

GROUNDWATER: Seepage encountered at 1.70m. No rise after 20 minutes.

BACKFILL: On completion, hole backfilled with arisings and the surface reinstated.

REMARKS: Obstruction encountered at 1.70m. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.50m -0.60ppm; 1.00m -0.70ppm; 1.70m -1.50ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	1.70		1.70

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 00:00	1.70	1.70	

WINDOWLESS SAMPLE LOG



Borehole No.

WS1003

Sheet 1 of 1

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471596 N 174182	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.21mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.10 - 0.30				MADE GROUND: Dark grey ASPHALT.	0.10	38.11	
		D	0.20				MADE GROUND: Reddish brown slightly sandy angular fine to coarse GRAVEL of brick.	0.12	38.09	
		B	0.40 - 0.60				MADE GROUND: Dark grey very sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick.	(0.98)		
		D	0.50							
		ES								
2		B	0.80 - 1.00							
		D	1.00				MADE GROUND: Light brown to grey sandy angular slightly silty fine to coarse GRAVEL of siliceous material and brick.	1.10	37.11	
		ES	1.10					(0.30)		
		D	1.20	S<1			Very soft brown slightly sandy CLAY. (ALLUVIUM)	1.40	36.81	
		ES	1.20 - 1.65					(0.35)		
3		SPT					Very soft greenish grey silty CLAY with moderate organic odour. (ALLUVIUM)	1.75	36.46	
		D	1.70							
		ES								
		SPT	2.00 - 2.45	S<1				(2.05)		
4		SPT	3.00 - 3.45	S<1						
		D	3.80				Very soft dark grey organic sandy CLAY. (ALLUVIUM)	3.80	34.41	
		B	4.00 - 5.00	S 10				(0.30)		
		SPT	4.00 - 4.45				Medium dense becoming dense grey to brown sandy sub-angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.10	34.11	
								(1.35)		
5		SPT	5.00 - 5.45	S 44						
							Borehole completed at 5.45m	5.45	32.76	
6										

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 3.89m and rose to 2.99m after a 20 minute monitoring period.

INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.50m -0.60ppm; 1.00m -0.70ppm; 1.70m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	3.89	4.00	2.99

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	5.45	5.00	2.42

WINDOWLESS SAMPLE LOG



Borehole No.

WS1004

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471603 N 174169	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.37mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 06/02/2018 End: 06/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.20 - 0.40				MADE GROUND: Grey ASPHALT.	0.10	38.27	
		D	0.20				MADE GROUND: Grey very sandy angular fine to coarse GRAVEL of siliceous material and brick.	(0.40)		
		B	0.50 - 0.70				MADE GROUND: Grey very sandy slightly silty (ashy) angular fine to coarse GRAVEL of siliceous material and brick.	0.50	37.87	
		D	0.60				MADE GROUND: Very soft brown slightly sandy gravelly CLAY. Gravel is angular to sub-angular of siliceous material and brick.	0.70	37.67	
		B	0.80 - 1.00							
2		D	1.00					(0.80)		
		ES	1.20 - 1.65	S 2						
		SPT								
							Very soft brown mottled grey slightly sandy CLAY. (ALLUVIUM)	1.50	36.87	
								(0.50)		
3		D	1.80							
		ES	2.00	S 3						
		SPT	2.00 - 2.45				Very soft greenish grey mottled brown slightly sandy CLAY with moderate organic odour. (ALLUVIUM)	2.00	36.37	
								(1.70)		
4		D	3.00	S<1						
		SPT	3.00 - 3.45							
		D	3.70				Grey very sandy slightly silty angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.70	34.67	
		B	4.00 - 5.00	S 25			Medium dense grey to brown sandy sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.90	34.47	
5		D	4.00							
		SPT	4.00 - 4.45							
								(1.55)		
		SPT	5.00 - 5.45	S 38						
6							Borehole completed at 5.45m	5.45	32.92	

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 3.71m and rose to 2.67m after a 20 minute monitoring period.

INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.45-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.60m -0.70ppm; 1.00m -0.90ppm; 2.00m -0.20ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
06/02/18	3.71	4.00	2.67

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
06/02/2018 17:00	5.45	5.00	2.43

WINDOWLESS SAMPLE LOG



Borehole No.

WS1005A

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471614 N 174146	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.17mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 09/02/2018 End: 09/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
							MADE GROUND: Dark grey ASPHALT.			
		B	0.25 - 0.45				MADE GROUND: Reddish brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material.	0.25	37.92	
		ES	0.30					0.45	37.72	
		B	0.45 - 0.60				MADE GROUND: Reddish brown and grey sandy clayey fine to coarse GRAVEL of siliceous material and brick.	0.60	37.57	
		ES	0.50							
		B	0.80 - 1.20				Very loose greyish brown slightly sandy clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material. (ALLUVIUM)			
1		ES	1.00					(1.00)		
		SPT	1.20 - 1.65	S 4						
		ES	1.50							
		D	1.90				Very soft bluish grey mottled brown slightly sandy CLAY with occasional shell fragments (<5mm). (ALLUVIUM)	1.60	36.57	
2		SPT	2.00 - 2.45	S 3						
		D	2.90					(2.40)		
3		SPT	3.00 - 3.45	S<1						
		D	3.90							
4		SPT	4.00 - 4.45	S 37			Dense brown sandy clayey angular fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.00	34.17	
		B	4.30 - 4.65					(0.65)		
		B	4.65 - 5.00				Dense light brown sandy angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	4.65	33.52	
5		SPT	5.00 - 5.45	S 41				(0.80)		
							Borehole completed at 5.45m	5.45	32.72	
6										

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 2.76m and rose to and levelled out at 2.22m after a 15 minute monitoring period.

INSTALLATION: Bentonite seal 5.45-2.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 2.00-1.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 1.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.40ppm; 0.50m -0.80ppm; 1.00m -1.40ppm; 1.50m -0.40ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
09/02/18	2.76	3.00	2.22

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
08/02/2018 17:00	5.45	5.00	2.29

WINDOWLESS SAMPLE LOG



Borehole No.

WS1006

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471608 N 174137	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.19mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 08/02/2018 End: 08/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.20 - 0.40				MADE GROUND: Dark grey ASPHALT.	0.20	37.99	1
		D	0.30				MADE GROUND: Grey and reddish brown sandy angular fine to coarse GRAVEL of siliceous material.	(0.40)		
		ES	0.40 - 0.60							
		B	0.50							
		D	0.60 - 0.90				MADE GROUND: Brown and greyish brown sandy angular to sub-angular fine to coarse GRAVEL of siliceous material, brick and concrete with rare geotextile membrane fragments (<80mm).	0.60	37.59	
2		ES	1.00					(1.00)		2
		SPT	1.20 - 1.65	S 3						
		D	1.90				Very soft bluish grey mottled brown slightly sandy CLAY. (ALLUVIUM)	1.60	36.59	
3		ES	2.00 - 2.45	S<1				(1.40)		3
		SPT	2.40							
		D	2.40							
4		B	3.00 - 3.75	S 18			Medium dense brown and greyish brown sandy sub-angular to sub-rounded fine to medium GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.00	35.19	4
		SPT	3.00 - 3.45					(0.75)		
		D	3.45							
5		SPT	4.00 - 4.45	S 41			Dense light brown sandy slightly silty sub-angular to sub-rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.75	34.44	5
		B	4.40 - 5.00					(1.70)		
		SPT	5.00 - 5.45	S 30						
6							Borehole completed at 5.45m	5.45	32.74	6

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 3.36m and rose to 2.94 after 20 minutes.

INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -0.10ppm; 0.50m -0.30ppm; 1.00m -0.20ppm; 1.90m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
07/02/18	3.36		2.94

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	3.45	3.00	3.36
08/02/2018 08:00	3.45	3.00	2.28
08/02/2018 17:00	5.45	5.00	2.32

WINDOWLESS SAMPLE LOG



Borehole No.

WS1007

Sheet 1 of 1

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471593 N 174138	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.38mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 05/02/2018 End: 05/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.10 - 0.20				MADE GROUND: ASPHALT.	0.10	38.28	
		D	0.15				MADE GROUND: Brown sandy silty angular to sub-rounded fine to medium GRAVEL of siliceous material.	0.20	38.18	
		ES	0.20 - 0.50				MADE GROUND: Grey sandy slightly silty angular fine to coarse of GRAVEL of brick, concrete and siliceous material.	(0.30)		
		B	0.45				MADE GROUND: Brown sandy clayey GRAVEL of siliceous material and chalk.	0.50	37.88	
2		D	1.00 - 1.20					(1.20)		
		B	1.00							
		ES	1.20 - 1.65	S 1			Grey mottled orangish brown gravelly CLAY. (ALLUVIUM)	1.70	36.68	
		SPT						(0.60)		
3		D	2.00							
		ES	2.00 - 2.45	S 4			Orangish brown and grey sandy clayey GRAVEL. (KEMPTON PARK GRAVEL)	2.30	36.08	
		SPT						(1.00)		
							3.00m: Medium dense.			
4		D	3.00							
		SPT	3.00 - 3.45	S 11			Dense brown sandy GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	3.30	35.08	
		B	3.30 - 3.70							
5		B	4.00 - 5.00	S 30						
		SPT	4.00 - 4.45					(2.15)		
6		SPT	5.00 - 5.45	S 34						
							Borehole completed at 5.45m	5.45	32.93	

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 1.10m. No rise is recorded.

INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 3.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.15m -0.20ppm; 0.45m -0.40ppm; 1.00m -0.30ppm; 2.00m -0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
05/02/18	1.10		

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
05/02/2018 17:00	5.45	5.00	2.48

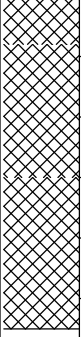
INSPECTION PIT LOG



Pit No
WS1008
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471586 N 174141 Level: 38.42mAOD	Date 05/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: m Depth 0.55m E 		Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		C	0.00 - 0.10		MADE GROUND: Dark grey ASPHALT.			
		B	0.10 - 0.25		MADE GROUND: Light brown very sandy angular fine to coarse GRAVEL of siliceous material and brick.	0.08	38.34	
		D ES	0.20			(0.22)		
		B	0.30 - 0.50		MADE GROUND: Dark grey sandy silty (ashy) GRAVEL with low cobble content. Cobbles are angular of red brick.	0.30	38.12	
		D ES	0.45		0.50m: Concrete across base of pit.	(0.25)		
					Inspection pit completed at 0.55m	0.55	37.87	
2								

EQUIPMENT: Hand digging tools. Terrier 2002 track mounted rig.

METHOD: Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.00-0.10m. Hand dug inspection pit: 0.10-0.55m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.55-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2001. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm; 0.45m -0.10ppm.

INSPECTION PIT LOG


 Pit No
WS1009

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471577 N 174143
 Level: 38.37mAOD
Date
 05/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: m

Scale
 1 : 12.5

Client: SSE Plc

Depth
 0.25m

E

Logged By
 MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		C	0.00 - 0.10		MADE GROUND: Dark grey ASPHALT.	(0.10)	38.27	
		B	0.10 - 0.25		MADE GROUND: Grey and brown very sandy silty angular fine to coarse GRAVEL of siliceous material and red brick.	0.10		
		D	0.20			(0.15)		
		ES			0.25m: Concrete across base of pit. Inspection pit completed at 0.25m	0.25	38.12	
2								

EQUIPMENT: Hand digging tools. Terrier 2002 track mounted rig.

METHOD: Borehole advanced using 300mm diameter coring barrel utilizing water flush: 0.00-0.10m. Hand dug inspection pit: 0.10-0.25m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.25-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2002. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm.

INSPECTION PIT LOG


Pit No
WS1013

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471560 N 174180
Level: 38.54mAOD
Date
08/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: m

Scale
1 : 12.5

Client: SSE Plc

Depth
0.80m

E

Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: ASPHALT.	(0.10)		
		B	0.15 - 0.40		MADE GROUND: Grey angular COBBLES of concrete with some slightly sandy angular fine to coarse gravel of concrete and brick.	0.10	38.44	
		ES	0.20					
		B	0.40 - 0.70			(0.70)		
2		ES	0.60					
					Inspection pit completed at 0.80m	0.80	37.74	

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.80m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.80-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete cobbles and boulders. PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.60m -0.30ppm.

INSPECTION PIT LOG

Pit No
WS1013A

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925Co-ords: E 471560 N 174180
Level: 38.54mAODDate
09/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: m

Scale
1 : 12.5

Client: SSE Plc

Depth
0.55m

E

Logged By
MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
					MADE GROUND: ASPHALT.	(0.10)		
					MADE GROUND: Grey angular COBBLES of concrete with some slightly sandy angular fine to coarse gravel of concrete and brick.	0.10	38.44	
						(0.45)		
					Inspection pit completed at 0.55m	0.55	37.99	

1

1

2

2

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.55m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.55-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete cobbles and boulders.

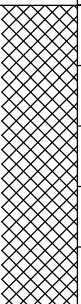
INSPECTION PIT LOG



Pit No
WS1017
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471564 N 174107 Level: 38.49mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: m Depth 0.50m E 		Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAD)	Legend
		No/Type	Depth (m)	Result				
1		B	0.00 - 0.12		MADE GROUND: Light grey CONCRETE.	(0.12)	38.37	
		B	0.12 - 0.40		MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	0.12		
		D ES	0.40			(0.38)		
					Inspection pit completed at 0.50m	0.50	37.99	
2								

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.50m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.50-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2006. See separate sheet. PID readings taken on all environmental samples. Results: 0.20m -0.10ppm.

INSPECTION PIT LOG



Pit No
WS1018
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471552 N 174113 Level: 38.65mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: m Depth 0.50m E 		Scale 1 : 12.5
Client: SSE Plc			Logged By MM

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B	0.07 - 0.20		MADE GROUND: Dark grey ASPHALT.	(0.15)		
		D ES B	0.15 0.20 - 0.45		MADE GROUND: Grey sandy slightly silty angular fine to coarse GRAVEL of concrete and siliceous material with high cobble content. Cobbles are angular of concrete.	0.15	38.50	
		D ES	0.40			(0.35)		
					Inspection pit completed at 0.50m	0.50	38.15	
2								

EQUIPMENT: Hand tools. Hydraulic breaker.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-0.50m.

GROUNDWATER: None encountered.

BACKFILL: On completion, hole backfilled with bentonite pellets: 0.50-0.10 and the surface reinstated with Tarmacadam: 0.10-0.00.

REMARKS: Unable to advance hole through concrete. Position continued with rotary coring and renamed BH2005. See separate sheet. PID readings taken on all environmental samples. Results: 0.15m -0.20ppm; 0.40m -0.10ppm.

WINDOWLESS SAMPLE LOG



Borehole No.

WS1019

Sheet 1 of 1

Telephone: 01452 739165, Fax: 01452 739220, Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471552 N 174069	Hole Type WS
Location: Vastern Road, Reading, RG1 8BU	Level: 38.32mAOD	Scale 1 : 37.50	
Client: SSE Plc	Dates: Start: 07/02/2018 End: 07/02/2018	Logged By MM	

(m)	Water Levels	Samples & In Situ Testing			Sample	Install	Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result						
1		B	0.10 - 0.25				MADE GROUND: Dark grey ASPHALT.	0.10	38.22	
		ES	0.20				MADE GROUND: Grey and reddish brown sandy slightly silty angular fine to coarse GRAVEL of siliceous material.	0.25	38.07	
		B	0.25 - 0.50				MADE GROUND: Brown and greyish brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of siliceous material, brick and concrete with low cobble content. Cobbles are angular brick.	(0.75)		
		ES	0.50							
2		B	1.00 - 1.20				MADE GROUND: Very soft brown gravelly sandy CLAY. Gravel is angular to sub-angular fine to coarse of siliceous material, brick and concrete.	1.00	37.32	1
		D	1.10					(0.70)		
		ES	1.20 - 1.65	S<1			Very soft firm greenish grey slightly gravelly slightly sandy CLAY. Gravel is sub-angular fine to medium of siliceous material. (ALLUVIUM)	1.70	36.62	
		SPT						(0.78)		
3		D	1.80				Medium dense light brown very sandy slightly silty sub-angular to rounded fine to coarse GRAVEL of siliceous material. (KEMPTON PARK GRAVEL)	2.48	35.84	2
		ES	2.00 - 2.45	S<1						
		SPT								
4		D	2.40							3
		SPT	3.00 - 3.45	S 11						
5		D	4.00							4
		SPT	4.00 - 4.45	S 15				(2.97)		
6		SPT	5.00 - 5.45	S 25			Borehole completed at 5.45m	5.45	32.87	5

EQUIPMENT: Hand tools. Hydraulic breaker. Terrier 2002 track mounted rig.

METHOD: Hard standing broken out using hydraulic breaker with a range of chisels and continued with hand dug inspection pit: 0.00-1.20m. Continuous disturbed sampling using 101mm sample barrel: 1.20-5.00m.

CASING: 113mm diameter to 5.00m.

GROUNDWATER: Encountered at 2.48m and rose to and leveling out at 2.36m after 15 minutes.

INSTALLATION: Borehole backfilled with washed gravel: 5.45-5.00m. 50mm ID HDPE slotted pipe with washed gravel response zone: 5.00-3.00m. 50mm ID HDPE plain pipe with bentonite pellet seal: 2.00-0.40m. Flush cover set in concrete: 0.40-0.10m and tarmacadam: 0.10-0.00m. Gas valve fitted.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -0.20ppm; 0.50m -0.30ppm; 1.10m -0.10ppm; 1.80m - 0.10ppm.

Groundwater:

Date	Strike Depth (m)	Casing Depth (m)	Depth After Observation (m)
07/02/18	2.48	3.00	2.36

Hole Progress:

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)
07/02/2018 17:00	5.45	5.00	2.44

TRIAL PIT LOG



Pit No
TP1001
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471567 N 174208 Level: 38.13mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 3.10m Depth 1.20m 0.60m		Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B D ES B ES	0.20		MADE GROUND: Dark brown slightly gravelly sandy silty CLAY with frequent roots and rootlets (<20mm) and rare fragments (<60mm) of pottery. Gravel is angular to sub-angular fine to coarse of siliceous material, concrete and red brick.	(0.40)	37.73	
			0.50		MADE GROUND: Dark greyish brown, grey and reddish brown COBBLES of concrete, red brick and slag with low boulder content and much very gravelly slightly clayey sand. Gravel is angular to sub-angular fine to coarse of mixed lithologies including red brick, concrete and siliceous material. Boulders are angular of concrete and intact red brick masonry (<400mm).	0.40 (0.40)		
		B D ES	1.00		MADE GROUND: Firm light brown mottled greyish brown slightly gravelly slightly sandy CLAY with rare roots and rootlets (<5mm). Gravel is angular to sub-rounded fine to coarse of red brick, concrete and siliceous material.	0.80 (0.40)		
					0.80m: Light grey concrete slab with red brick masonry across large are of pit. 1.20m: 1no. black cable (Intact) approximately 50mm diameter orientated approximately Southwest - Northeast. 1.20m: Dry. Trial pit completed at 1.20m	1.20		
2								
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -1.90ppm; 1.50m -2.00ppm; 1.00m - 2.60ppm. Trial pit terminated at 1.20m due to buried service at 1.20m.

TRIAL PIT LOG



Pit No
TP1002
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471604 N 174164 Level: 38.36mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 3.70m Depth 4.00m		Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B ES	0.30		MADE GROUND: Dark grey ASPHALT.	0.05	38.31	
					MADE GROUND: CONCRETE.	0.15	38.21	
					MADE GROUND: Brown very sandy very silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with medium cobble content and rare fragments (<50mm) of metal. Cobbles are angular to sub-angular of red brick and concrete.	0.35	38.01	
		B ES	0.80		MADE GROUND: CONCRETE.	0.50	37.86	
					MADE GROUND: Brown, grey and reddish brown COBBLES of red brick and concrete with much very sandy very silty angular to rounded fine to coarse gravel of red brick, siliceous material and concrete.	(0.60)		
					0.50-1.10m: Intact red brick masonry in Northern pit wall.	1.10	37.26	
2		B ES	1.40		MADE GROUND: Brown very sandy very clayey angular to sub-rounded fine to coarse GRAVEL of siliceous material, red brick and chalk.	(0.50)		
					1.40-1.60m: Tending to slightly sandy gravelly clay.	1.60	36.76	
		B D ES	1.70		Very soft dark green slightly sandy silty CLAY with moderate organic odour and rare comminuted shell fragments (<5mm). (ALLUVIUM)	(0.80)		
						2.40	35.96	
3		B D	2.50		Very soft bluish green mottled light grey silty calcareous CLAY with rare partially decomposed organic material (<5mm), occasional comminuted shell fragments (<5mm) and a moderate organic odour. (ALLUVIUM)	(1.60)		
4		D	3.90		3.90-4.00m: 1no. lens of light grey and off white very clayey sand with frequent comminuted shell fragments (<5mm).	4.00	34.36	
					4.00m: Slow groundwater seepage. Trial pit completed at 4.00m			
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Slow groundwater seepage encountered at 4.00m.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -2.50ppm; 0.80m -3.40ppm; 1.40m - 4.10ppm; 1.70m -3.50ppm. Surface reinstated on 13/02/2018.

TRIAL PIT LOG


 Pit No
TP1003

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471596 N 174149
 Level: 38.35mAOD
Date
 07/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 3.60m

Depth
 0.35m

1.80m

Scale
 1 : 37.5

Client: SSE Plc

Logged By
 TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B ES	0.30		MADE GROUND: Dark grey ASPHALT.	0.05	38.30	
					MADE GROUND: CONCRETE.	0.10	38.25	
					MADE GROUND: Reddish brown very sandy silty angular to sub-rounded fine to coarse GRAVEL of mixed lithologies including concrete, red brick and siliceous material with high cobble content. Cobbles are angular to sub-angular of red brick and concrete.	0.35	38.00	
					0.30m: Historic concrete foundations with rolled steel joists (~200mm). 0.30-0.35m: Attempt to break through concrete obstruction. Concrete extending below extent of JCB pecker. 0.35m: 1no steel plate (exposed 1.40mx0.80m) - Possible earthing plate. 0.35m: Dry. Trial pit completed at 0.35m			
2								
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -1.80ppm. Trial pit terminated at 0.35m due to historic reinforced concrete foundations.

Surface reinstated on 13/02/2018.

TRIAL PIT LOG



Pit No
TP1004
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471580 N 174166 Level: 38.29mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 3.60m Depth 4.20m		Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1		B ES B ES	0.40 0.60		MADE GROUND: Dark grey ASPHALT.	0.05	38.24	
					MADE GROUND: CONCRETE.	(0.30)		
					MADE GROUND: Brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with a medium cobble content. Cobbles are angular of red brick.	0.35 0.50	37.94 37.79	
					MADE GROUND: Off white and brown sandy very clayey angular to sub-rounded fine to coarse GRAVEL of chalk, red brick and siliceous material.	0.75	37.54	
		B D ES	1.00		MADE GROUND: Very soft dark green and bluish grey slightly gravelly slightly sandy silty calcareous CLAY with a slight organic odour. Gravel is angular to sub-angular fine to coarse of red brick.	(0.55)		
						1.30	36.99	
		B D ES	1.50		Very soft dark green and dark brownish grey silty calcareous CLAY with rare shell fragments (<5mm) and a strong organic odour. (ALLUVIUM)	(0.70)		
						2.00	36.29	
		B D	2.50		Very soft bluish green mottled light grey silty calcareous CLAY with a strong organic odour and rare partially decomposed organic material (<5mm). (ALLUVIUM)	(1.10)		
						3.10	35.19	
4		B D	3.50		Very soft greenish grey mottled greenish brown and light grey slightly sandy silty calcareous CLAY with occasional comminuted shell fragments (<5mm). (ALLUVIUM)	(1.10)		
					Trial pit completed at 4.20m	4.20	34.09	

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Groundwater encountered at 3.90m rising to 3.40m after a 10 minute monitoring period.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.40m -0.70ppm; 0.60m -1.30ppm; 1.00m - 1.50ppm; 1.50m - 4.20ppm. Surface reinstated on 13/02/2018.

TRIAL PIT LOG



Pit No
TP1005
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471567 N 174159 Level: 38.41mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 2.60m Depth 1.10m		Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: Dark grey ASPHALT.	0.05	38.36	
					MADE GROUND: CONCRETE.	0.15	38.26	
		B ES	0.30		MADE GROUND: Brown and reddish brown COBBLES of angular red brick and concrete with much very sandy very silty angular to sub-angular fine to coarse gravel of red brick, concrete, slag and siliceous material.	(0.95)		
		B ES	0.70		0.80m: 1no. broken black metal pipe (~80mm diameter) orientated approximately East to West.	1.10	37.31	
					Trial pit completed at 1.10m			
2								
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m -0.40ppm; 0.70m -2.00ppm. Trial pit terminated at 1.10m due to buried service at 1.20m. Trial pit terminated at 0.35m due to historic reinforced concrete foundations. Surface reinstated on 13/02/2018.

TRIAL PIT LOG



Pit No
TP1006
Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road, Reading	Project No: C5925	Co-ords: E 471565 N 174172 Level: 38.44mAOD	Date 07/02/2018
Location: Vastern Road, Reading, RG1 8BU	Dimensions: 3.60m Depth 2.40m		Scale 1 : 37.5
Client: SSE Plc			Logged By TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
					MADE GROUND: Dark grey ASPHALT.	0.05	38.39	
					MADE GROUND: CONCRETE.	0.15	38.29	
		B ES	0.30		MADE GROUND: Brown very sandy slightly clayey angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with a medium cobble content. Cobbles are angular of red brick.	(0.30)		
		B ES	0.50			0.45	37.99	
		B ES	0.70		MADE GROUND: Light brown very sandy silty angular to sub-rounded fine to coarse GRAVEL of siliceous material, red and yellow brick.	0.60	37.84	
1					MADE GROUND: Off white and light brown slightly sandy very silty angular to sub-rounded fine to coarse GRAVEL of chalk and siliceous material with high cobble content. Cobbles are sub-angular to sub-rounded of chalk and siliceous material.	(1.30)		
		B ES	1.50		0.90-1.10m: Light brown and reddish brown very sandy clayey angular to sub-angular gravel of siliceous material, red brick and concrete with a high cobble content. Cobbles are angular to sub-angular of red brick.			
					1.10-1.90m: Low cobble content.			
2	1				Very soft dark green and dark grey CLAY with strong organic odour. (ALLUVIUM)	1.90	36.54	
		B D ES	2.20			(0.50)		
					Trial pit completed at 2.40m	2.40	36.04	
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: Groundwater encountered at 2.40m rising to 2.30m after a ten minute monitoring period. Slow groundwater seepage encountered at 1.90m.

STABILITY: Trial pit collapsing from 1.10-1.90m.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.30m - 1.20ppm; 0.50m - 1.20ppm; 0.70m - 1.40ppm; 1.50m - 0.70ppm; 2.20m - 1.70ppm. Trial pit terminated at 2.40m due to undermining of surface hardstanding. Surface reinstated on 13/02/2018.

TRIAL PIT LOG


Pit No
TP1007

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
Reading

Project No:
C5925

Co-ords: E 471545 N 174170
Level: 38.70mAOD

Date
07/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 2.80m

Scale
1 : 37.5

Client: SSE Plc

Depth
0.70m

2.20m

Logged By
TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: Dark grey ASPHALT.	0.05	38.65	
					MADE GROUND: CONCRETE.	0.10	38.60	
		B ES	0.20		MADE GROUND: Brown very sandy very silty angular to sub-angular fine to coarse GRAVEL of red brick, concrete and siliceous material with medium cobble content and rare fragments (<50mm) of metal. Cobbles are angular to sub-angular of red brick and concrete.	(0.40)		
		B ES	0.50		0.30m: Historic concrete foundations.	0.50	38.20	
					MADE GROUND: Firm light brown slightly gravelly sandy silty CLAY with a moderate hydrocarbon odour. Gravel is angular to sub-angular fine to coarse of red brick, siliceous material, chalk and concrete.	0.70	38.00	
					Trial pit completed at 0.70m			
2								
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pits excavated using 0.60m backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally stable and vertical throughout.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.20m -3.20ppm; 0.70m -5.20ppm. Trial pit terminated at 0.70m due to historic reinforced concrete foundations. Surface reinstated on 13/02/2018.

TRIAL PIT LOG


 Pit No
TP1008

Sheet 1 of 1

Telephone: 01452 739165 , Fax: 01452 739220 , Email: info@ccground.co.uk

Project Name: SSE Site, Vastern Road,
ReadingProject No:
C5925
Co-ords: E 471546 N 174157
 Level: 38.69mAOD
Date
 07/02/2018

Location: Vastern Road, Reading, RG1 8BU

Dimensions: 3.10m

Depth
 1.70m

1.50m

Scale
 1 : 37.5

Client: SSE Plc

Logged By
 TH

(m)	Water Levels	Samples & In Situ Testing			Description	Depth (m)	Level (mAOD)	Legend
		No/Type	Depth (m)	Result				
1					MADE GROUND: Dark grey ASPHALT.	0.05	38.64	
					MADE GROUND: CONCRETE.	(0.30)		
		B ES	0.40		MADE GROUND: Gray and light brown and reddish brown very sandy silty angular to sub-angular fine to coarse GRAVEL of mixed lithologies including concrete, red brick and siliceous material with high cobble content. Cobbles are angular to sub-angular of concrete and red brick.	0.35 (0.35)	38.34	
		B ES	0.80		MADE GROUND: Firm light brown slightly gravelly sandy silty CLAY. Gravel is angular to sub-angular fine to coarse of chalk, siliceous material, red brick and clinker.	0.70	37.99	
2		B D ES	1.50		0.75-1.10m: 1no. pocket of dark grey and grey ash. 1.00-1.70m: With pockets (<0.5m) of off white slightly sandy very silty angular to sub-angular fine to coarse gravel of chalk and siliceous material.	(1.00)		
					1.70m: Dry. Trial pit completed at 1.70m	1.70	36.99	
3								
4								
5								
6								

EQUIPMENT: JCB 3CX Mechanical Excavator.

METHOD: Trial pit excavated using 0.60m wide backactor bucket.

GROUNDWATER: None encountered.

STABILITY: Trial pit generally unstable and collapse from 1.20-1.70m.

BACKFILL: Trial pit backfilled with arisings and compacted with excavator bucket.

REMARKS: PID readings taken on all environmental samples. Results: 0.40m -1.70ppm; 0.80m -0.60ppm; 1.50m - 1.40ppm. Trial pit terminated at 1.20m due to buried service at 1.20m. Trial pit terminated at 1.70m due to undermining surface hardstanding. Surface reinstated on 13/02/2018.



Omnia Environmental Consulting
10 Manor Court
2 Barnes Wallis Road
Fareham
PO15 5TH

Borehole Log

Borehole No.

WS101

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

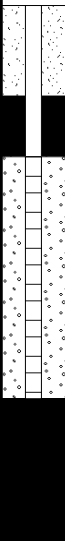
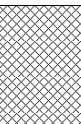
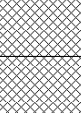
Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 16/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
				PID=4	0.40			MADE GROUND Concrete.	
		0.40 - 0.45 0.45 - 0.80	ES ES	PID=4	0.45			MADE GROUND Soft dark grey slightly silty CLAY. Black staining present.	
				PID=4	0.80			MADE GROUND Dark grey SAND AND GRAVEL. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse concrete, brick and asphalt.	
		0.80 - 1.00	ES	PID=10				MADE GROUND Dark grey/black slightly silty slightly gravelly fine to coarse SAND. Gravel of subangular to subrounded fine to coarse brick and concrete.	
		1.00 - 1.30	ES					MADE GROUND Soft brown slightly sandy slightly gravelly CLAY. Sand is medium to coarse. Gravel is subangular to subrounded fine to coarse chalk, asphalt and clinker.	
		1.30 - 1.50	ES	PID=9	1.30			CLAY Soft brown slightly gravelly CLAY. Gravel is subangular to subrounded fine shell fragments.	
		1.50 - 1.70	ES	PID=8	1.50			CLAY Firm green with black speckling slightly gravelly slightly silty CLAY. Gravel is subangular to subrounded fine to medium chalk, flint and organic matter.	
		1.70 - 1.80	ES	PID=6	1.80			End of borehole at 1.80 m	

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered.





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Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 16/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND Concrete.	
		0.40 - 0.60	ES	PID=4	0.38				
		0.60 - 0.90	ES	PID=4	0.60			MADE GROUND Black gravely medium to coarse SAND. Gravel of subangular to subrounded fine to coarse concrete, clinker, asphalt and PACM.	
		0.95 - 1.50	ES	PID=7	0.95			MADE GROUND Multicoloured gravely medium to coarse SAND. Gravel of subangular to subrounded fine to medium clinker, concrete and brick.	1
		1.50 - 2.00	ES	PID=9				MADE GROUND Light grey SAND AND GRAVEL. Sand is medium to coarse. Gravel is angular to subrounded fine to coarse brick concrete and clinker.	
		2.00 - 2.40	ES	PID=10	2.00			CLAY Soft green slightly gravely slightly silty CLAY. Gravel of subangular to subrounded fine chalk and shell fragments.	2
					2.40			End of borehole at 2.40 m	
									3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered.





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Borehole Log

Borehole No.

WS103

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 16/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND Concrete.	
		0.40 - 0.70	ES	PID=5	0.40			MADE GROUND Grey and SAND AND GRAVEL. Sand is fine to coarse with frequent cobble content of brick, ceramic, clinker asphalt, chalk and concrete.	1
		1.20 - 1.40	ES	PID=4					
		1.60 - 1.70	ES	PID=6	1.60			MADE GROUND Soft brown slightly gravelly CLAY. Gravel of subangular to subrounded fine to coarse brick, chalk, clinker and flint.	
		1.70 - 2.00	ES	PID=3	1.80			CLAY Soft brown slightly gravelly CLAY . Gravel of subangular to subrounded fine chalk.	2
					2.00			CLAY Soft green slightly gravelly CLAY. Gravel of subangular to subrounded flint, chalk and shell fragments.	
								End of borehole at 2.00 m	
									3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered.





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Borehole Log

Borehole No.

WS104

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 17/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 - 0.70	ES		0.30			MADE GROUND Concrete.	
		0.70 - 1.55	ES	PID=3	0.70			MADE GROUND Grey sandy GRAVEL. Sand is medium to coarse. Gravel of subangular to subrounded fine to medium concrete and brick.	
		1.55 - 1.75	ES	PID=13	1.55			MADE GROUND Soft brown gravelly CLAY. Gravel subangular to subrounded fine to coarse with frequent cobble of brick, concrete, slate, clinker and flint.	1
		1.75 - 2.00	ES	PID=2307	1.75			MADE GROUND Firm black slightly gravelly CLAY. Gravel of subangular to subrounded fine to coarse flint, brick and concrete.	
		2.00 - 2.40	ES	PID=368				CLAY Firm greyish green with black staining present slightly gravelly CLAY. Gravel subangular to subrounded fine, chalk and shell fragments.	2
					2.40			End of borehole at 2.40 m	3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered.





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Borehole Log

Borehole No.

WS105

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 17/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.60 - 0.90	ES	PID=4	0.60			MADE GROUND Concrete.	1
		0.90 - 1.30	ES	PID=4				MADE GROUND Soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel of subangular to subrounded fine to coarse with frequent cobble content brick, clinker and flint.	
		1.60 - 1.70	ES	PID=8	1.70			MADE GROUND Soft dark brown/black slightly gravelly CLAY. Gravel of subangular to subrounded fine to medium brick, clinker and flint.	
		1.70 - 1.80	ES		1.85				
		2.00 - 2.30	ES	PID=3	2.30				
							CLAY Soft greyish green slightly gravelly CLAY. Gravel of subangular to subrounded fine shell fragments chalk and organic matter.	2	
							End of borehole at 2.20 m	3	
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
Groundwater encountered as strike at 2.2m bgl.





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PO15 5TH

Borehole Log

Borehole No.

WS106

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 18/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND Concrete.	
		0.40 - 0.70	ES		0.40			MADE GROUND Red slightly sandy GRAVEL. Sand is medium to coarse. Gravel of subangular to subrounded fine to coarse with frequent cobble content of brick.	
					0.70			End of borehole at 0.70 m	
									1
									2
									3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).

No groundwater encountered.

Hole terminated due to obstruction at 0.70m bgl.





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PO15 5TH

Borehole Log

Borehole No.

WS107

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 18/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.40	ES	PID=0				MADE GROUND Brown slightly silty gravelly fine to coarse SAND. Gravel of subangular to subrounded fine to coarse with frequent cobble content of brick and concrete.	1
		0.50 - 1.00	ES	PID=0					
		1.00 - 1.50	ES	PID=1					
					1.50			POOR RECOVERY BETWEEN 1.50- 2.20M BGL.	2
					2.20				
								End of borehole at 2.20 m	3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT)

No groundwater encountered.

Hole terminated due to obstruction at 2.20m bgl.





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PO15 5TH

Borehole Log

Borehole No.

WS108

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 18/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.30	ES	PID=0	0.05			MADE GROUND Asphalt cover.	1
		0.50 - 0.70	ES	PID=0				MADE GROUND Brown slightly clayey gravelly fine to coarse SAND. Gravel of subangular to subrounded fine to coarse brick, concrete and flint.	
		0.90 - 1.20	ES	PID=0					
		1.20 - 1.50	ES	PID=3					
		1.50 - 1.70	ES	PID=6	1.50			CLAY Firm greyish green slightly silty slightly gravelly CLAY. Gravel of subangular to subrounded fine flint and orangic material.	2
		1.80 - 2.00	ES	PID=0					
		2.00 - 2.50	ES						
					2.50			End of borehole at 2.50 m	3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered





Omnia Environmental Consulting
10 Manor Court
2 Barnes Wallis Road
Fareham
PO15 5TH

Borehole Log

Borehole No.

WS109

Sheet 1 of 1

Project Name: 55 Vastern Road, Reading

Project No.
A10967

Co-ords: -

Hole Type
WS

Location: SSE Contracting Ltd, 55 Vastern Road, Reading,
Berkshire, RG1 8BU

Level:

Scale
1:25

Client: Berkely (Western) Homes

Dates: 18/04/2018 -

Logged By
K.D

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.30	ES	PID=6	0.05			MADE GROUND Asphalt cover.	
		0.30 - 0.60	ES	PID=2				MADE GROUND	
								Brown slightly silty gravelly fine to coarse SAND.	
		0.60 - 0.90	ES	PID=0				Gravel of subangular to subrounded fine to coarse with frequent cobble content of brick, asphalt and concrete.	
					1.00			End of borehole at 1.00 m	1
									2
									3
									4
									5

Remarks

Cleared by Cable Avoidance Tool (CAT).
No groundwater encountered.
Hole terminated due to obstruction at 1.00m bgl.



APPENDIX VII
GROUND GAS RESULTS

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1001	22/02/18	1021	0.0	0.4	17.6	4	0	+0.0/+0.0	2.35	0.2	Standpipe developed by bailing.
BH1001	07/03/18	991	0.0	0.5	18.4	1	0	-0.1/+0.0	2.30	0.3	NAPLs not detected
BH1001	22/03/18	1019	0.0	0.8	19.0	2	0	+0.0/+0.0	2.34	1.0	NAPLs detected (film only)
BH1001	04/04/18	989	0.0	1.0	17.8	1	0	+0.0/+0.0	2.07	1.1	NAPLs not detected
BH1001	19/04/18	1020	0.2	0.9	18.9	3	0	+0.0/+0.0	2.29	2.9	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1002C	22/02/18	1021	1.6	0.3	9.0	0	0	+0.0/+0.2	2.44	0.3	Standpipe developed by bailing.
BH1002C	07/03/18	992	0.0	0.2	12.4	0	0	-0.1/-0.0	2.38	0.5	NAPLs not detected
BH1002C	22/03/18	1019	0.0	0.4	13.3	2	0	+0.0/+0.0	2.42	1.3	NAPLs not detected
BH1002C	04/04/18	989	0.0	0.2	9.1	5	0	-0.1/-0.0	2.14	1.8	NAPLs not detected. Redish Brown (oxide?) pressent
BH1002C	19/04/18	1020	0.2	0.1	20.9	4	0	+0.0/+0.0	2.37	4.1	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1003E	22/02/18	1022	0.0	0.2	18.9	5	0	+0.0/+0.0	2.67	0.5	Standpipe developed by bailing.
BH1003E	07/03/18	992	0.0	0.3	19.3	4	0	-0.1/+0.0	2.62	0.1	NAPLs not detected
BH1003E	22/03/18	1019	0.0	0.5	20.4	2	0	+0.0/+0.0	2.65	0.7	NAPLs detected (film only)
BH1003E	04/04/18	989	0.0	0.6	19.8	1	0	+0.0/+0.0	2.39	1.0	NAPLs not detected
BH1003E	19/04/18	1021	0.2	0.5	19.5	2	0	+0.0/+0.0	2.61	2.6	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1004	22/02/18	1020	2.2	4.0	9.3	12	0	-0.3/+0.1	2.22	0.0	Standpipe developed by bailing.
BH1004	07/03/18	992	0.2	3.4	14.1	3	0	+0.0/+0.1	2.17	0.1	NAPLs not detected
BH1004	22/03/18	1017	3.0	3.9	6.5	1	0	-0.0/-0.0	2.20	2.6	NAPLs not detected
BH1004	04/04/18	988	1.5	2.4	2.2	1	0	+0.0/+0.0	1.92	0.0	NAPLs not detected
BH1004	19/04/18	1020	0.3	3.5	5.6	3	0	+0.1/+0.0	2.13	4.5	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH1005	22/02/18	1020	0.0	0.3	18.7	4	0	+0.0/+0.0	2.61	0.0	Standpipe developed by bailing.
BH1005	08/03/18	991	0.0	0.8	19.0	0	0	-0.5/-0.2	2.56	0.0	NAPLs not detected
BH1005	22/03/18	1016	0.0	1.2	20.1	2	0	-3.1/-0.7	2.60	2.8	Interface meter faulty
BH1005	04/04/18	988	0.0	1.3	19.9	2	0	+4.4/+11.4	2.33	2.6	NAPLs not detected
BH1005	19/04/18	1020	0.2	0.5	21.2	5	0	+0.0/+0.0	2.54	4.7	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2001	22/02/18	1022	0.0	0.0	19.8	1	0	+0.2/+0.5	2.43	0.8	Standpipe developed by bailing.
BH2001	07/03/18	992	0.0	0.5	19.7	5	0	-3.7/-1.2	2.39	0.5	NAPLs not detected
BH2001	22/03/18	1018	0.1	1.0	20.7	6	0	-2.8/-0.7	2.41	3.2	NAPLs not detected
BH2001	04/04/18	989	0.1	0.9	20.4	6	0	+4.7/+11.2	2.15	2.9	NAPLs not detected
BH2001	19/04/18										Unable to access due to car parked on top of cover
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2002	22/02/18	1022	0.0	0.0	19.6	4	0	+0.0/+0.0	2.39	2.7	Standpipe developed by bailing.
BH2002	07/03/18	991	0.0	0.6	19.6	3	0	-0.1/+0.0	2.35	0.5	NAPLs not detected
BH2002	22/03/18	1018	0.0	0.2	21.1	1	0	+0.0/+0.0	2.38	1.3	NAPLs not detected
BH2002	04/04/18	989	0.0	0.2	20.6	1	0	+0.0/+0.0	2.10	1.4	NAPLs not detected. Redish Brown (oxide?) pressent
BH2002	19/04/18	1020	0.3	0.2	20.9	2	1	-0.1/+0.0	2.15	4.2	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2003	22/02/18	1022	0.0	0.0	19.7	1	0	+0.0/+0.0	2.55	1.9	Standpipe developed by bailing.
BH2003	08/03/18	991	0.0	0.2	19.8	4	0	-0.5/-0.3	2.43	0.2	NAPLs not detected
BH2003	22/03/18	1018	0.0	0.6	20.8	4	0	-3.3/-0.9	2.46	3.4	NAPLs not detected
BH2003	04/04/18	989	0.0	0.6	20.7	3	0	+4.7/+11.3	2.21	2.9	NAPLs not detected
BH2003	19/04/18	1021	0.3	0.2	20.4	3	0	+0.1/+0.1	4.53	3.9	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2004	22/02/18	1021	0.0	0.0	19.7	1	0	+0.0/+0.0	2.54	0.5	Standpipe developed by bailing.
BH2004	08/03/18	990	0.0	0.3	19.6	4	0	-0.1/-0.0	2.52	0.5	NAPLs not detected
BH2004	22/03/18	1018	0.0	0.6	20.8	3	0	+0.0/+0.0	2.58	1.3	NAPLs detected (film only)
BH2004	04/04/18	989	0.0	0.6	20.6	3	0	+0.0/+0.0	2.25	1.7	NAPLs not detected
BH2004	19/04/18	1021	0.3	0.2	20.5	2	0	-0.0/+0.0	2.53	2.4	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2005	22/02/18	1021	0.0	2.9	11.9	8	0	+0.1/+0.6	2.37	0.6	Standpipe developed by bailing.
BH2005	08/03/18	990	0.0	5.4	12.6	4	0	-0.0/+0.0	2.50	1.1	NAPLs not detected
BH2005	22/03/18	1016	0.1	5.3	10.6	1	0	+0.0/+0.0	2.28	1.9	NAPLs not detected
BH2005	04/04/18	989	0.0	6.1	11.3	1	0	-0.0/+0.0	2.06	1.7	NAPLs not detected. Redish Brown (oxide?) pressent
BH2005	19/04/18	1020	0.2	6.8	6.5	4	0	+0.0/+0.1	2.12	6.4	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
BH2006	22/02/18	1021	0.0	0.1	13.1	78	0	+0.0/+0.1	1.63	0.5	Standpipe developed by bailing.
BH2006	08/03/18	990	0.0	0.6	12.5	9	0	+0.0	1.60	0.4	NAPLs not detected
BH2006	22/03/18	1016	0.0	1.3	11.2	1	0	+0.0/+0.1	1.61	1.7	NAPLs detected 1.60-2.00m
BH2006	04/04/18	988	0.0	1.9	10.6	1	0	+0.0/+0.0	1.52	1.3	NAPLs not detected
BH2006	19/04/18	1020	0.1	1.6	13.4	8	1	+0.0/+0.1	1.57	5.6	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1003	22/02/18	1021	0.0	0.6	19.2	0	0	+0.0/+0.1	2.18	0.3	Standpipe developed by bailing.
WS1003	07/03/18	990	0.0	0.3	19.8	0	0	+0.0/+0.1	2.13	0.7	NAPLs not detected
WS1003	22/03/18	1019	0.0	1.0	20.6	1	0	+0.0/+0.1	2.17	1.7	NAPLs not detected
WS1003	04/04/18	989	0.0	0.7	20.2	1	0	+0.0/+0.0	1.91	2.7	NAPLs not detected
WS1003	19/04/18	1020	0.2	0.2	21.2	2	0	+0.0/+0.1	2.11	4.6	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1004	22/02/18	1021	0.0	0.8	19.2	0	0	+0.0/+0.1	2.36	0.6	Standpipe developed by bailing.
WS1004	07/03/18	991	0.0	0.6	19.6	0	0	-0.1/-0.0	2.30	1.2	NAPLs not detected
WS1004	22/03/18	1019	0.0	1.0	20.7	0	0	+0.0/+0.0	2.34	1.2	NAPLs not detected
WS1004	04/04/18	989	0.0	1.8	19.0	2	0	-0.0/+0.0	2.07	5.3	NAPLs not detected
WS1004	19/04/18	1020	0.2	0.2	21.5	3	0	+0.0/+0.1	2.30	5.1	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS10005A	22/02/18	1021	0.0	0.0	19.6	1	0	+0.0/+0.1	0.97	0.3	Standpipe developed by bailing.
WS10005A	07/03/18	990	0.9	0.0	10.3	0	0	-0.0/+0.0	1.69	0.0	NAPLs not detected
WS10005A	22/03/18	1019	0.0	0.3	15.2	1	0	+0.0/+0.1	1.63	0.9	NAPLs not detected
WS10005A	04/04/18	989	0.0	0.3	9.6	1	0	+0.1/+0.8	1.47	2.9	NAPLs not detected
WS10005A	19/04/18	1020	0.2	0.0	21.6	3	0	-0.0/+0.1	1.37	3.3	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1006	22/02/18	1021	0.0	0.6	19.1	4	0	+0.0/+0.0	2.22	0.1	Standpipe developed by bailing.
WS1006	07/03/18	990	0.0	0.3	19.2	0	0	-0.0/+0.0	2.16	0.1	NAPLs not detected
WS1006	22/03/18	1019	0.0	0.4	21.1	1	0	+0.0/+0.0	1.20	1.1	NAPLs not detected
WS1006	04/04/18	989	0.0	0.5	19.9	4	0	+0.0/+0.0	1.92	2.7	NAPLs not detected
WS1006	19/04/18	1020	0.2	0.1	21.4	3	0	0.0+/-0.1	2.16	3.3	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS1007	22/02/18	1021	0.0	0.3	19.5	5	0	-0.3/-0.1	1.06	0.7	Standpipe developed by bailing.
WS1007	07/03/18	990	0.0	0.1	19.6	1	0	-0.3/-0.1	1.02	0.3	NAPLs not detected
WS1007	22/03/18	1018	0.0	0.6	21.2	4	0	-2.2/-0.3	1.06	5.9	NAPLs not detected
WS1007	04/04/18	988	0.0	0.4	21.0	3	0	+0.7/+3.5	1.03	6.2	NAPLs not detected
WS1007	19/04/18	1020	0.3	0.3	21.0	3	0	-0.0/-0.0	1.03	10.3	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

Peak Gas and Groundwater Monitoring

Borehole	Date	Barometric Pressure (mb)	Methane (%)	Carbon Dioxide (%)	Oxygen (min) (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	Gas Flow (min/max) (Litres/hour)	Water Level (mbgl)	PID (ppm)	Comments
WS10019	22/02/18	1021	0.0	0.9	18.5	1	0	+0.0/+0.0	2.32	0.7	Standpipe developed by bailing.
WS10019	07/03/18	991	0.0	1.5	17.8	1	0	-0.1/-0.0	2.27	0.4	NAPLs not detected
WS10019	22/03/18	1017	0.0	2.0	19.3	1	0	-0.1/+0.0	2.31	1.3	NAPLs not detected
WS10019	04/04/18	989	0.0	0.7	20.5	1	0	-0.1/-0.0	2.04	0.9	NAPLs not detected
WS10019	19/04/18	1021	0.2	1.0	19.6	3	1	+0.1/+0.1	2.27	4.6	NAPLs not detected
 CC Ground Investigations Ltd		Contract Name:					SSE Site, Vastern Road, Reading				
		Contract ID:					C5925				
		Client:					SSE Plc				
		Instrument used:					GA5000 Gas Analyser. Geotechnical Instruments dip meter. ATEX approved oil/water interface meter.				

PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date: 01/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.2
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 1.0 VOCs (ppm): 0.0
Weather/Wind: Light Rain **Weather Trend:** Unsettled **Atm. Press. Trend** Falling
Remarks: BH1002C: Bung moved at the end of test allowing air to move in **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH1001	995	0.05	Initial:	15	0	4.9	12.9	1	1	0.2	2.23
				30	0	5	8.5	1	1	0.3	
			0.1	45	0	5	8.3	1	1	0.3	
				60	0	5	8.2	1	1	0.3	
			Peak:	75	0	5	8.2	1	1	0.3	
				90	0	5	8.2	1	1	0.3	
			-4.5	105	0	5	8.1	1	1	0.3	
				120	0	5.1	8.1	1	1	0.3	
			Average:	135	0	5.1	8	1	1	0.3	
				150	0	5.1	8	1	1	0.3	
			-1.3	165	0	5.1	8.2	1	1	0.3	
				180	0	5	8.5	1	1	0.2	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH1002C	996	-0.17	Initial:	15	0	0.1	21.5	1	1	0.1	2.32 - Light Hydro-carbon Odour
				30	0	1.6	18.8	1	1	0.1	
			-1.9	45	0	1.8	17	1	1	0.1	
				60	0	2	16.4	1	1	0.1	
			Peak:	75	0	2.3	15.9	1	1	0.1	
				90	0	2.4	15.5	1	1	0.1	
			-1.9	105	0	2.6	15.1	1	1	0.0	
				120	0	2.7	14.9	1	1	0.1	
			Average:	135	0	2.7	14.8	1	1	0.1	
				150	0	2.4	15.4	1	1	0.0	
			-1.7	165	0	1.6	17.7	1	1	0.0	
				180	0	0.4	20.3	1	1	0.0	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH1003E	994	0.03	Initial:	15	0	0.9	20.2	1	1	0.3	2.44
				30	0	1	19.5	0	1	0.3	
			0.1	45	0	1	19.4	0	1	0.3	
				60	0	1	19.4	0	1	0.3	
			Peak:	75	0	1	19.4	0	1	0.3	
				90	0	1	19.4	0	1	0.3	
			0.1	105	0	1	19.4	0	1	0.3	
				120	0	1	19.4	0	1	0.3	
			Average:	135	0	1	19.4	0	1	0.3	
				150	0	1	19.4	0	1	0.3	
			0.1	165	0	1	19.4	0	1	0.2	
				180	0	1	19.4	0	1	0.2	

PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date: 01/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.2
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 1.0 VOCs (ppm): 0.0
Weather/Wind: Light Rain **Weather Trend:** Unsettled **Atm. Press. Trend** Falling
Remarks: BH1002C: Bung moved at the end of test allowing air to move in **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH1004	994	-1.15	Initial:	15	0.1	6.3	9.8	8	1	0.7	2.08
				30	0.1	6.4	0.6	2	1	0.7	
			0.1	45	0.1	6.5	0.3	2	1	0.7	
				60	0.1	6.5	0.3	1	1	0.8	
			Peak:	75	0.1	6.5	0.2	1	1	0.8	
				90	0.1	6.5	0.2	1	1	0.8	
			-21.6	105	0.1	6.5	0.2	1	1	0.8	
				120	0.1	6.5	0.2	1	1	0.8	
			Average:	135	0.1	6.5	0.2	1	1	0.8	
				150	0.1	6.5	0.2	1	1	0.8	
			-9.9	165	0.1	6.5	0.1	1	1	0.8	
				180	0.1	6.5	0.1	1	1	0.8	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH1005	997	0.05	Initial:	15	0	0.6	20.3	1	1	2.5	2.49
				30	0	0.6	20	0	1	2.5	
			-16.0	45	0	0.6	20.1	0	1	2.4	
				60	0	0.6	20.1	0	1	2.3	
			Peak:	75	0	0.6	20.2	0	1	2.2	
				90	0	0.5	20.2	0	1	2.2	
			-16.0	105	0	0.5	20.2	0	1	2.1	
				120	0	0.5	20.3	0	1	2.0	
			Average:	135	0	0.5	20.3	0	1	2.0	
				150	0	0.5	20.3	0	1	1.9	
			-5.9	165	0	0.5	20.4	0	1	1.8	
				180	0	0.4	20.4	0	1	1.8	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH2001	996	-0.53	Initial:	15	0.1	6.3	9.8	8	1	1.3	2.32
				30	0.1	6.4	0.6	2	1	1.2	
			-5.2	45	0.1	6.5	0.3	2	1	1.1	
				60	0.1	6.5	0.3	1	1	1.0	
			Peak:	75	0.1	6.5	0.2	1	1	0.9	
				90	0.1	6.5	0.2	1	1	0.9	
			-2.7	105	0.1	6.5	0.2	1	1	0.8	
				120	0.1	6.5	0.2	1	1	0.7	
			Average:	135	0.1	6.5	0.2	1	1	0.7	
				150	0.1	6.5	0.2	1	1	0.7	
			-2.8	165	0.1	6.5	0.1	1	1	0.6	
				180	0.1	6.5	0.1	1	1	0.5	

PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date: 01/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.2
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 1.0 VOCs (ppm): 0.0
Weather/Wind: Light Rain **Weather Trend:** Unsettled **Atm. Press. Trend** Falling
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH2002	996	-0.17	Initial:	15	0	0.1	21	1	1	0.1	2.28
				30	0	0.1	21.1	1	1	0.1	
			0.1	45	0	0.1	21.1	1	1	0.1	
				60	0	0.1	21.1	1	1	0.1	
			Peak:	75	0	0.1	21.1	1	1	0.1	
				90	0	0.1	21.1	1	1	0.1	
			0.1	105	0	0.1	21.1	1	1	0.1	
				120	0	0.1	21.2	1	1	0.1	
			Average:	135	0	0.1	21.2	1	1	0.1	
				150	0	0.1	21.2	1	1	0.0	
			0.1	165	0	0.1	21.2	1	1	0.0	
				180	0	0.1	21.2	1	1	0.0	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH2003	996	-2.62	Initial:	15	0	1.4	19.3	4	1	2.5	2.44
				30	0	1.4	17.9	6	1	2.6	
			-22.1	45	0	1.4	17.8	6	1	2.7	
				60	0	1.4	17.8	6	1	2.7	
			Peak:	75	0	1.4	17.8	6	1	2.7	
				90	0	1.4	17.8	6	1	2.6	
			-22.1	105	0	1.4	17.8	6	1	2.6	
				120	0	1.4	17.8	6	1	2.6	
			Average:	135	0	1.4	17.8	6	1	2.6	
				150	0	1.4	17.8	6	1	2.6	
			-20.2	165	0	1.4	17.8	6	1	2.6	
				180	0	1.4	17.8	6	1	2.6	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH2004	996	-0.29	Initial:	15	0	0.1	20.2	1	1	0.4	2.40
				30	0	0.1	20.1	1	1	0.5	
			0.1	45	0	0.1	20.3	1	1	0.4	
				60	0	0.1	20.5	1	1	0.3	
			Peak:	75	0	0.1	20.6	0	1	0.2	
				90	0	0.1	20.7	0	1	0.2	
			0.3	105	0	0.1	20.7	0	1	0.2	
				120	0	0.1	20.7	0	1	0.2	
			Average:	135	0	0.1	20.8	1	1	0.2	
				150	0	0.1	20.8	1	1	0.2	
			0.2	165	0	0.1	20.8	1	1	0.2	
				180	0	0.1	20.8	1	1	0.2	

PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date: 01/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.2
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 1.0 VOCs (ppm): 0.0
Weather/Wind: Light Rain **Weather Trend:** Unsettled **Atm. Press. Trend** Falling
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
BH2005	997	-1.34	Initial:	15	0	10.3	12.7	2	1	0.2	2.44 - Strong hydro-carbon odour & sheen on dipmeter
				30	0	10.4	9.4	2	1	0.2	
			0.1	45	0	10.4	9.3	1	1	0.1	
				60	0	10.5	9.2	1	1	0.1	
			Peak:	75	0	10.5	9.2	1	1	0.1	
				90	0	10.6	9.2	1	1	0.1	
			0.1	105	0	10.7	9.2	1	1	0.0	
				120	0	10.9	8.9	1	1	0.0	
			Average:	135	0	11.1	8.7	1	1	0.0	
				150	0	11.2	8.5	0	1	0.0	
			0.1	165	0	11.2	8.4	0	1	0.0	
				180	0	11.2	8.3	1	1	0.0	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
WS1003	995	-0.43	Initial:	15	0	0.9	20.3	1	1	0.3	2.06
				30	0	0.5	21	1	1	0.1	
			0.0	45	0	0.4	21.1	1	1	0.1	
				60	0	0.3	21.1	1	1	0.1	
			Peak:	75	0	0.2	21.2	1	1	0.1	
				90	0	0.2	21.2	1	1	0.1	
			0.0	105	0	0.2	21.2	1	1	0.1	
				120	0	0.2	21.2	1	1	0.1	
			Average:	135	0	0.2	21.2	1	1	0.1	
				150	0	0.2	21.2	1	1	0.1	
			0.0	165	0	0.2	21.2	1	1	0.1	
				180	0	0.2	21.3	1	1	0.1	
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
WS1004	995	-0.63	Initial:	15	0	4.2	17.7	1	1	0.5	2.24
				30	0	4.2	17.3	1	1	0.5	
			-4.3	45	0	4.2	17.3	1	1	0.5	
				60	0	4.1	17.3	1	1	0.5	
			Peak:	75	0	4.1	17.3	1	1	0.5	
				90	0	4.1	17.3	1	1	0.5	
			-4.3	105	0	4.1	17.3	1	1	0.5	
				120	0	4.1	17.3	1	1	0.5	
			Average:	135	0	4	17.3	1	1	0.4	
				150	0	3.9	17.2	1	1	0.4	
			-2.5	165	0	3.9	17.2	1	1	0.4	
				180	0	3.7	17.1	1	1	0.3	

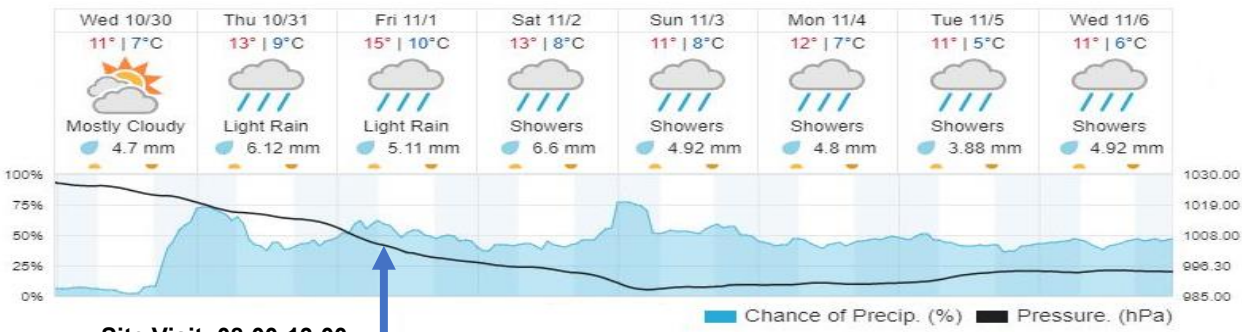
PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date: 01/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.2
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 1.0 VOCs (ppm): 0.0
Weather/Wind: Light Rain **Weather Trend:** Unsettled **Atm. Press. Trend** Falling
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
WS1007	996	-4.61	Initial:	15	0	1.7	19	1	1	0.1	0.96
				30	0	1.7	17.4	1	1	0.1	
				45	0	1.7	17.3	1	1	0.1	
			-24.8	60	0	1.7	17.3	1	1	0.1	
				75	0	1.7	17.3	1	1	0.1	
				90	0	1.7	17.3	1	1	0.1	
			Peak:	105	0	1.7	17.3	1	1	0.1	
				120	0	1.7	17.3	1	1	0.1	
				135	0	1.7	17.3	1	1	0.0	
			Average:	150	0	1.7	17.3	1	1	0.0	
				165	0	1.7	17.3	1	1	0.0	
				180	0	1.7	17.3	1	1	0.0	
			-20.7								
Borehole ID	Atmospheric Barometric Pressure (mb)	Borehole Barometric Pressure (mb)	Flow (l/hr)	Time (sec)	Methane CH4 (%)	Carbon Dioxide CO2 (%)	Oxygen O2 (%)	Carbon Monoxide CO (ppm)	Hydrogen Sulphide H2S (ppm)	Volatile Organic Compounds VOCs (ppm)	Water Level (m)
WS10019	994	0.03	Initial:	15	0	0.6	20.7	0	0	0.5	2.21
				30	0	0.6	20.6	0	0	0.5	
				45	0	0.7	20.5	0	1	0.5	
			0.1	60	0	0.8	20.4	0	0	0.5	
				75	0	0.8	20.4	0	1	0.5	
				90	0	0.9	20.3	0	1	0.5	
			Peak:	105	0	1	20.2	0	1	0.5	
				120	0	1	20.1	0	1	0.5	
				135	0	1.1	20.1	0	1	0.5	
			Average:	150	0	1.1	20.1	0	1	0.5	
				165	0	1.2	20	0	1	0.5	
				180	0	1.2	20	0	1	0.5	
			0.3								

PAGE:	4200	GAS MONITORING
DATE: 01/11/2019	VASTERN ROAD, READING	

Monitoring Date:	01/11/2019	Ambient Gas Conc.:	CH4 (%): 0.0	CO2 (%): 0.1	O2 (%): 21.2
Monitoring Engineer:	RK		CO (ppm): 0.0	H2S (ppm): 1.0	VOCs (ppm): 0.0
Weather/Wind:	Light Rain	Weather Trend:	Unsettled	Atm. Press. Trend	Falling
Remarks:	-			Equipment:	Geotech GA5000



Site Visit: 08:00-13:00

Local Weather Station Atmospheric Pressure Records for 30th October to 6th November 2019.

NB Note: The weather station atmospheric pressure is normally corrected for attitude (providing an equivalent sea level atmospheric pressure), whereas the GA5000 gas analyser measures absolute atmospheric pressure at the sites altitude, therefore a difference in pressures is to be expected between the local station data and the gas analyser data. The graph above has been appended purely to give an indication of pressure trends prior to the monitoring visit.

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date: 12/11/2019 **Ambient Gas Conc.:** **CH4 (%):** 0.0 **CO2 (%):** 0.1 **O2 (%):** 21.4
Monitoring Engineer: RK **CO (ppm):** 0.0 **H₂S (ppm):** 0.0 **VOCs (ppm):** N/A
Weather/Wind: Rainy/strong **Weather Trend:** Unsettled **Atm. Press. Trend** Stable
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH1001	994	-0.09	Initial:	Initial:	15	0	4.7	17.1	0	1	0.2	2.15
					30	0	4.8	9.7	0	1	0.3	
					45	0	4.8	8.9	0	1	0.3	
			-4.5	0.0	60	0	4.9	8.7	0	1	0.3	
					75	0	4.9	8.7	0	1	0.3	
					90	0	4.9	8.6	0	1	0.3	
			Peak:	Peak:	105	0	4.9	8.6	0	1	0.3	
					120	0	4.9	8.6	0	1	0.2	
					135	0	5	8.6	0	1	0.2	
			Average:	Average:	150	0	5	8.5	0	1	0.2	
					165	0	5	8.6	0	1	0.2	
					180	0	5	8.6	0	1	0.2	
BH1002C	994	0.07	Initial:		15	0	1.3	20.4	0	1	0.1	2.21
					30	0	1.3	16.7	0	0	0.1	
					45	0	1	17	0	0	0.1	
			0.1		60	0	0.8	17.9	0	0	0.1	
					75	0	0.6	19.3	0	1	0.1	
					90	0	0.6	20	0	1	0.1	
			Peak:		105	0	0.5	20.2	0	1	0.1	
					120	0	0.4	20.5	0	1	0.0	
					135	0	0.4	20.7	0	1	0.0	
			Average:		150	0	0.4	20.8	0	1	0.0	
					165	0	0.3	21	0	1	0.0	
					180	0	0.3	21.1	0	1	0.0	
BH1003E	994	0.03	Initial:		15	0	0.2	22	0	0	0.0	2.47
					30	0	0.2	22	0	0	0.0	
					45	0	0.2	22	0	0	0.0	
			0.2		60	0	0.2	22	0	0	0.0	
					75	0	0.2	22	0	0	0.0	
					90	0	0.2	22	0	1	0.0	
			Peak:		105	0	0.3	21.9	0	1	0.0	
					120	0	0.3	21.9	0	1	0.0	
					135	0	0.3	21.9	0	1	0.0	
			Average:		150	0	0.3	21.8	0	1	0.0	
					165	0	0.3	21.8	0	1	0.0	
					180	0	0.3	21.8	0	1	0.0	

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date: 12/11/2019 **Ambient Gas Conc.:** **CH4 (%):** 0.0 **CO2 (%):** 0.1 **O2 (%):** 21.4
Monitoring Engineer: RK **CO (ppm):** 0.0 **H₂S (ppm):** 0.0 **VOCs (ppm):** N/A
Weather/Wind: Rainy/strong **Weather Trend:** Unsettled **Atm. Press. Trend** Stable
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH1004	995	2.48	Initial:	Initial:	15	0	5.1	19.4	0	1	0.2	2.01
					30	0	5.2	12.2	0	1	0.2	
					45	0	5.3	11.7	0	1	0.2	
			-18.8	2.0	60	0	5.3	11.5	0	1	0.2	
					75	0	5.3	11.5	0	1	0.2	
					90	0	4.9	11.7	0	1	0.2	
			Peak:	Peak:	105	0	4.4	12.1	0	1	0.2	
					120	0	4.3	13.2	0	1	0.2	
					135	0	4.2	13.6	0	1	0.2	
			Average:	Average:	150	0	3.8	13.9	0	1	0.2	
					165	0	3.8	14.3	0	1	0.2	
					180	0	3.6	14.2	0	1	0.2	
BH1005	995	4.37	Initial:	Initial:	15	0	1	21	1	1	1.8	2.41 - Light Hydro-carbon Odour & Sheen
					30	0	1	20.8	1	1	1.8	
					45	0	0.8	20.9	1	1	1.6	
			-0.2	0.4	60	0	0.6	21	1	1	1.2	
					75	0	0.9	21.1	1	1	0.9	
					90	0	0.4	21.2	1	1	0.7	
			Peak:	Peak:	105	0	0.4	21.3	1	1	0.6	
					120	0	0.4	21.4	1	1	0.5	
					135	0	0.3	21.4	1	1	0.4	
			Average:	Average:	150	0	0.3	21.4	0	1	0.4	
					165	0	0.2	21.4	0	1	0.3	
					180	0	0.2	21.5	0	1	0.3	
BH2001	994	-1.68	Initial:	Initial:	15	0.1	1	20.9	1	1	1.6	2.21
					30	0.1	1	20.4	1	1	1.8	
					45	0.1	0.9	20.4	1	1	1.7	
			-11.9	0.4	60	0.1	0.9	20.6	1	1	1.6	
					75	0.1	0.8	20.6	1	1	1.5	
					90	0.1	0.8	20.7	1	1	1.4	
			Peak:	Peak:	105	0.1	0.7	20.8	0	1	1.4	
					120	0	0.7	20.9	0	1	1.3	
					135	0	0.6	21	0	1	1.2	
			Average:	Average:	150	0	0.5	21.2	0	1	0.9	
					165	0	0.4	21.4	0	1	0.7	
					180	0	0.4	21.4	0	1	0.7	

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date: 12/11/2019 **Ambient Gas Conc.:** CH4 (%): 0.0 CO2 (%): 0.1 O2 (%): 21.4
Monitoring Engineer: RK CO (ppm): 0.0 H₂S (ppm): 0.0 VOCs (ppm): N/A
Weather/Wind: Rainy/strong **Weather Trend:** Settled **Atm. Press. Trend** Stable
Remarks: - **Equipment:** Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH2002	994	0.02	Initial:		15	0	0.2	21.3	0	1	0.0	2.19
					30	0	0.2	21.2	0	1	0.0	
			0.1		45	0	0.1	21.3	0	1	0.0	
					60	0	0.1	21.4	0	1	0.0	
			Peak:		75	0	0.1	21.4	0	1	0.0	
					90	0	0.1	21.4	0	1	0.0	
			0.2		105	0	0.1	21.5	0	1	0.0	
					120	0	0.1	21.4	0	1	0.0	
			Average:		135	0	0.1	21.5	0	1	0.0	
					150	0	0.1	21.5	0	1	0.0	
			0.2		165	0	0.1	21.5	0	1	0.0	
					180	0	0.1	21.5	0	1	0.0	
Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH2003	994	0.09	Initial:	Initial:	15	0	0.6	20.1	1	1	1.2	2.35
					30	0	0.6	19.6	2	1	1.4	
			-17.0	0.4	45	0	0.6	19.6	2	1	1.3	
					60	0	0.6	19.7	2	1	1.2	
			Peak:	Peak:	75	0	0.5	19.8	1	1	1.1	
					90	0	0.5	19.9	1	1	1.1	
			-17.5	0.7	105	0	0.5	19.9	1	1	1.1	
					120	0	0.5	20	1	1	1.1	
			Average:	Average:	135	0	0.5	20	1	1	1.0	
					150	0	0.5	20.1	1	1	0.9	
			-5.6	0.7	165	0	0.5	20.1	1	1	1.0	
					180	0	0.5	20.1	1	1	0.9	
Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH2004	994	0.1	Initial:	Initial:	15	0	0.3	22.1	1	0	0.7	2.29
					30	0	0.3	21.7	1	0	0.7	
			-0.5	0.1	45	0	0.2	21.7	0	0	0.5	
					60	0	0.2	21.9	0	0	0.4	
			Peak:	Peak:	75	0	0.2	22	0	1	0.4	
					90	0	0.2	22	0	1	0.4	
			-1.0	1.4	105	0	0.2	22	0	0	0.3	
					120	0	0.2	22.1	0	1	0.3	
			Average:	Average:	135	0	0.2	22.1	0	0	0.3	
					150	0	0.2	22.1	0	1	0.3	
			-0.9	0.3	165	0	0.2	22.1	0	0	0.2	
					180	0	0.2	22.1	0	1	0.2	

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date: 12/11/2019
Monitoring Engineer: RK
Weather/Wind: Rainy/strong
Remarks: -

Ambient Gas Conc.:
CH4 (%): 0.0
CO (ppm): 0.0
Weather Trend: Settled

CO2 (%): 0.1
H2S (ppm): 0.0
Atm. Press. Trend: Stable
Equipment: Geotech GA5000

O2 (%): 21.4
VOCs (ppm): N/A

Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
BH2005	995	-0.05	Initial:		15	0	10.7	16.6	1	1	0.2	2.31 - Hydro-carbon odour & sheen on dipmeter
					30	0	10.9	8.8	1	1	0.2	
			0.1		45	0	11	7.9	1	1	0.2	
					60	0	11	7.7	0	1	0.2	
			Peak:		75	0	11	7.6	0	1	0.2	
					90	0	11.1	7.5	0	1	0.2	
			0.2		105	0	11.1	7.4	0	1	0.2	
					120	0	11.2	7.2	0	1	0.2	
			Average:		135	0	11.5	7	0	1	0.2	
					150	0	11.6	6.6	0	1	0.1	
			0.1		165	0	11.8	6.3	0	1	0.1	
					180	0	12	6.1	0	1	0.1	
Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
WS1003	995	0.6	Initial:		15	0	0.8	21.3	0	0	0.3	1.98
					30	0	0.6	21.4	0	0	0.2	
			0.2		45	0	0.6	21.5	0	0	0.2	
					60	0	0.6	21.5	0	0	0.2	
			Peak:		75	0	0.5	21.6	0	0	0.2	
					90	0	0.5	21.7	0	0	0.2	
			0.4		105	0	0.4	21.7	0	0	0.2	
					120	0	0.4	21.8	0	0	0.2	
			Average:		135	0	0.4	21.9	0	0	0.2	
					150	0	0.4	21.9	0	0	0.2	
			0.4		165	0	0.4	22	0	0	0.2	
					180	0	0.4	22	0	0	0.1	
Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
WS1004	994	0	Initial:		15	0	2.5	21.4	0	0	0.2	2.15
					30	0	2.3	20.1	0	0	0.2	
			0.1		45	0	2.1	20.2	0	0	0.2	
					60	0	1.9	20.4	0	0	0.2	
			Peak:		75	0	1.8	20.6	0	0	0.2	
					90	0	1.6	20.8	0	0	0.2	
			0.3		105	0	1.4	21	0	0	0.2	
					120	0	1.2	21.2	0	0	0.2	
			Average:		135	0	1.1	21.3	0	0	0.1	
					150	0	1	21.4	0	0	0.1	
			0.2		165	0	1	21.5	0	0	0.1	
					180	0	1	21.5	0	0	0.1	

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date: 12/11/2019
Monitoring Engineer: RK
Weather/Wind: Rainy/strong
Remarks: -

Ambient Gas Conc.:
Weather Trend:

CH4 (%): 0.0
CO (ppm): 0.0
Unsettled

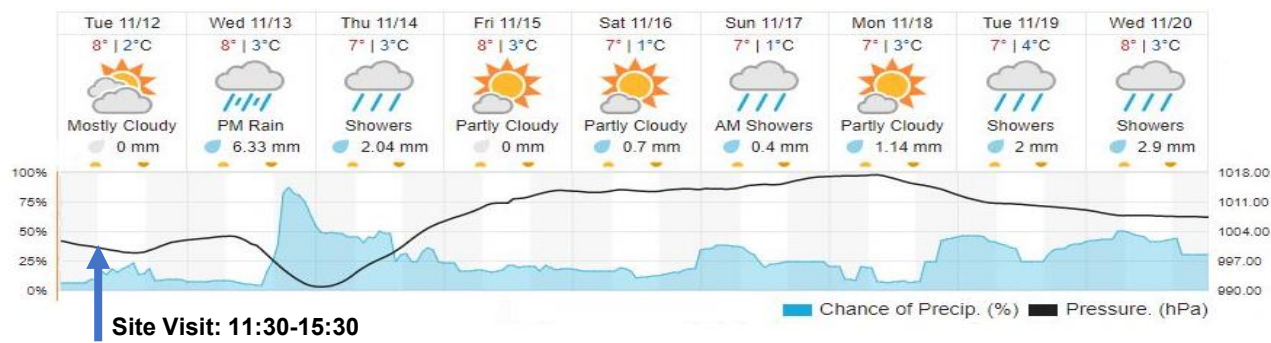
CO2 (%): 0.1
H₂S (ppm): 0.0
Atm. Press. Trend
Equipment:

O2 (%): 21.4
VOCs (ppm): N/A
Stable
Geotech GA5000

Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
WS1007	995	0.02	Initial:	Initial:	15	0	0.8	21.5	0	0	0.1	0.95
					30	0	0.8	20.5	0	0	0.1	
			-16.4	0.5	45	0	0.8	20.4	0	0	0.1	
					60	0	0.8	20.4	0	0	0.1	
			Peak:	Peak:	75	0	0.8	20.4	0	0	0.1	
					90	0	0.7	20.6	0	0	0.1	
			-16.4	0.9	105	0	0.6	20.8	0	0	0.1	
					120	0	0.6	21	0	0	0.1	
			Average:	Average:	135	0	0.6	21	0	0	0.1	
					150	0	0.6	21	0	0	0.1	
					165	0	0.5	21.2	0	1	0.1	
					180	0	0.5	21.3	0	1	0.1	
			-4.2	0.6								
Borehole ID	Atmospheric Barometric Pressure	Borehole Barometric Pressure	Flow	Second flow (after bung was placed back)	Time	Methane	Carbon Dioxide	Oxygen	Carbon Monoxide	Hydrogen Sulphide	Volatile Organic Compounds	Water Level
	(mb)	(mb)	(l/hr)	(l/hr)	(sec)	CH4 (%)	CO2 (%)	O2 (%)	CO (ppm)	H2S (ppm)	VOCs (ppm)	(m)
WS1019	995	-0.07	Initial:		15	0	0.4	21.5	0	0	0.1	2.12 - Hydro-carbon odour
					30	0	0.2	21.7	0	0	0.1	
			0.1		45	0	0.2	21.8	0	0	0.1	
					60	0	0.1	21.9	0	0	0.1	
			Peak:		75	0	0.1	21.9	0	0	0.1	
					90	0	0.1	22	0	0	0.1	
			0.2		105	0	0.1	22	0	0	0.1	
					120	0	0.1	22	0	0	0.1	
			Average:		135	0	0.1	22	0	0	0.1	
					150	0	0.1	22	0	0	0.1	
					165	0	0.1	22	0	0	0.1	
					180	0	0.1	22	0	0	0.1	

PAGE:	4200	GAS MONITORING
DATE: 12/11/2019	VASTERN ROAD, READING	

Monitoring Date:	12/11/2019	Ambient Gas Conc.:	CH4 (%): 0.0	CO2 (%): 0.1	O2 (%): 21.4
Monitoring Engineer:	RK		CO (ppm): 0.0	H2S (ppm): 0.0	VOCs (ppm): N/A
Weather/Wind:	Rainy/strong	Weather Trend:	Unsettled	Atm. Press. Trend	Stable
Remarks:	-			Equipment:	Geotech GA5000



Local Weather Station Atmospheric Pressure Records for 12th to 20th November 2019.

NB Note: The weather station atmospheric pressure is normally corrected for attitude (providing an equivalent sea level atmospheric pressure), whereas the GA5000 gas analyser measures absolute atmospheric pressure at the sites altitude, therefore a difference in pressures is to be expected between the local station data and the gas analyser data. The graph above has been appended purely to give an indication of pressure trends prior to the monitoring visit.

APPENDIX VIII
ORIGIN OF GAC VALUES

 ENVIRONMENTAL CONSULTING	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Determinant	Unit	GAC	Exposure Pathway	Origin of Risk Assessment Value
Metals				
Arsenic	mg/kg	40	1	LQM CIEH Suitable for Use Levels (S4UL) 2015- Inorganic Arsenic
Beryllium	mg/kg	1.7	1	LQM CIEH Suitable for Use Levels (S4UL) 2015
Boron	mg/kg	11,000	1	
Cadmium	mg/kg	85	1	
Chromium (III)	mg/kg	910	1	
Chromium (VI)	mg/kg	6	1	
Copper	mg/kg	7,100	1	
Lead	mg/kg	310	1	Category 4 Screening Level (C4SL) utilising exposure parameters from CLEA SR3 report.
Mercury	mg/kg	56	4	LQM CIEH Suitable for Use Levels (S4UL) 2015- Inorganic Mercury
Nickel	mg/kg	180	1	LQM CIEH Suitable for Use Levels (S4UL) 2015
Selenium	mg/kg	430	1	
Vanadium	mg/kg	1,200	1	
Zinc	mg/kg	40,000	1	
General Inorganics				
Total Cyanide*	mg/kg	50	1	Dutch Intervention Values 2010
Asbestos	%	0.001%	6	OEC Derived Value based on ICRCL
General Organics				
Phenol	mg/kg	750	4,1	LQM CIEH Suitable for Use Levels (S4UL) 2015 1%SOM
PAHs				
Naphthalene	mg/kg	2.3	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Acenaphthylene	mg/kg	2,900	1	
Acenaphthene	mg/kg	3,000	1	
Fluorene	mg/kg	2,800	1	
Phenanthrene	mg/kg	1,300	1	
Anthracene	mg/kg	31,000	1	
Fluoranthene	mg/kg	1,500	1	
Pyrene	mg/kg	3,700	1	
Benzo(a)Anthracene ^l	mg/kg	11	1	
Chrysene	mg/kg	30	1	
Benzo(b)Fluoranthene	mg/kg	3.9	1	
Benzo(k)Fluoranthene	mg/kg	110	1	
Benzo(a)Pyrene	mg/kg	3.2	1	
Indeno(123-cd)Pyrene	mg/kg	45	1	
Dibenzo(a,h)Anthracene	mg/kg	0.31	1	

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	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Determinant	Unit	GAC	Exposure Pathway	Origin of Risk Assessment Value
Benzo(ghi)Perylene	mg/kg	360	1	
BTEX & MTBE				
Benzene	mg/kg	0.38	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 1%SOM
Toluene	mg/kg	880	4	
Ethylbenzene	mg/kg	83	4	
Xylenes	mg/kg	79	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 1% SOM p-Xylene
MTBE	mg/kg	73	4	CL:AIRE SGV 2010 1% SOM
TPH-CWG				
Aliphatic				LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Aliphatic EC 5-6	mg/kg	42	4	
Aliphatic EC >6-8	mg/kg	100	4	
Aliphatic EC >8-10	mg/kg	27	4	
Aliphatic EC >10-12	mg/kg	130 ^(vap)	4	
Aliphatic EC > 12-16	mg/kg	1,100 ^(sol)	4	
Aliphatic EC > 16-35	mg/kg	65,000 ^(sol)	1	
Aliphatic EC >35-44	mg/kg	65,000 ^(sol)	1	
Aromatic				LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Aromatic EC 5-7	mg/kg	370	4	
Aromatic EC>7-8	mg/kg	860	4	
Aromatic EC> 8-10	mg/kg	47	4	
Aromatic EC> 10-12	mg/kg	250	2	
Aromatic EC> 12-16	mg/kg	1,800	2	
Aromatic EC> 16-21	mg/kg	1,900	2	
Aromatic EC> 21-35	mg/kg	1,900	1	
Aromatic EC> 35-44	mg/kg	1,900	1	
Banded TPH				
TPH EC 5-6**	mg/kg	42	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM, utilising the most conservative of the Ali/Aro chain lengths.
TPH EC >6-8**	mg/kg	100	4	
TPH EC >8-10**	mg/kg	27	4	
TPH EC> 10-12**	mg/kg	130	4	
TPH EC> 12-16**	mg/kg	1,100	4	
TPH EC> 16-21**	mg/kg	1,900	2	
TPH EC> 21-35**	mg/kg	1,900	1	
TPH EC> 35-44**	mg/kg	1,900	1	

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	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Notes

Main Exposure Pathways: 1 = Ingestion of Soil & Indoor Dust, 2 = Consumption of Homegrown Produce & Attached Soil, 3 = Dermal contact (Indoor & Outdoor); 4 = Inhalation of Vapour (Indoor & Outdoor), 5 = Inhalation of Dust (Indoor & Outdoor), 6 = Inhalation of Fibres.

Abbreviations: GAC = General Assessment Criteria

* Total cyanide Tier 1 GAC is taken from the Dutch Intervention Value (2010) for complex cyanide.

** The Tier 1 GAC for the banded hydrocarbon fraction is derived from the CIEH/S4UL assessment for petroleum hydrocarbons Criteria Working Group (CWG) for both aliphatic and aromatic compounds. OEC has utilised the lowest of the aliphatic and aromatic chain lengths in order to adopt a conservative approach, which is considered satisfactory for the protection of human health.

(sol) – GAC presented exceeds the solubility saturation limit.

(vap) – GAC presented exceeds the vapour saturation limit

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Determinand	Units	Hardness Banding (CaCO3 mg/l)	Freshwater EQS	Source
Arsenic	ug/l		50	WFD EQS 2010 (Freshwater in England & Wales)
Boron	ug/l		2000	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Cadmium	ug/l	<40	<0.08	WFD EQS 2010 (Freshwater in England & Wales)
		40-50	0.08	
		50-100	0.09	
		100-200	0.15	
		>200	0.25	
Chromium	ug/l		4.7	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Copper	ug/l	0-50	1	WFD EQS 2010 (Freshwater in England & Wales)
		50-100	6	
		100-250	10	
		>250	28	
Cyanide (Free)	ug/l		1	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Iron	ug/l		1000	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Lead	ug/l		7.2	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Mercury	ug/l		0.05	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Nickel	ug/l		20	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Selenium	ug/l		10	Drinking Water Directive
Sulphate	mg/l		400	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Zinc	ug/l	0-50	8	(AA) WFD EQS 2010 (Freshwater in England & Wales)
		50-100	50	
		100-250	75	
		>250	125	
pH			6 to 9	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Organics				
Phenol (total)	ug/l		7.7	(AA) WFD EQS 2010 (Freshwater in England & Wales)
MTBE	ug/l		30	Ireland (IGV)
TPH Aliphatic				
Aliphatic C5-C6	ug/l		15,000	WHO Petroleum Products in Drinking Water
Aliphatic C6-C8	ug/l		15,000	WHO Petroleum Products in Drinking Water
Aliphatic C8-C10	ug/l		300	WHO Petroleum Products in Drinking Water
Aliphatic C10-C12	ug/l		300	WHO Petroleum Products in Drinking Water
Aliphatic C12-C16	ug/l		300	WHO Petroleum Products in Drinking Water
Aliphatic C16-C21	ug/l		300	WHO Petroleum Products in Drinking Water
Aliphatic C21-C35	ug/l		300	WHO Petroleum Products in Drinking Water
TPH Aromatic				
Aromatic C5-C7	ug/l		10	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Aromatic C7-C8	ug/l		50	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Aromatic C8-C10	ug/l		20	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Aromatic C10-C12	ug/l		100	WHO Petroleum Products in Drinking Water
Aromatic C12-C16	ug/l		100	WHO Petroleum Products in Drinking Water
Aromatic C16-C21	ug/l		90	WHO Petroleum Products in Drinking Water
Aromatic C21-C35	ug/l		90	WHO Petroleum Products in Drinking Water
BTEX				
Benzene	ug/l		10	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Toluene	ug/l		50	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Ethylbenzene	ug/l		20	Freshwater EQS (AA) - Dangerous Substances Directive (List II)
Xylenes	ug/l		30	(AA) WFD EQS 2010 (Freshwater in England & Wales)
PAH				
Anthracene	ug/l		0.1	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Benzo(a)Pyrene	ug/l		0.005	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Fluoranthene	ug/l		0.1	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Naphthalene	ug/l		2.4	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Benzo(b/k)fluoranthene	ug/l		0.003	(AA) WFD EQS 2010 (Freshwater in England & Wales)
Benzo(ghi)perylene & Indeno(1,2,3-cd)perylene	ug/l		0.002	(AA) WFD EQS 2010 (Freshwater in England & Wales)