Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
24894	Eastergate	Samples received	06/07/2018
		Schedule received	20/07/2018
Project No.	Client	Project started	20/07/2018
K4-	Wilson Bailey	Testing Started	03/09/2018

Hole No.	Sample				Soil Description	NMC	Passing 425µm	LL	PL	PI	Remarks
	Ref	Top m	Base m	Type		%	%	%	%	%	
BH1	-	1.00	-	D	Brown silty very gravelly CLAY with traces of rootlets (gravel is fmc and angular to sub-angular)	11	39	57	23	34	Sample washed to obtain test fraction
BH2	-	1.00	-	D	Dark brown slightly gravelly silty CLAY with traces of carbonaceous deposits (gravel is fm and sub-angular)	23	87	45	20	25	
BH3	-	1.00	-	D	Brown slightly sandy silty CLAY with dark grey carbonaceous deposits and rare fine sub-angular fine gravel	20	99	46	19	27	
BH4	-	1.00	-	D	Redish brown silty slightly sandy gravelly CLAY with traces of rootlets (gravel is fmc and angular to sub-angular)	19	62	44	21	23	
BH5	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with traces of rootlets and rare fine gravel	21	95	39	19	20	
BH6	-	1.00	-	D	Reddsih brown slightly sandy silty CLAY with rare fine gravel.	20	96	41	21	20	
BH7	-	1.00	-	D	Reddish brown gravelly slightly sandy silty CLAY with scattered calcaeous deposits (gravel is fmc and angular to sub-angular)	18	33	50	21	29	
BH8	-	1.00	-	D	Reddish brown slightly gravelly slightly sandy silty CLAY with traces of black flecks (gravel is fm and sub-angular)	21	98	40	19	21	
BH11	-	1.00	-	D	Reddsh brown slightly gravelly slightly sandy silty CLAY (gravel is fm and sub-angular)	22	96	40	19	21	
BH17	-	1.00	-	D	Reddish brown gravelly slightly sandy silty CLAY with traces of calcareous deposits (gravel is fmc and angular to sub-angular)	19	41	49	23	26	Sample washed to obtain test fraction
BH18	-	1.00	-	D	Brown slightly gravelly fine sandy silty CLAY with occasional rootlets (gravel is fm and sub-angular)	15	97	36	20	16	
BHR1	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with dark grey carbonaceous stains and occasional rootlets	22	100	47	21	26	

Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Atterberg Limits: clause 4.3 and 5.0

Test Report by K4 SOILS LABORATORY
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Summary of Natural Moisture Content, Liquid Limit and Plastic Limit Results

Job No.	Project Name	Programme	
24894	Eastergate	Samples received	06/07/2018
		Schedule received	20/07/2018
Project No.	Client	Project started	20/07/2018
K4-	Wilson Bailey	Testing Started	03/09/2018

Hole No.	Sample				Soil Description	NMC	Passing 425µm	LL	PL	PI	Remarks
	Ref	Top m	Base m	Type		%	%	%	%	%	
BHR2	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with rare fine sub-angular gravel	21	99	39	19	20	
BHR3	-	1.00	-	D	Reddish brown slightly gravelly slightly sandy silty CLAY with occasional roots (gravel is fm and sub-angular)	21	93	43	19	24	
BHR4	-	1.00	-	D	Brown gravelly sandy silty CLAY with occasional roots and rootlets (gravel is fmc and angular to sub-angular)	1.6	31	56	21	35	
BHR6	-	0.50	-	D	Greyish brown gravelly slightly sandy silty CLAY with occasional rootlets (gravel is fmc and sub-angular)	11	35	36	20	16	Sample washed to obtain test fraction
BHR6	-	1.00	-	D	Pale reddish brown sandy gravelly silty calcareous CLAY with occasional rootlets (gravel is fmc and sub-angular to sub-rounded flint)	13	40	22	15	7	
BHR8	-	1.00	-	D	Brown sandy gravelly CLAY with occasional roots and rootlets (gravel is fmc and sub-angular to sub-rounded)	9.8	50	39	21	18	
BHR9	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with rare fine gravel	22	100	44	18	26	

Test Methods: BS1377: Part 2: 1990:
Natural Moisture Content : clause 3.2
Atterberg Limits: clause 4.3 and 5.0

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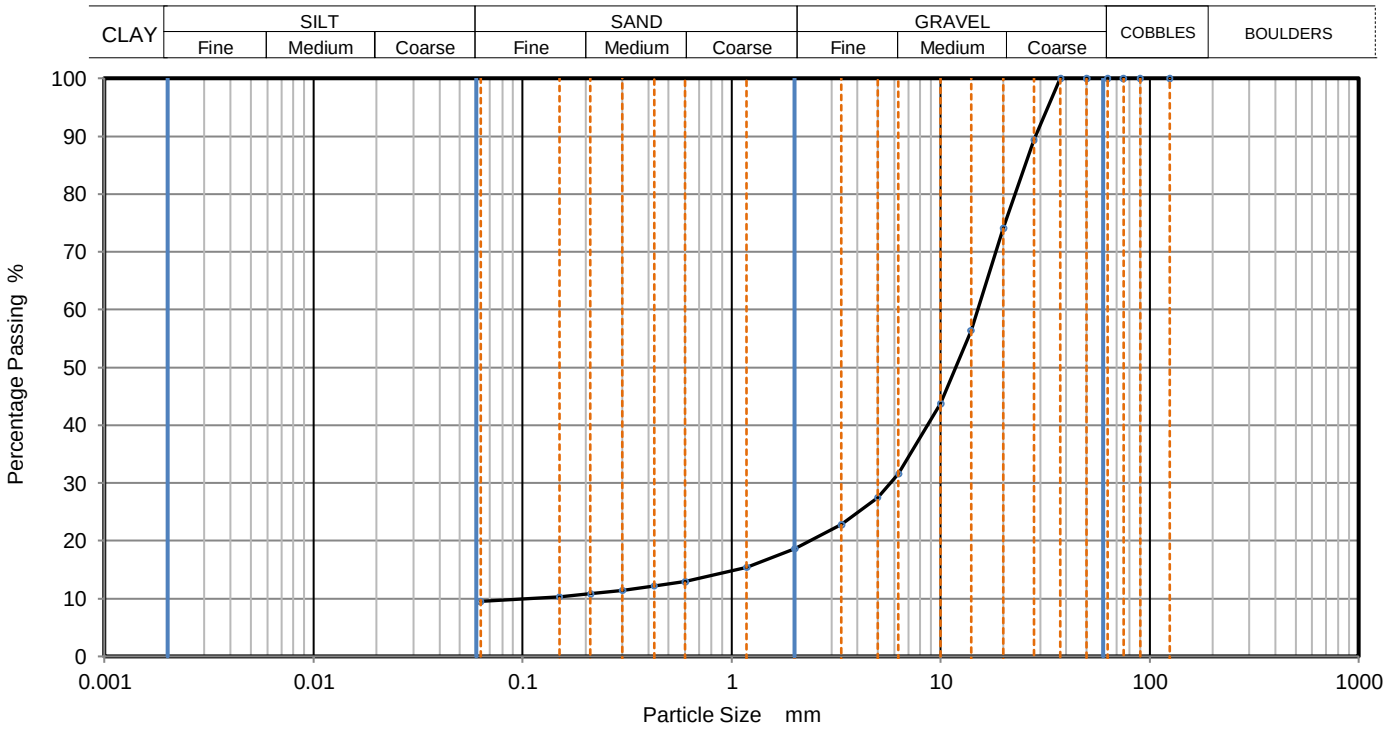
PARTICLE SIZE DISTRIBUTION

Job Ref	24894				
Borehole/Pit No.	BH1				
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Dark reddish brown and pale grey clayey sandy GRAVEL (gravel is fmc and sub-angular flint)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	89		
20	74		
14	56		
10	44		
6.3	32		
5	28		
3.35	23		
2	19		
1.18	15		
0.6	13		
0.425	12		
0.3	11		
0.212	11		
0.15	10		
0.063	10		

Dry Mass of sample, g: 1943

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	81.4
Sand	9.1
Fines <0.063mm	9.5

Grading Analysis		
D100	mm	
D60	mm	15.1
D30	mm	5.75
D10	mm	0.108
Uniformity Coefficient		140
Curvature Coefficient		20

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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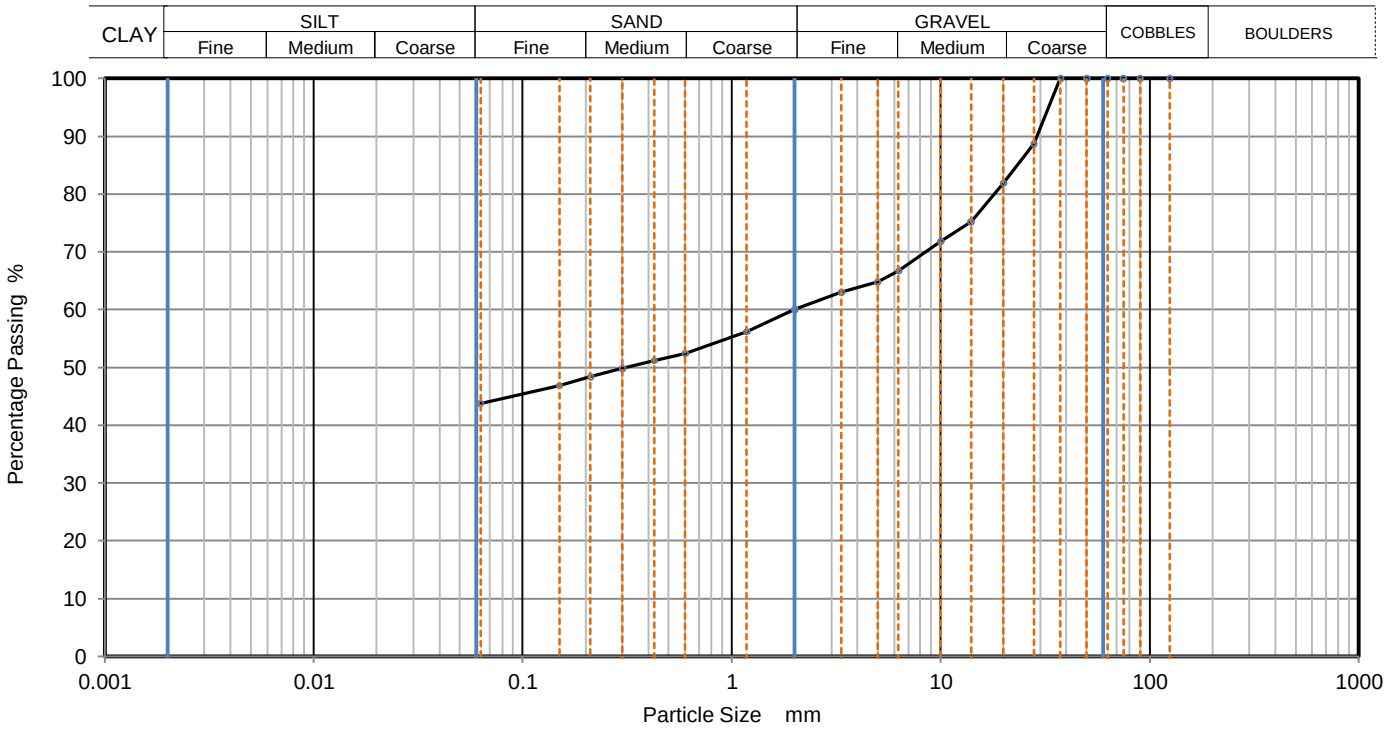
Date: 13/09/2018

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BH2
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	1.50 m
Soil Description	Pale greyish brown gravelly sandy silty calcareous CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	89		
20	82		
14	75		
10	72		
6.3	67		
5	65		
3.35	63		
2	60		
1.18	56		
0.6	52		
0.425	51		
0.3	50		
0.212	48		
0.15	47		
0.063	44		

Dry Mass of sample, g	607

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	40.0
Sand	16.2
Fines <0.063mm	43.8

Grading Analysis		
D100	mm	
D60	mm	2.01
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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UKAS TESTING 2519

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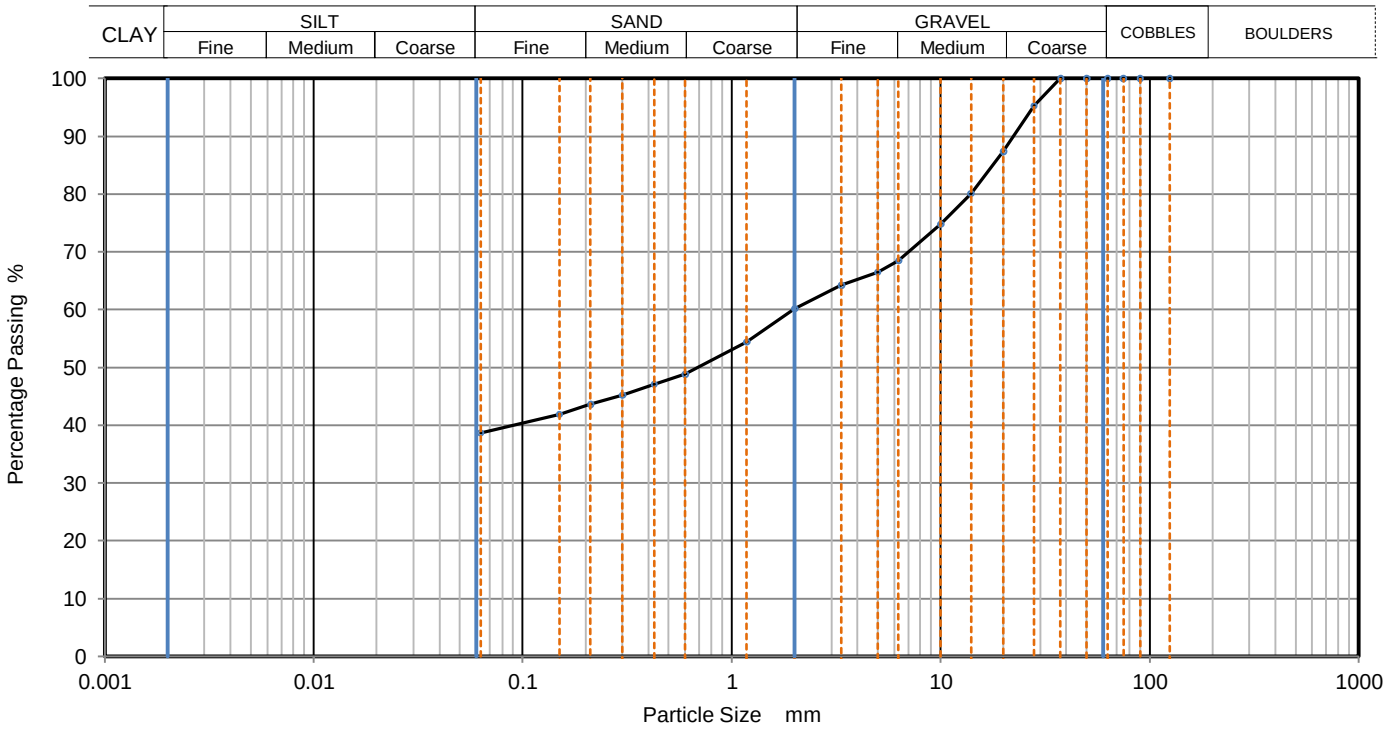
PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BH5
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Pale greyish brown gravelly sandy silty calcareous CLAY with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	95		
20	87		
14	80		
10	75		
6.3	69		
5	67		
3.35	64		
2	60		
1.18	54		
0.6	49		
0.425	47		
0.3	45		
0.212	44		
0.15	42		
0.063	39		

Dry Mass of sample, g: 735

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	39.8
Sand	21.5
Fines <0.063mm	38.8

Grading Analysis		
D100	mm	
D60	mm	1.96
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Date: 13/09/2018

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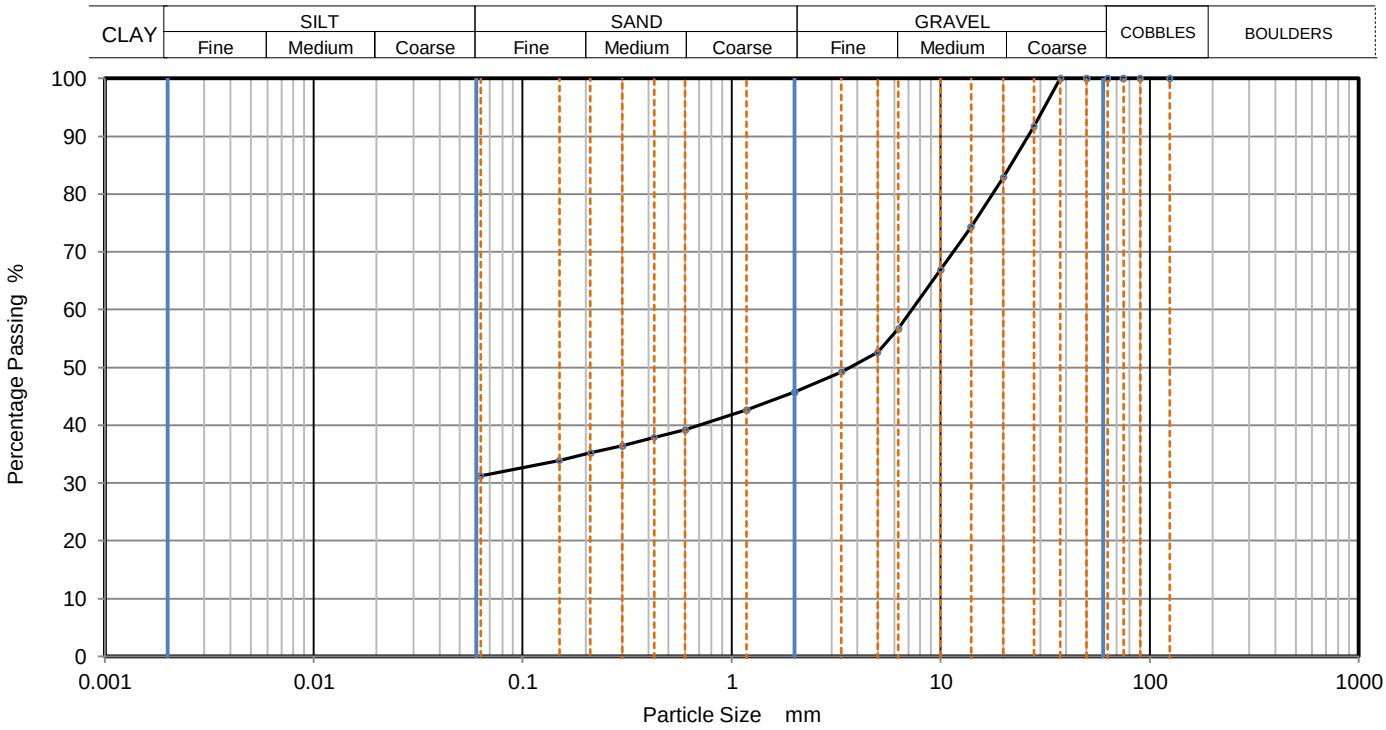
PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BH5
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	3.00 m
Soil Description	Off white and pale grey calcareous very clayey sandy GRAVEL (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	92		
20	83		
14	74		
10	67		
6.3	57		
5	53		
3.35	49		
2	46		
1.18	43		
0.6	39		
0.425	38		
0.3	36		
0.212	35		
0.15	34		
0.063	31		

Dry Mass of sample, g	795

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	54.3
Sand	14.5
Fines <0.063mm	31.2

Grading Analysis		
D100	mm	
D60	mm	7.31
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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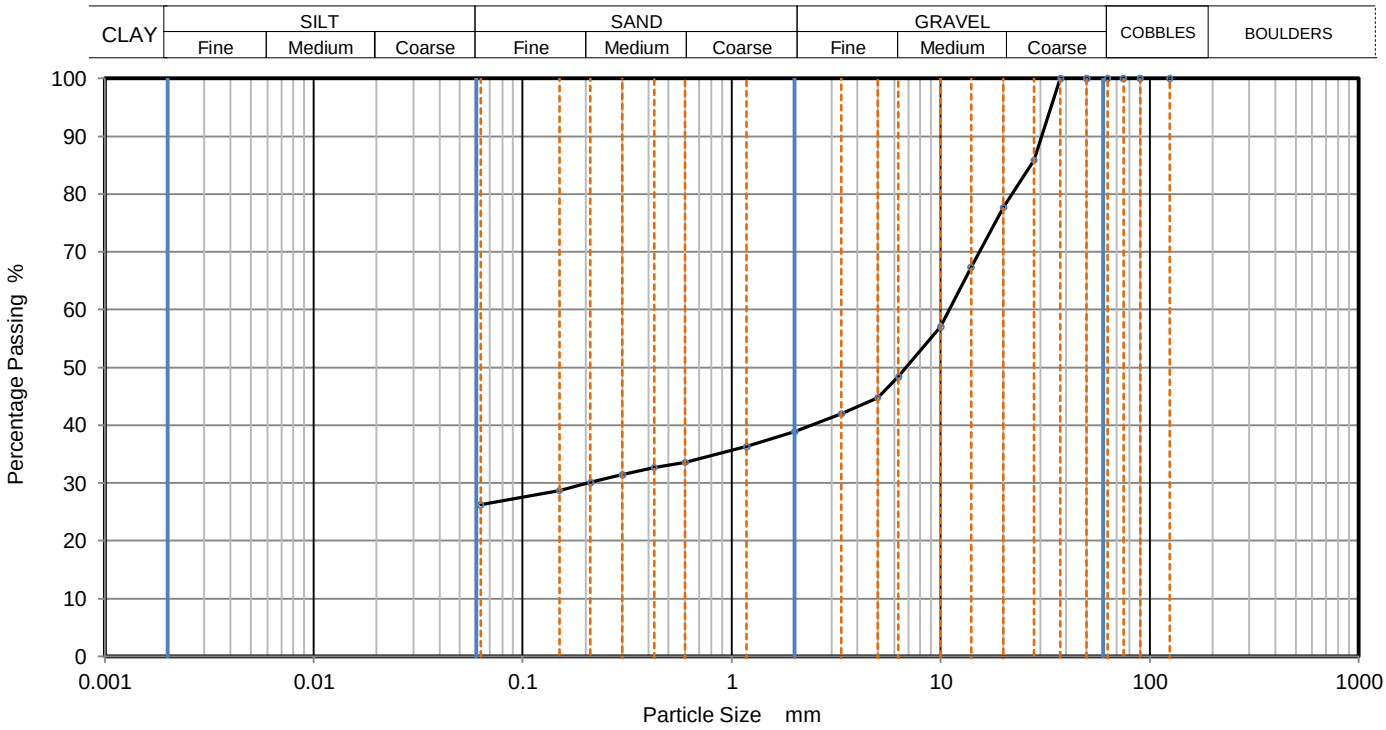
Date: 13/09/2018

PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BH6
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	2.00 m
Soil Description	Reddish brown and pale greyish brown calcareous very clayey sandy GRAVEL (gravel consist of fmc sub-angular flint and fm sub-angular to sub-rounded chalk gravel)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	86		
20	78		
14	67		
10	57		
6.3	48		
5	45		
3.35	42		
2	39		
1.18	36		
0.6	34		
0.425	33		
0.3	31		
0.212	30		
0.15	29		
0.063	26		

Dry Mass of sample, g	752

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	61.1
Sand	12.7
Fines <0.063mm	26.2

Grading Analysis		
D100	mm	
D60	mm	11
D30	mm	0.206
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Date: 13/09/2018

2519

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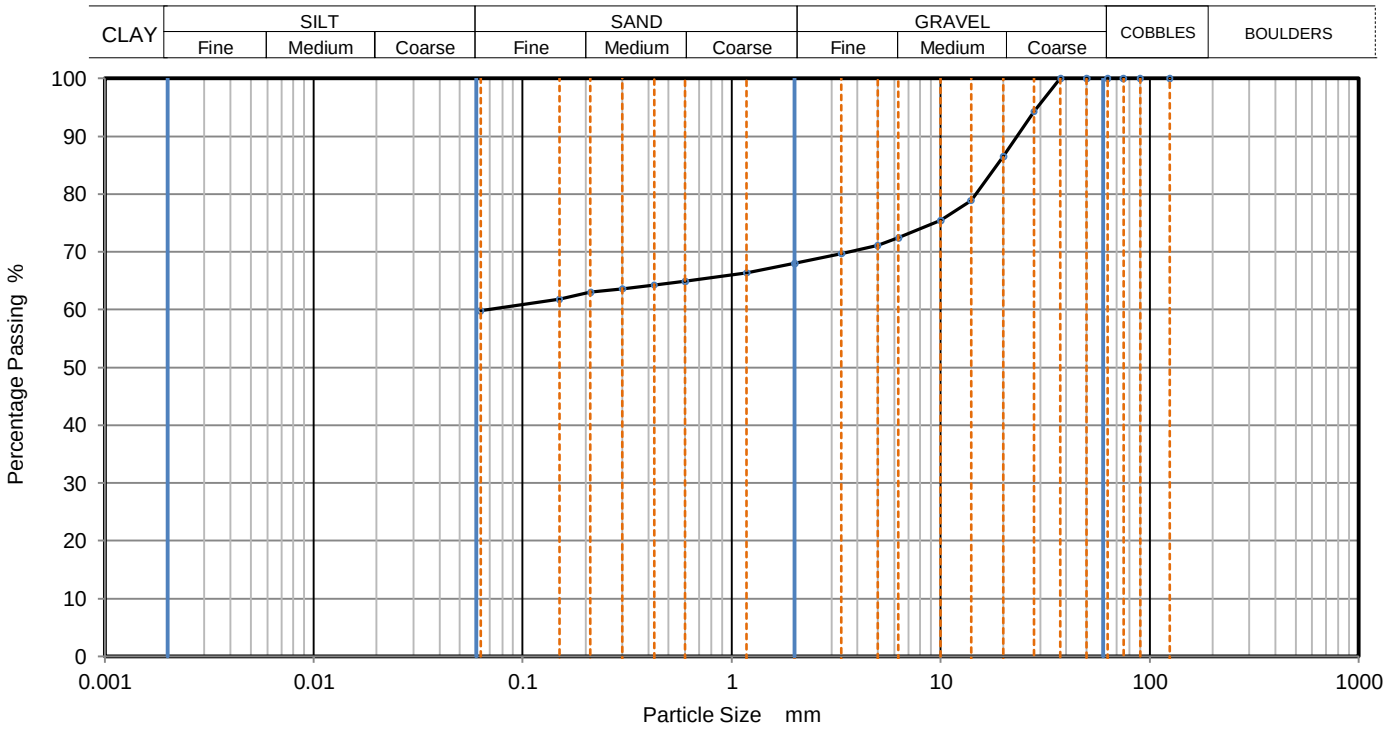
PARTICLE SIZE DISTRIBUTION

Job Ref	24894				
Borehole/Pit No.	BH6				
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	4.00 m
Soil Description	Greyish brown slightly calcareous slightly gravelly slightly sandy silty CLAY with occasional chalk fragments (gravel consist of fmc sub-angular flint and fm sub-rounded chalk gravel)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	03/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	94		
20	87		
14	79		
10	75		
6.3	72		
5	71		
3.35	70		
2	68		
1.18	66		
0.6	65		
0.425	64		
0.3	64		
0.212	63		
0.15	62		
0.063	60		

Dry Mass of sample, g	279

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	32.0
Sand	8.2
Fines <0.063mm	59.8

Grading Analysis		
D100	mm	
D60	mm	0.0696
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Date: 13/09/2018

UKAS TESTING 2519

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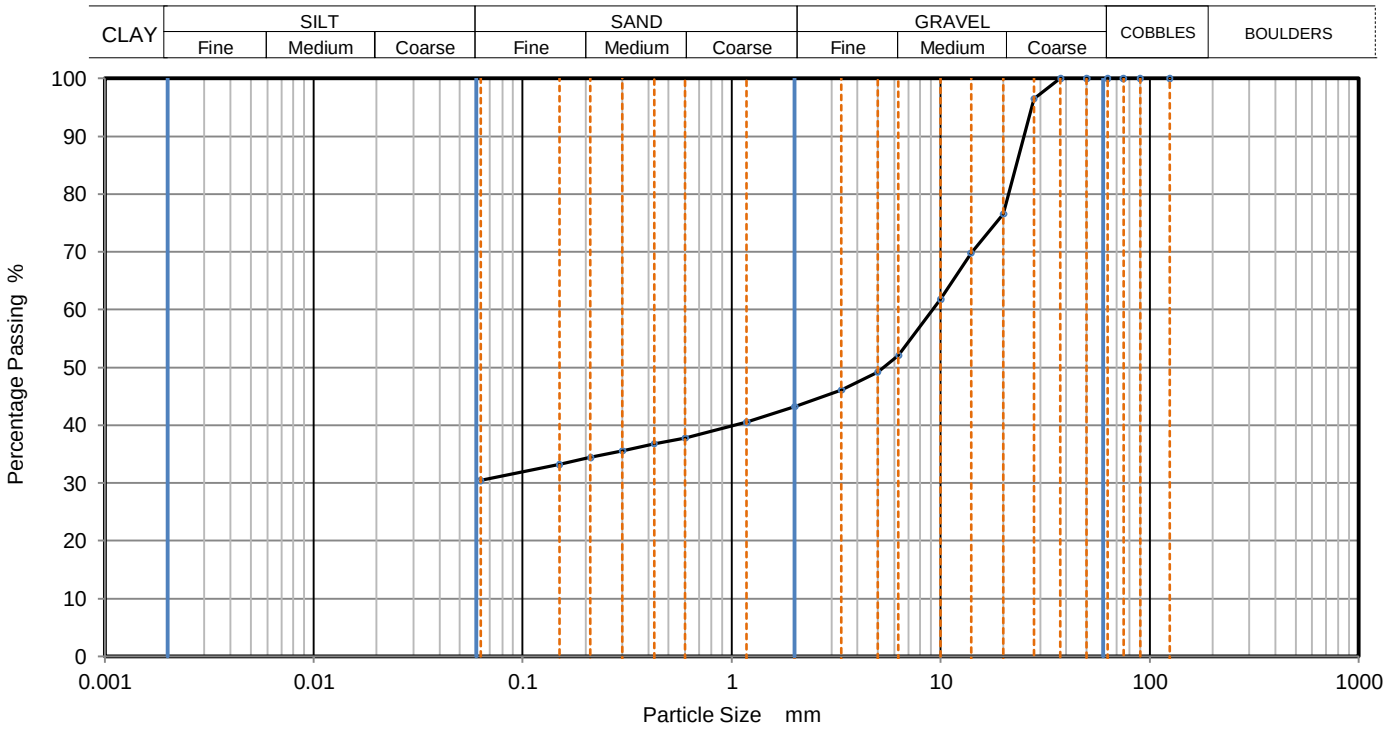
PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BH7
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	2.00 m
Soil Description	Pale grey and reddish brown gravelly slightly sandy silty calcareous CLAY (gravel consist of fmc sub-angular flint and fm sub-angular chalk gravel)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/09/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	77		
14	70		
10	62		
6.3	52		
5	49		
3.35	46		
2	43		
1.18	41		
0.6	38		
0.425	37		
0.3	36		
0.212	34		
0.15	33		
0.063	30		

Dry Mass of sample, g	809

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	56.8
Sand	12.8
Fines <0.063mm	30.4

Grading Analysis		
D100	mm	
D60	mm	9.18
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Date: 13/09/2018

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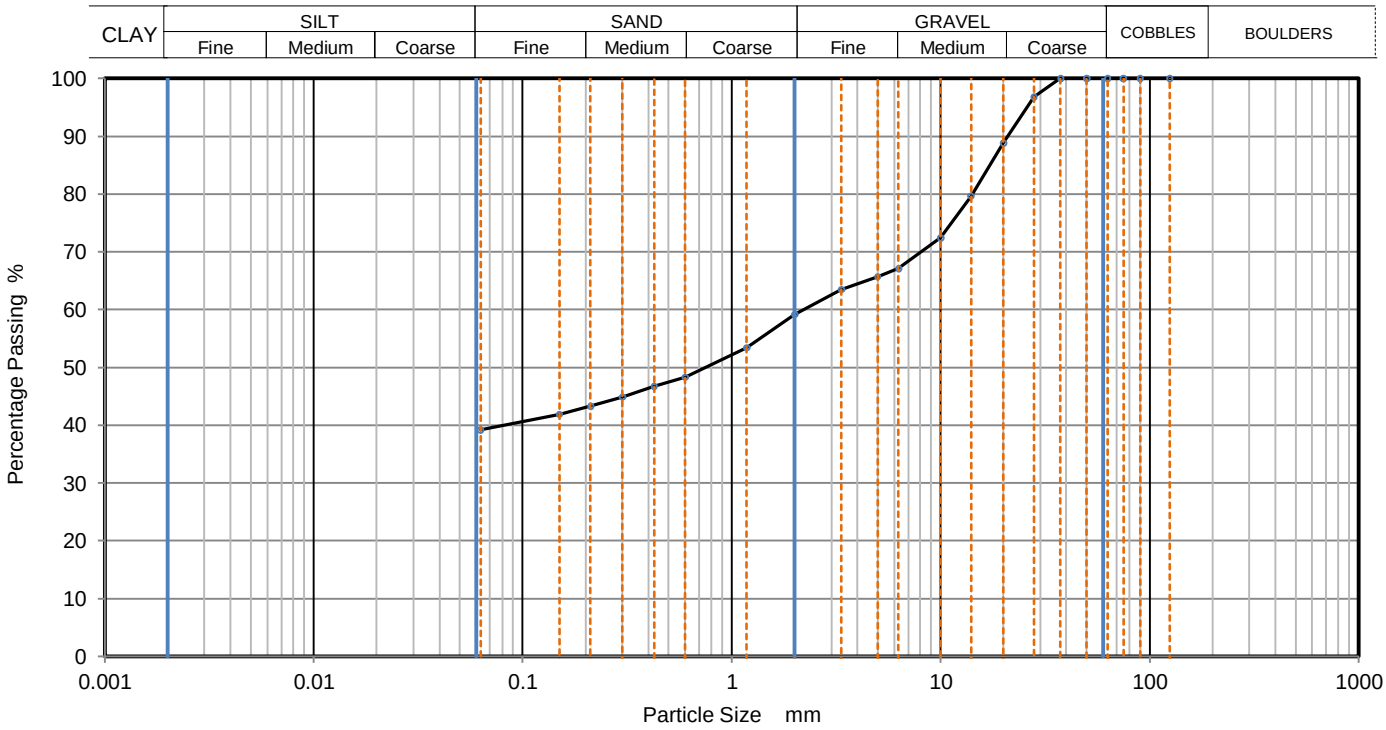
PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BH8
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	2.00 m
Soil Description	Pale greyish brown gravelly slightly sandy silty calcareous CLAY with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	89		
14	80		
10	72		
6.3	67		
5	66		
3.35	64		
2	59		
1.18	53		
0.6	48		
0.425	47		
0.3	45		
0.212	43		
0.15	42		
0.063	39		

Dry Mass of sample, g	897

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	40.8
Sand	20.1
Fines <0.063mm	39.2

Grading Analysis		
D100	mm	
D60	mm	2.19
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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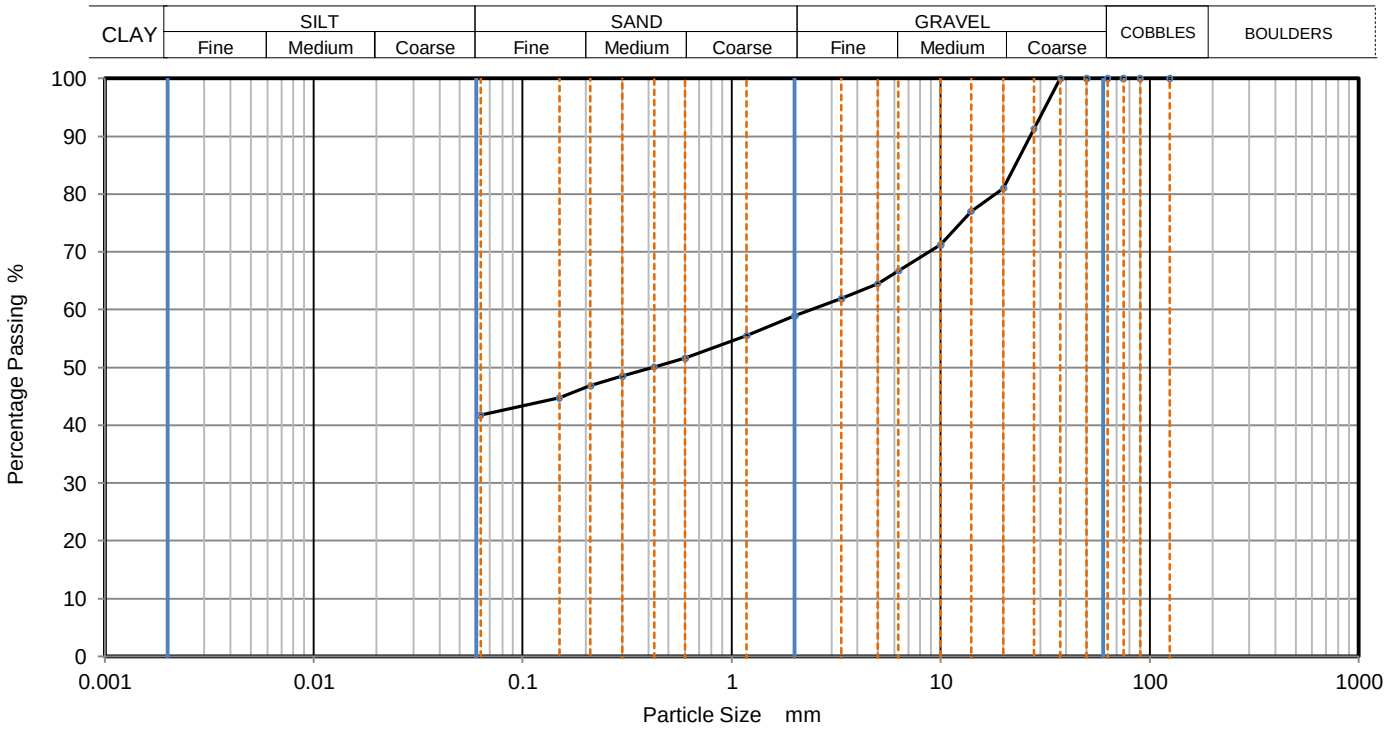
Date: 13/09/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BH11
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Pale greyish brown gravelly slightly sandy silty calcareous CLAY with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	91		
20	81		
14	77		
10	71		
6.3	67		
5	65		
3.35	62		
2	59		
1.18	56		
0.6	52		
0.425	50		
0.3	49		
0.212	47		
0.15	45		
0.063	42		

Dry Mass of sample, g	580

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	41.1
Sand	17.3
Fines <0.063mm	41.7

Grading Analysis		
D100	mm	
D60	mm	2.42
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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Date: 13/09/2018

UKAS TESTING 2519

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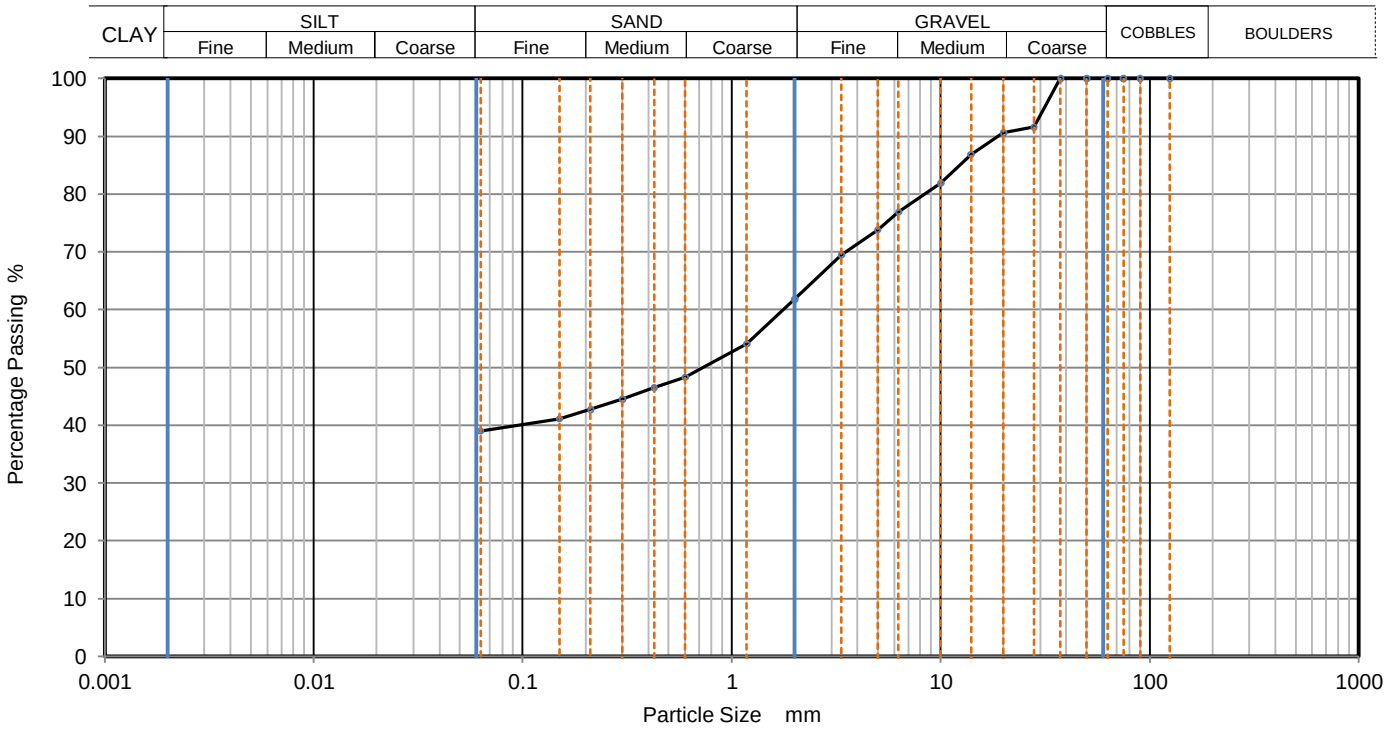
PARTICLE SIZE DISTRIBUTION

Job Ref	24894				
Borehole/Pit No.	BH12				
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Pale greyish brown gravelly slightly sandy silty calcareous CLAY with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	92		
20	91		
14	87		
10	82		
6.3	77		
5	74		
3.35	70		
2	62		
1.18	54		
0.6	48		
0.425	47		
0.3	45		
0.212	43		
0.15	41		
0.063	39		

Dry Mass of sample, g	931

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	38.2
Sand	22.7
Fines <0.063mm	39.0

Grading Analysis		
D100	mm	
D60	mm	1.77
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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Checked and Approved

Initials: **K.P**

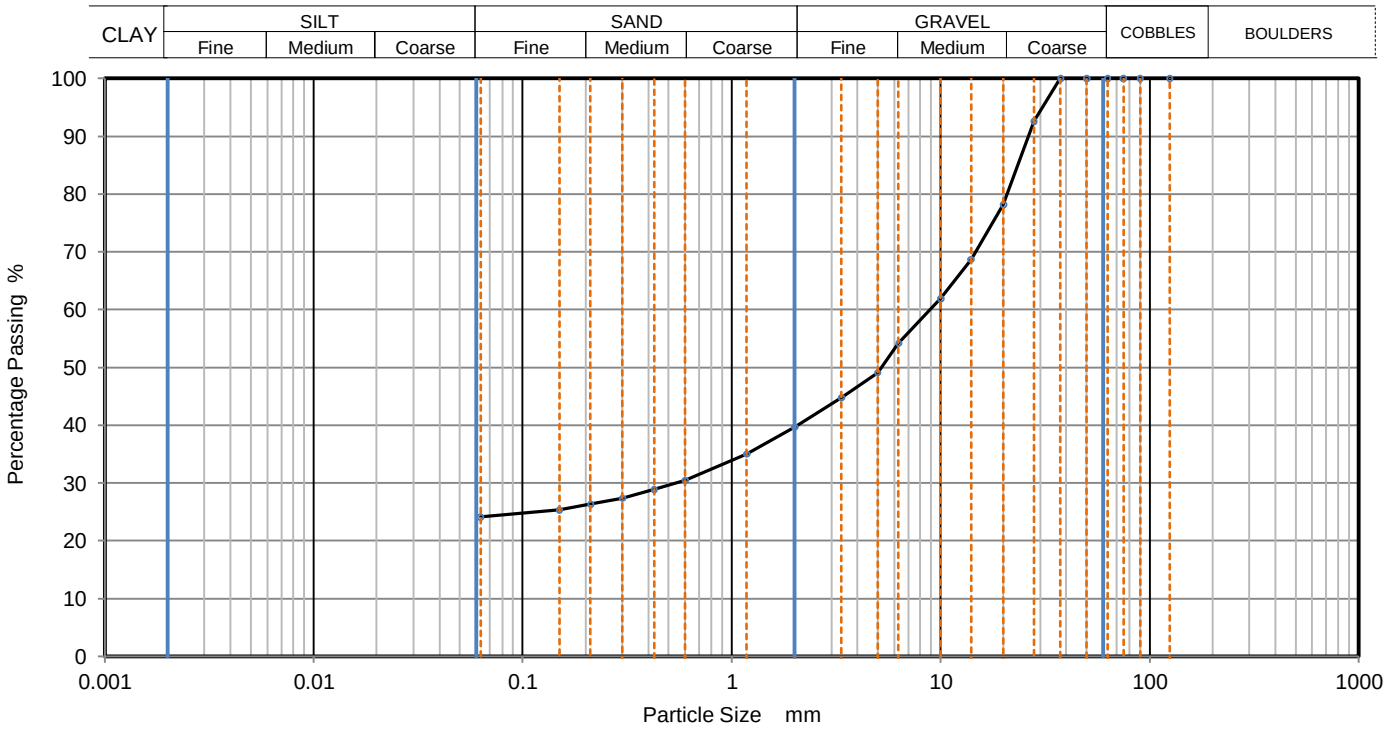
Date: 13/09/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

Job Ref	24894				
Borehole/Pit No.	BH17				
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	1.50 m
Soil Description	Pale grey calcareous very clayey sandy GRAVEL (gravel is fm and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	02/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	93		
20	78		
14	69		
10	62		
6.3	54		
5	49		
3.35	45		
2	40		
1.18	35		
0.6	31		
0.425	29		
0.3	27		
0.212	26		
0.15	25		
0.063	24		

Dry Mass of sample, g	1857

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	60.3
Sand	15.7
Fines <0.063mm	24.1

Grading Analysis		
D100	mm	
D60	mm	8.9
D30	mm	0.534
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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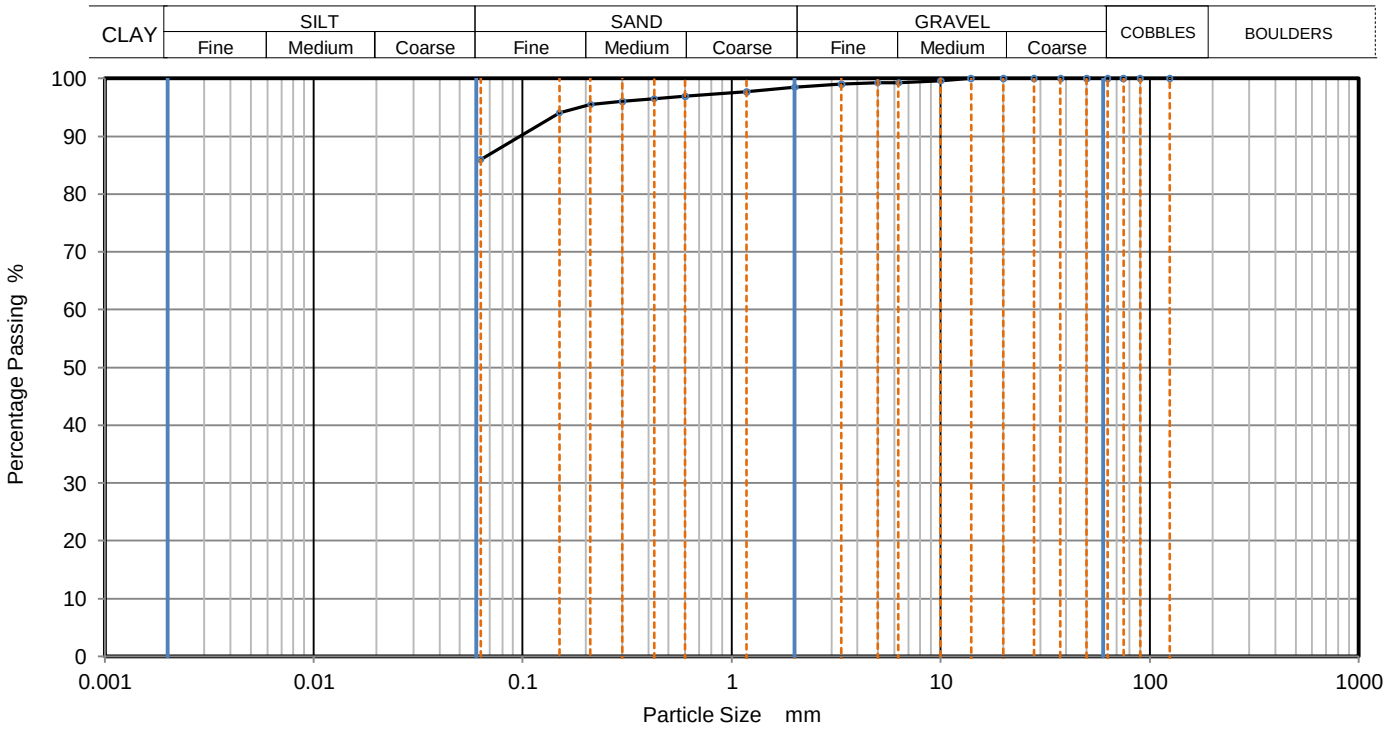
Date: 13/09/2018

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BHR1
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	1.50 m
Soil Description	Brown slightly sandy silty CLAY with rare fm sub-rounded gravel			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	03/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	99		
1.18	98		
0.6	97		
0.425	97		
0.3	96		
0.212	96		
0.15	94		
0.063	86		

Dry Mass of sample, g	79

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.5
Sand	12.5
Fines <0.063mm	86.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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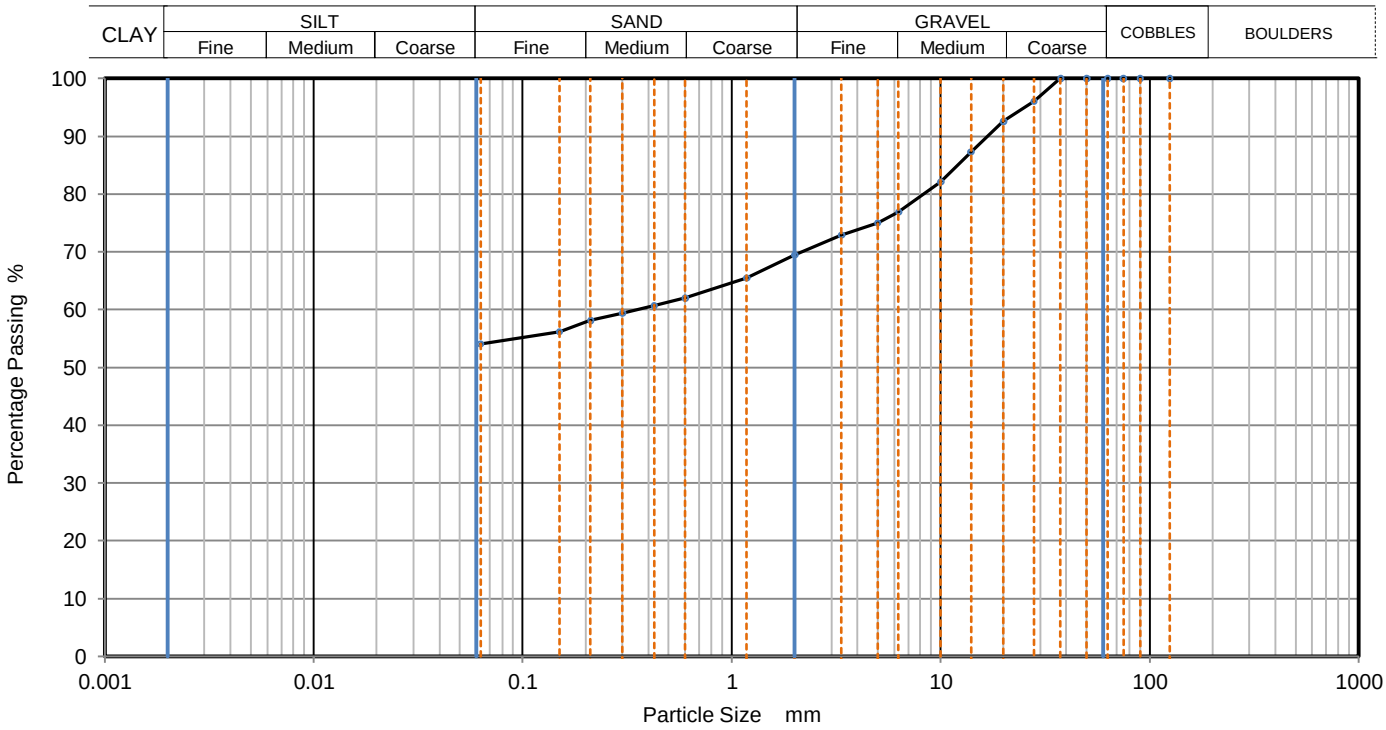
Date: 13/09/2018

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BHR1
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.50 m
Soil Description	Pale greyish brown slightly gravelly calcareous slightly sandy CLAY with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	03/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	96		
20	93		
14	87		
10	82		
6.3	77		
5	75		
3.35	73		
2	70		
1.18	66		
0.6	62		
0.425	61		
0.3	59		
0.212	58		
0.15	56		
0.063	54		

Dry Mass of sample, g	565

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	30.5
Sand	15.4
Fines <0.063mm	54.1

Grading Analysis		
D100	mm	
D60	mm	0.351
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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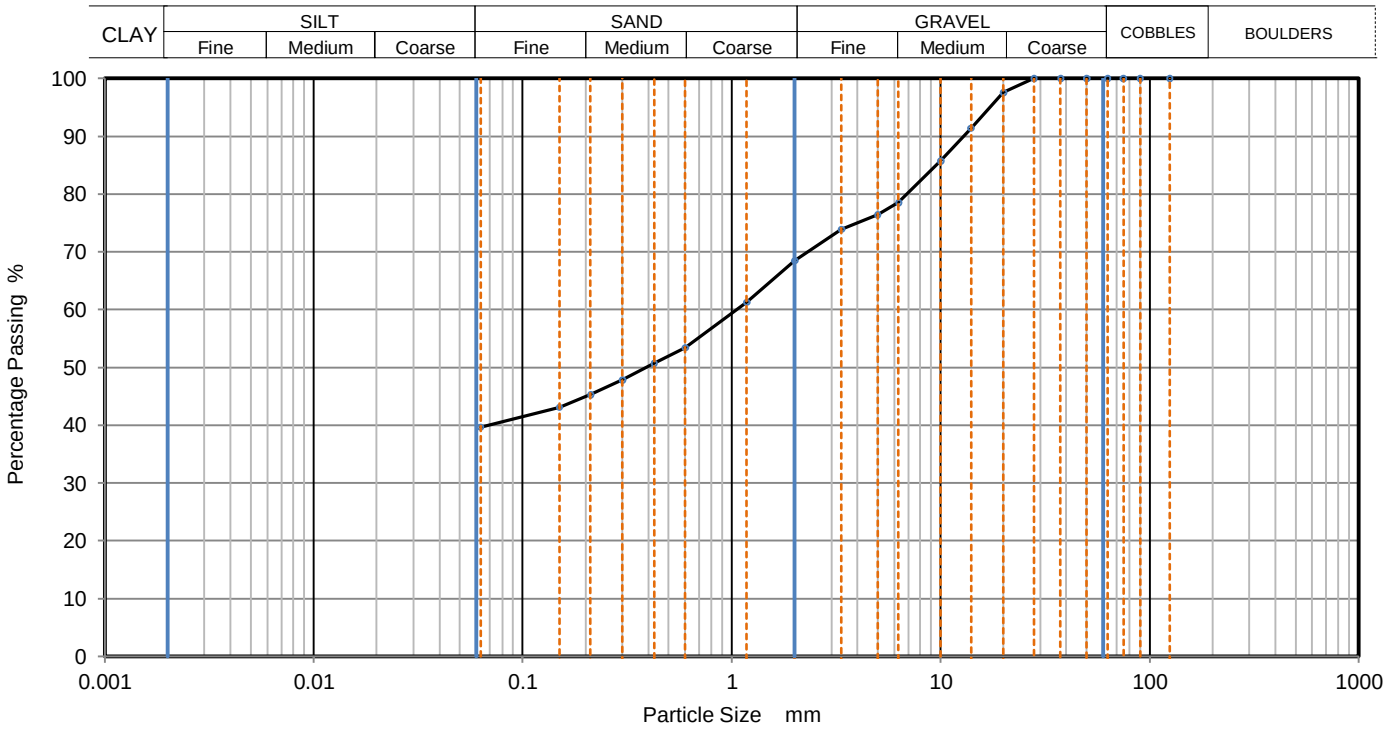
Date: 13/09/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

Site Name	Eastergate			Job Ref	24894
				Borehole/Pit No.	BHR2
Project No.	K4-	Client	Wilson Bailey	Sample No.	-
				Depth Top	2.00 m
Soil Description	Greyish pink and pale reddish brown slightly gravelly calcareous slightly sandy CLAY with frequent calcareous deposits (gravel consist of fm sub-angular to sub-rounded flint and fm sub-angular chalk gravel)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	91		
10	86		
6.3	79		
5	76		
3.35	74		
2	69		
1.18	61		
0.6	53		
0.425	51		
0.3	48		
0.212	45		
0.15	43		
0.063	40		

Dry Mass of sample, g	828

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	31.5
Sand	28.8
Fines <0.063mm	39.7

Grading Analysis		
D100	mm	
D60	mm	1.06
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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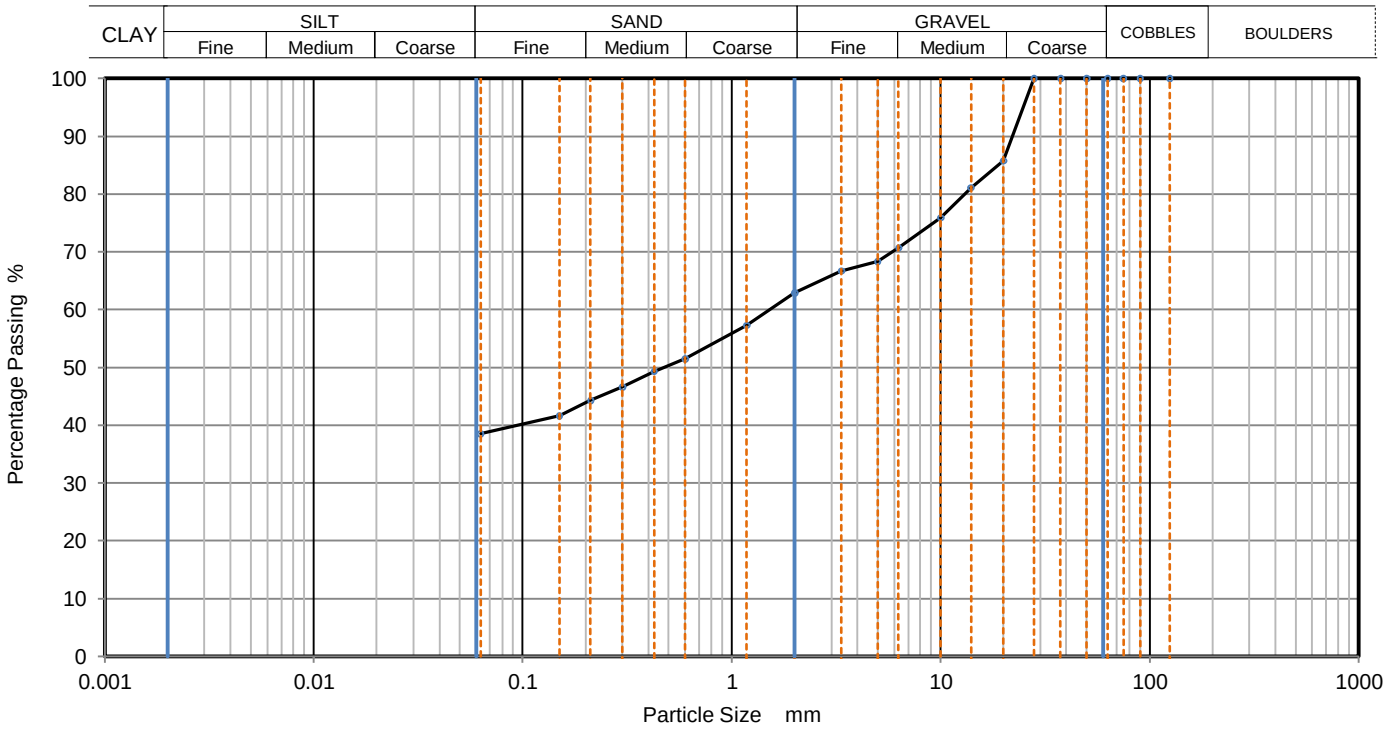
Date: 13/09/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BHR6
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Pinkish grey gravelly slightly sandy calcareous CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	03/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	86		
14	81		
10	76		
6.3	71		
5	68		
3.35	67		
2	63		
1.18	57		
0.6	52		
0.425	49		
0.3	47		
0.212	44		
0.15	42		
0.063	39		

Dry Mass of sample, g: 498

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	37.1
Sand	24.4
Fines <0.063mm	38.5

Grading Analysis		
D100	mm	
D60	mm	1.52
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

UKAS TESTING 2519

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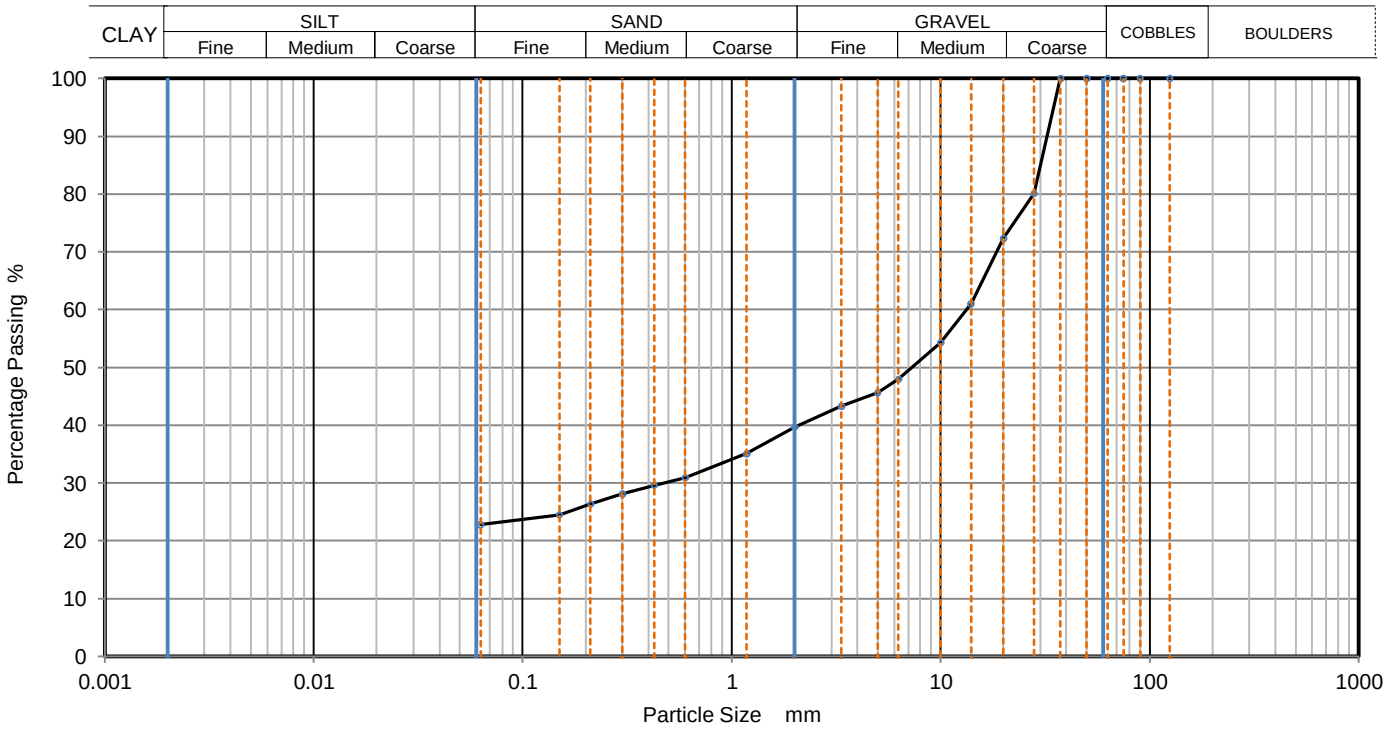
Checked and Approved

Initials: K.P

Date: 13/09/2018

PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BHR8
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Pale greyish brown very clayey sandy GRAVEL with occasional chalk deposits (gravel is fmc and sub-angular)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	80		
20	72		
14	61		
10	54		
6.3	48		
5	46		
3.35	43		
2	40		
1.18	35		
0.6	31		
0.425	30		
0.3	28		
0.212	26		
0.15	25		
0.063	23		

Dry Mass of sample, g	1200

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	60.3
Sand	16.9
Fines <0.063mm	22.8

Grading Analysis		
D100	mm	
D60	mm	13.3
D30	mm	0.475
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

UKAS TESTING 2519

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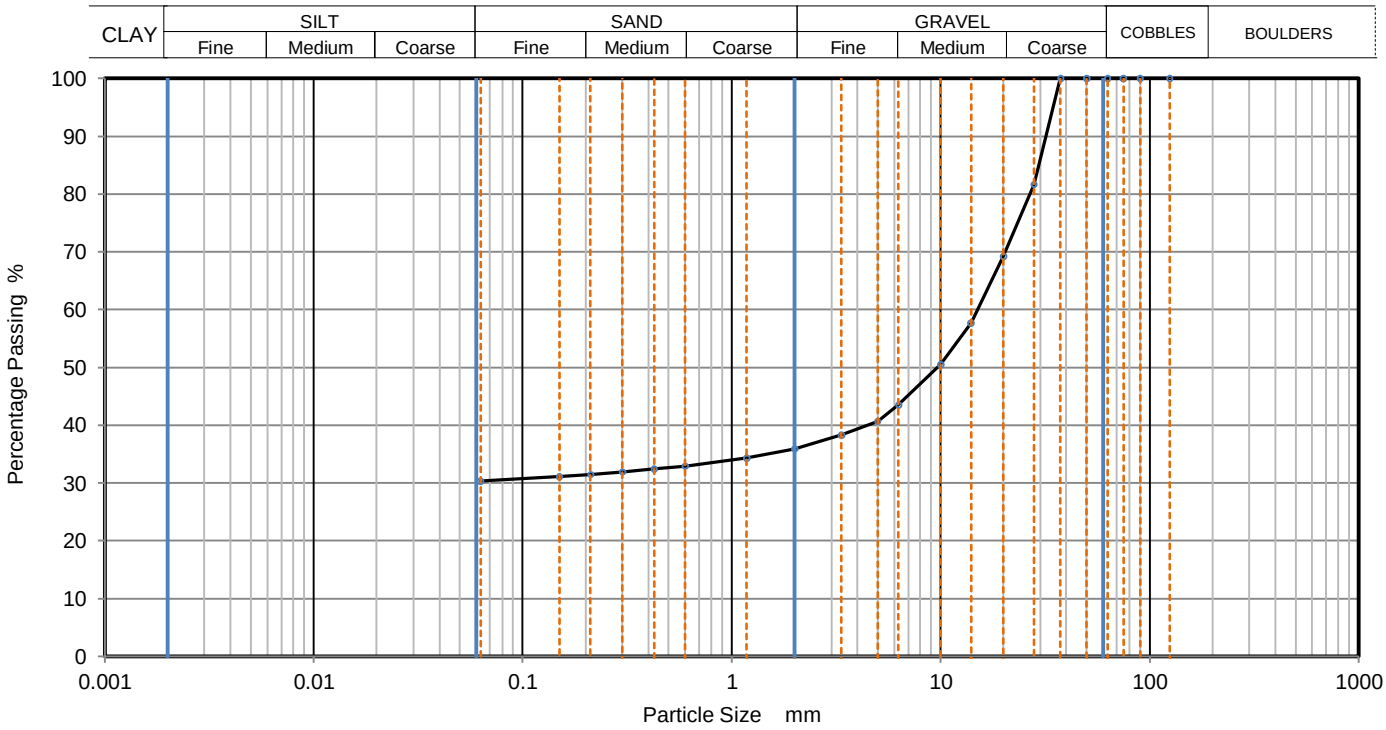
Date: 13/09/2018

PARTICLE SIZE DISTRIBUTION

				Job Ref	24894
				Borehole/Pit No.	BHR9
Site Name	Eastergate			Sample No.	-
Project No.	K4-	Client	Wilson Bailey	Depth Top	2.00 m
Soil Description	Reddish brown gravelly slightly sandy silty CLAY (gravel is fmc and sub-angular to sub-rounded)			Depth Base	- m
				Sample Type	D
				Samples received	06/07/2018
				Schedules received	20/07/2018
Test Method	BS1377:Part 2: 1990, clause 9.0			Project started	20/07/2018
				Date tested	01/08/2018



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	82		
20	69		
14	58		
10	51		
6.3	44		
5	41		
3.35	38		
2	36		
1.18	34		
0.6	33		
0.425	32		
0.3	32		
0.212	32		
0.15	31		
0.063	30		

Dry Mass of sample, g	735

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	64.1
Sand	5.6
Fines <0.063mm	30.3

Grading Analysis		
D100	mm	
D60	mm	15
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below

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Date: 13/09/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

Sulphate Content (Gravimetric Method) for 2:1 Soil: Water Extract and pH Value - Summary of Results

Tested in accordance with BS1377 : Part 3 : 1990, clause 5.3 and clause 9

Job No.	Project Name	Programme	
24894	Eastergate	Samples received	06/07/2018
		Schedule received	20/07/2018
Project No.	Client	Project started	20/07/2018
K4-	Wilson Bailey	Testing Started	03/09/2018

Hole No.	Sample				Soil description	Dry Mass passing 2mm	SO3 Content	SO4 Content	pH	Remarks
	Ref	Top m	Base m	Type		%	g/l	g/l		
BH1	-	1.00	-	D	Brown silty very gravelly CLAY with traces of rootlets (gravel is fmc and angular to sub-angular)	48	0.11	0.13	7.62	
BH3	-	1.00	-	D	Brown slightly sandy silty CLAY with dark grey carbonaceous deposits and rare fine sub-angular fine gravel	99	0.01	0.01	7.75	
BH6	-	2.00	-	D	Reddish brown and pale greyish brown calcareous very clayey sandy GRAVEL (gravel consist of fmc sub-angular flint and fm sub-angular to sub-rounded chalk gravel)	39	0.10	0.12	7.80	
BH7	-	1.00	-	D	Reddish brown gravelly slightly sandy silty CLAY with scattered calcaeous deposits (gravel is fmc and angular to sub-angular)	42	0.09	0.10	7.81	
BH11	-	1.00	-	D	Reddsh brown slightly gravelly slightly sandy silty CLAY (gravel is fm and sub-angular)	98	0.14	0.16	7.66	
BH17	-	1.00	-	D	Reddish brown gravelly slightly sandy silty CLAY with traces of calcareous deposits (gravel is fmc and angular to sub-angular)	48	0.16	0.19	7.69	
BHR1	-	1.00	-	D	Reddish brown slightly andy silty CLAY with dark grey carbonaceous stains and occasional rootlets	100	0.11	0.14	7.80	
BHR2	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with rare fine sub-angular gravel	99	0.20	0.24	7.71	
BHR4	-	1.00	-	D	Brown gravelly sandy silty CLAY with occasional roots and rootlets (gravel is fmc and angular to sub-angular)	41	0.08	0.09	7.70	
BHR8	-	1.00	-	D	Brown sandy gravelly CLAY with occasional roots and rootlets (gravel is fmc and sub-angular to sub-rounded)	50	0.11	0.13	7.60	
BHR9	-	1.00	-	D	Reddish brown slightly sandy silty CLAY with rare fine gravel	100	0.14	0.17	7.56	

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials K.P

Date: 13/09/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R1
Site Name	Eastergate			Depth m	0.30
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	1

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

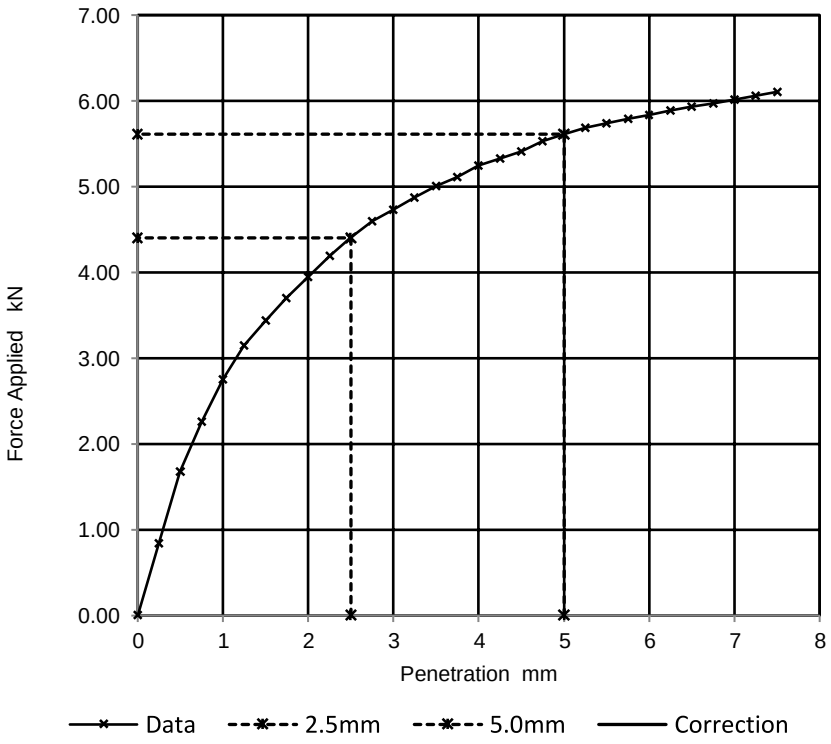
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	118	0.84
0.50	235	1.68
0.75	317	2.26
1.00	386	2.75
1.25	442	3.15
1.50	482	3.44
1.75	519	3.70
2.00	554	3.95
2.25	588	4.19
2.50	618	4.41
2.75	645	4.60
3.00	664	4.73
3.25	684	4.88
3.50	702	5.01
3.75	717	5.11
4.00	736	5.25
4.25	747	5.33
4.50	759	5.41
4.75	776	5.53
5.00	787	5.61
5.25	798	5.69
5.50	805	5.74
5.75	812	5.79
6.00	819	5.84
6.25	826	5.89
6.50	832	5.93
6.75	838	5.97
7.00	844	6.02
7.25	850	6.06
7.50	856	6.10

Force versus Penetration Plot



Remarks

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	33	28	**33**	11

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R2
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	2

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

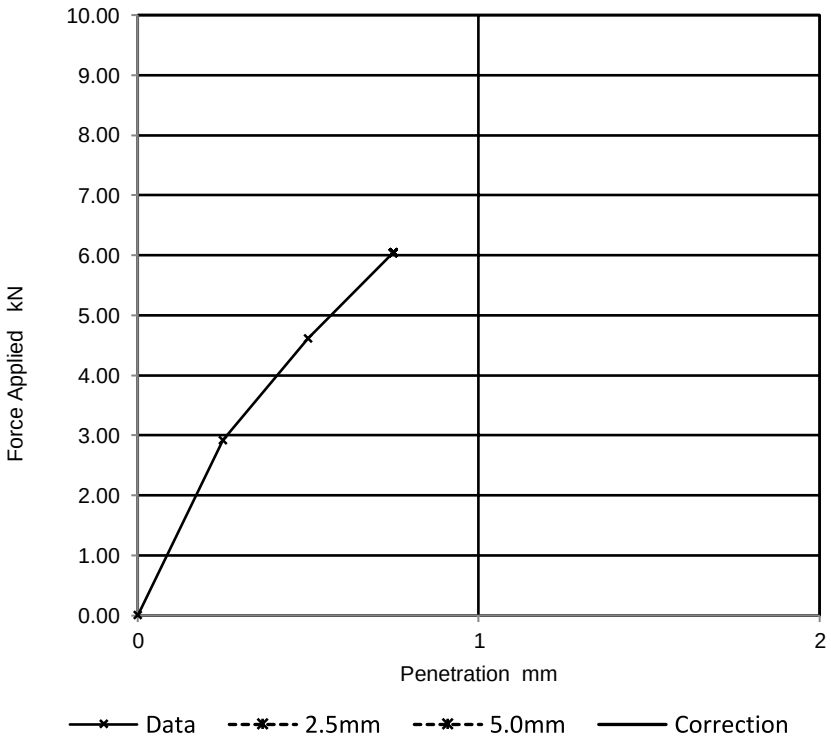
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	409	2.92
0.50	647	4.61
0.75	847	6.04
1.00		
1.25		
1.50		
1.75		
2.00		
2.25		
2.50		
2.75		
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	-	-	**>30**	10

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R3
Site Name	Eastergate			Depth m	0.30
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	3

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

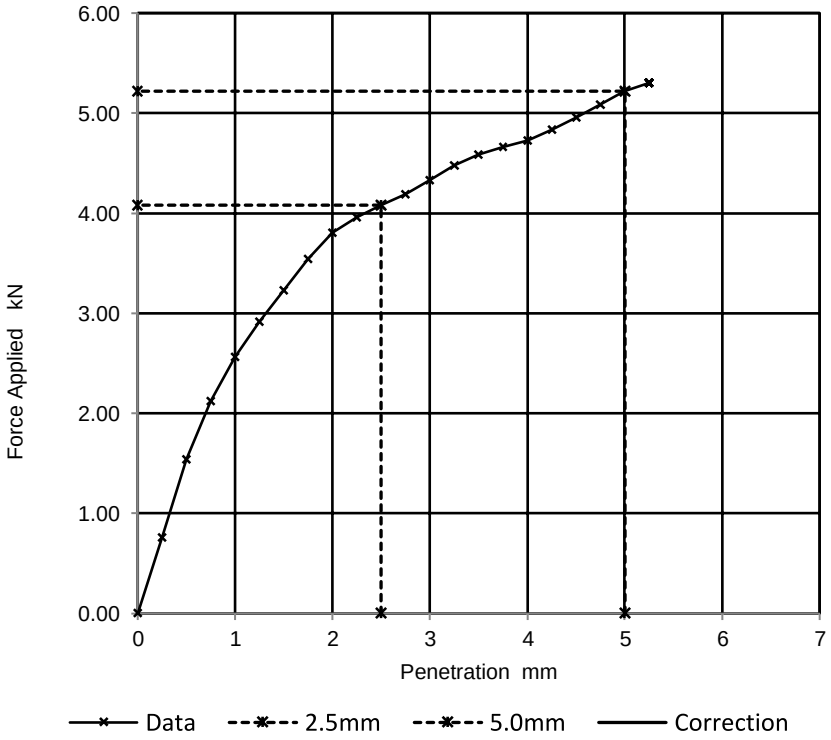
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	106	0.76
0.50	216	1.54
0.75	298	2.12
1.00	360	2.57
1.25	409	2.92
1.50	453	3.23
1.75	497	3.54
2.00	534	3.81
2.25	555	3.96
2.50	572	4.08
2.75	588	4.19
3.00	607	4.33
3.25	628	4.48
3.50	643	4.58
3.75	654	4.66
4.00	663	4.73
4.25	678	4.83
4.50	695	4.96
4.75	713	5.08
5.00	732	5.22
5.25	744	5.30
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	31	26	**31**	9.8

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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R4
Site Name	Eastergate			Depth m	0.30
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	4

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

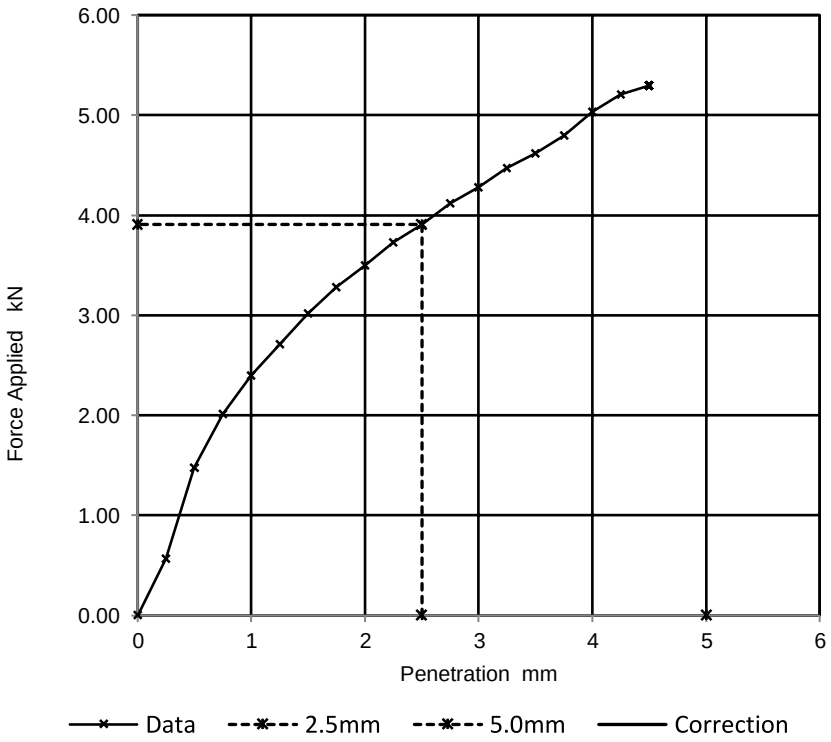
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	79	0.56
0.50	207	1.48
0.75	282	2.01
1.00	336	2.40
1.25	380	2.71
1.50	423	3.02
1.75	460	3.28
2.00	491	3.50
2.25	523	3.73
2.50	548	3.91
2.75	578	4.12
3.00	600	4.28
3.25	627	4.47
3.50	648	4.62
3.75	673	4.80
4.00	706	5.03
4.25	730	5.20
4.50	743	5.30
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	30	-	**30**	10

Test Report by K4 SOILS LABORATORY
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Watford Herts WD18 9RU

Tel: 01923 711 288
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R5
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	5

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

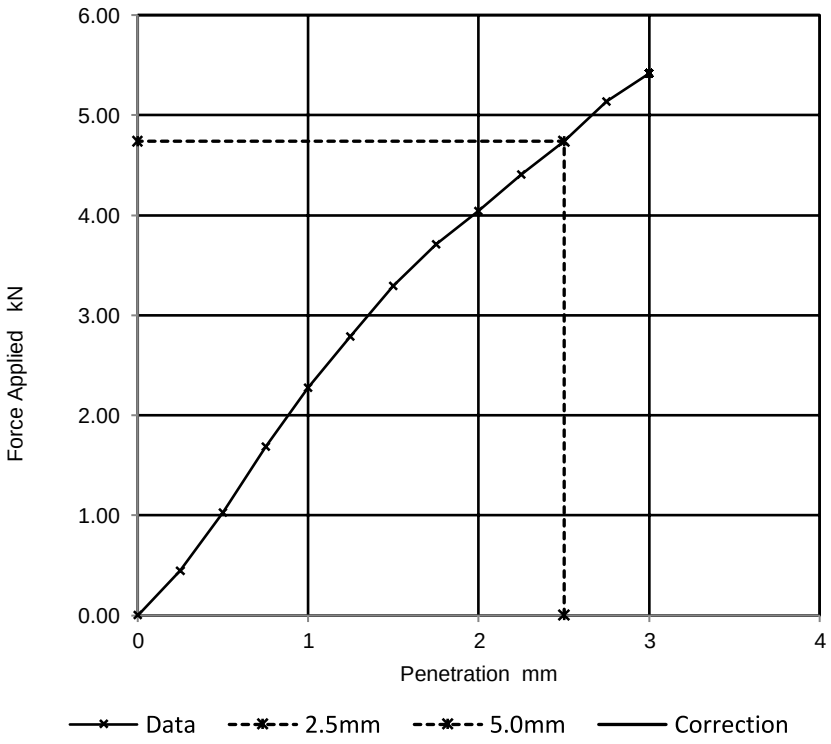
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	62	0.44
0.50	144	1.03
0.75	237	1.69
1.00	319	2.27
1.25	391	2.79
1.50	462	3.29
1.75	520	3.71
2.00	567	4.04
2.25	618	4.41
2.50	665	4.74
2.75	721	5.14
3.00	760	5.42
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	36	-	**36**	8.1

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

UKAS TESTING 2519

Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr)

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R6
Site Name	Eastergate			Depth m	0.25
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	6

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

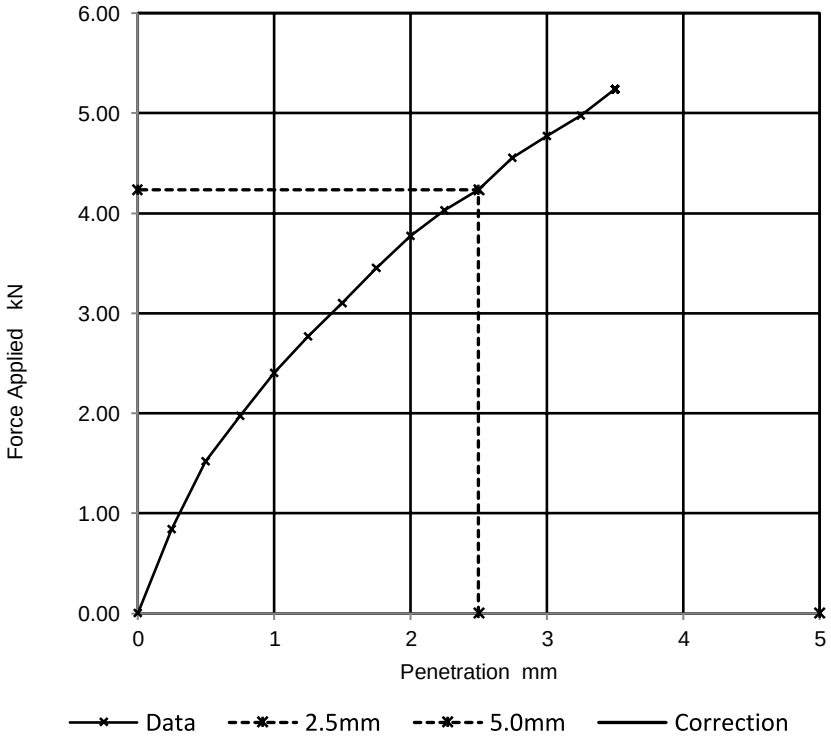
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	118	0.84
0.50	213	1.52
0.75	277	1.98
1.00	337	2.40
1.25	388	2.77
1.50	435	3.10
1.75	484	3.45
2.00	529	3.77
2.25	565	4.03
2.50	594	4.24
2.75	639	4.56
3.00	669	4.77
3.25	698	4.98
3.50	735	5.24
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	32	-	**32**	7.7

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Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R7
Site Name	Eastergate			Depth m	0.40
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	7

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

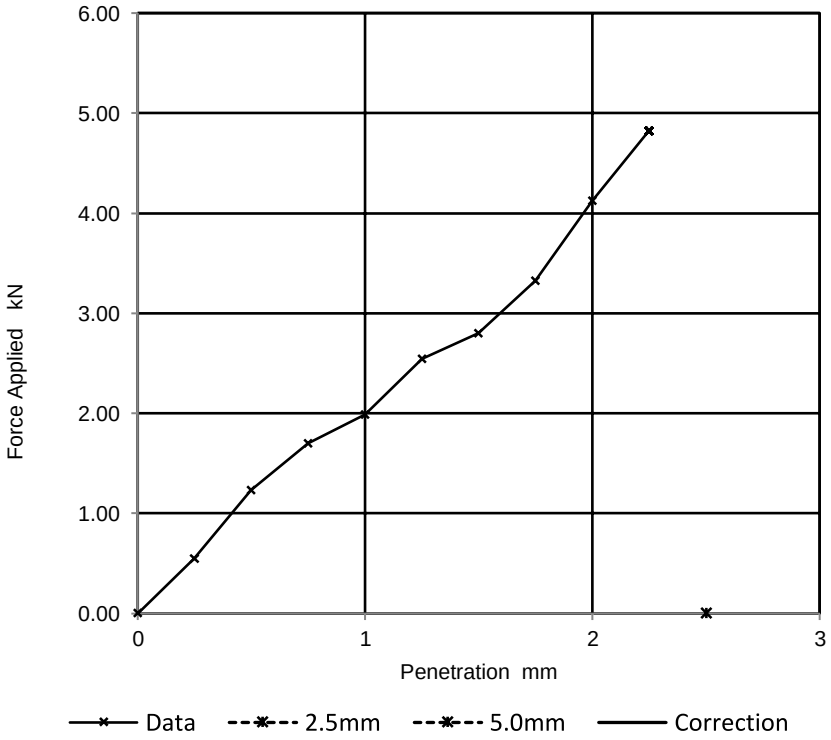
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	77	0.55
0.50	173	1.23
0.75	238	1.70
1.00	279	1.99
1.25	357	2.55
1.50	393	2.80
1.75	466	3.32
2.00	579	4.13
2.25	677	4.83
2.50		
2.75		
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	-	-	**>30**	5.2

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R8
Site Name	Eastergate			Depth m	0.30
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	8

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

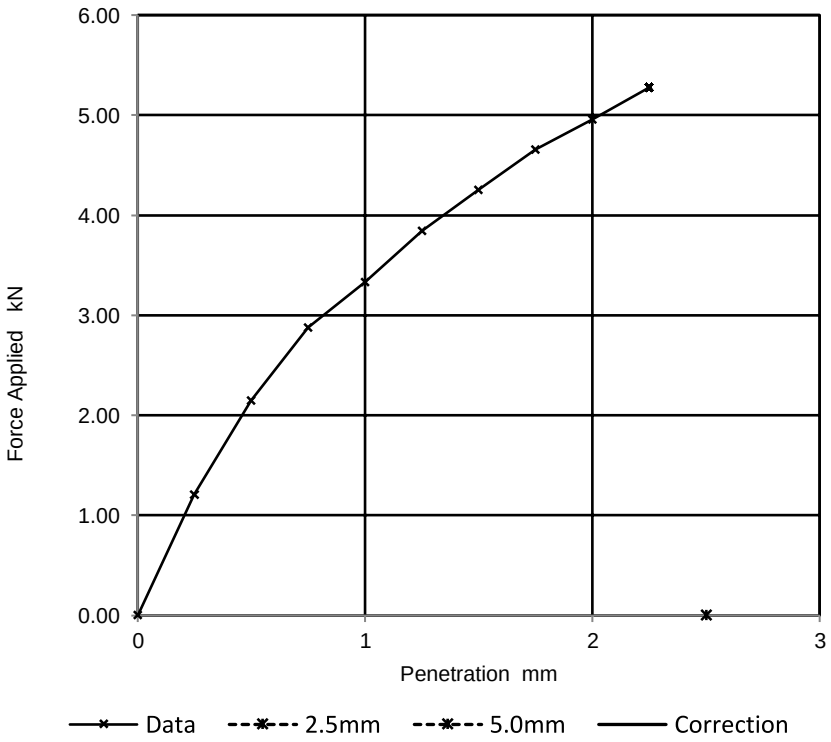
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	169	1.20
0.50	301	2.15
0.75	404	2.88
1.00	467	3.33
1.25	539	3.84
1.50	597	4.26
1.75	653	4.66
2.00	695	4.96
2.25	740	5.28
2.50		
2.75		
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	-	-	**>30**	9.0

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Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR R9
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	9

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

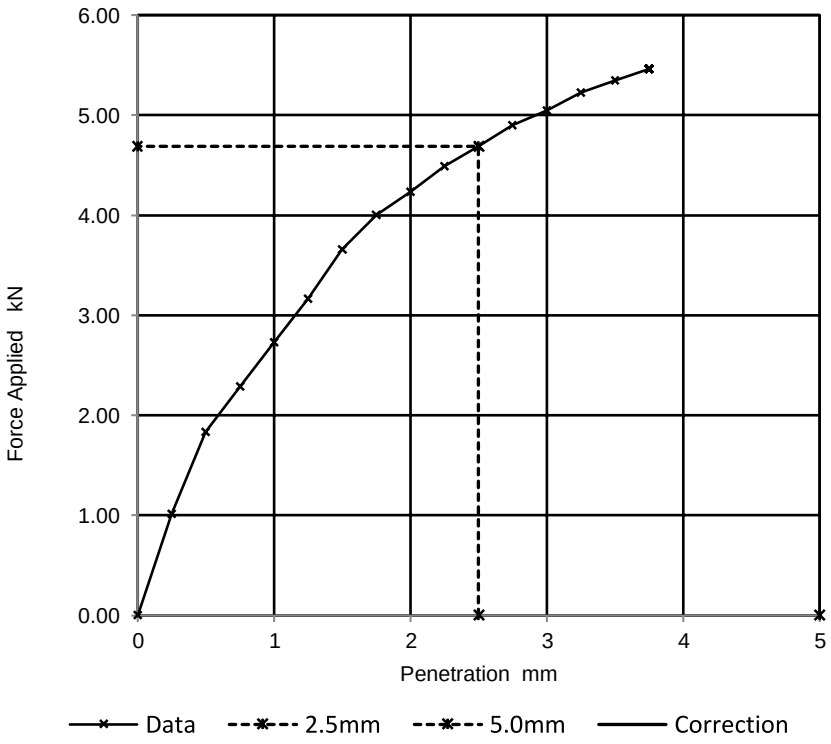
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	28	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	142	1.01
0.50	257	1.83
0.75	321	2.29
1.00	383	2.73
1.25	444	3.17
1.50	513	3.66
1.75	562	4.01
2.00	594	4.24
2.25	630	4.49
2.50	658	4.69
2.75	687	4.90
3.00	708	5.05
3.25	733	5.23
3.50	750	5.35
3.75	766	5.46
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	36	-	**36**	11

Test Report by K4 SOILS LABORATORY
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Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S1
Site Name	Eastergate			Depth m	0.25
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	10

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

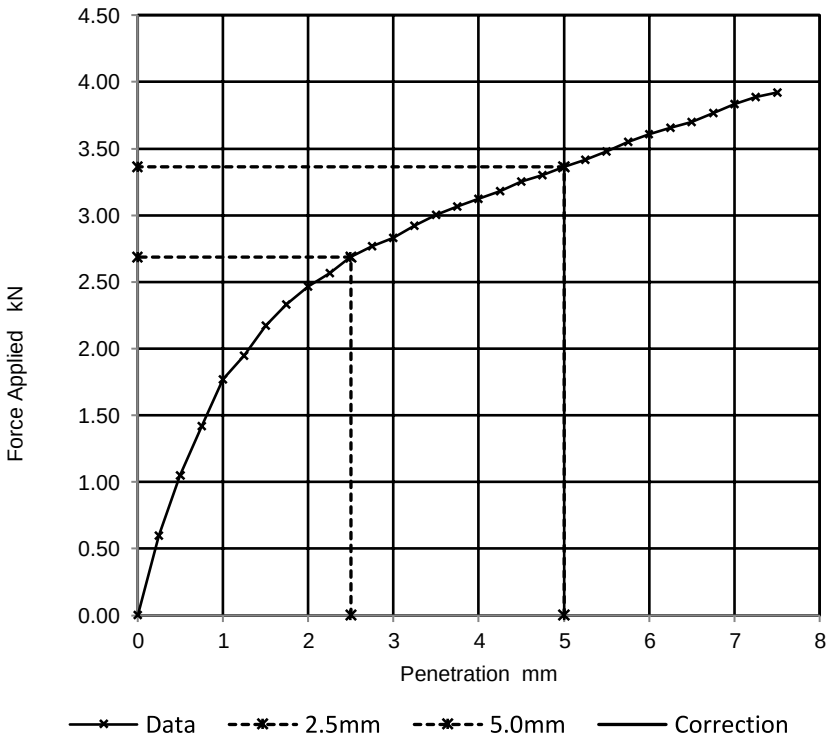
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	84	0.60
0.50	147	1.05
0.75	199	1.42
1.00	248	1.77
1.25	273	1.95
1.50	305	2.17
1.75	327	2.33
2.00	346	2.47
2.25	360	2.57
2.50	377	2.69
2.75	388	2.77
3.00	397	2.83
3.25	410	2.92
3.50	421	3.00
3.75	430	3.07
4.00	438	3.12
4.25	446	3.18
4.50	456	3.25
4.75	463	3.30
5.00	472	3.37
5.25	479	3.42
5.50	488	3.48
5.75	498	3.55
6.00	506	3.61
6.25	513	3.66
6.50	519	3.70
6.75	528	3.76
7.00	538	3.84
7.25	545	3.89
7.50	550	3.92

Force versus Penetration Plot



Remarks

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	20	17	**20**	11

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S2
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	11

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

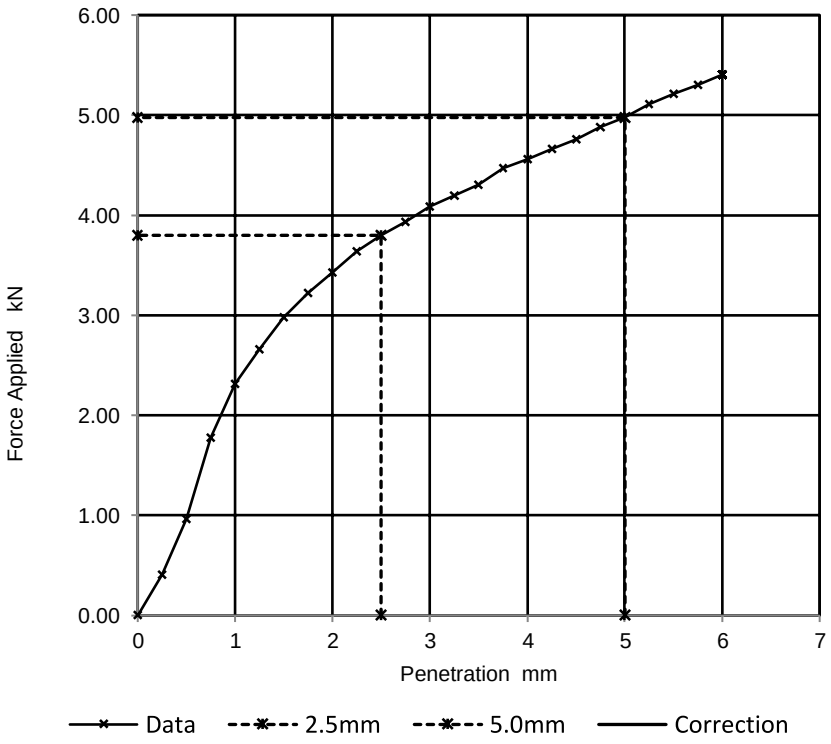
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	57	0.41
0.50	135	0.96
0.75	249	1.78
1.00	325	2.32
1.25	373	2.66
1.50	418	2.98
1.75	452	3.22
2.00	481	3.43
2.25	510	3.64
2.50	533	3.80
2.75	552	3.94
3.00	573	4.09
3.25	589	4.20
3.50	604	4.31
3.75	627	4.47
4.00	640	4.56
4.25	654	4.66
4.50	668	4.76
4.75	685	4.88
5.00	698	4.98
5.25	717	5.11
5.50	731	5.21
5.75	744	5.30
6.00	758	5.40
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	29	25	**29**	9.8

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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S3
Site Name	Eastergate			Depth m	0.25
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	12

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

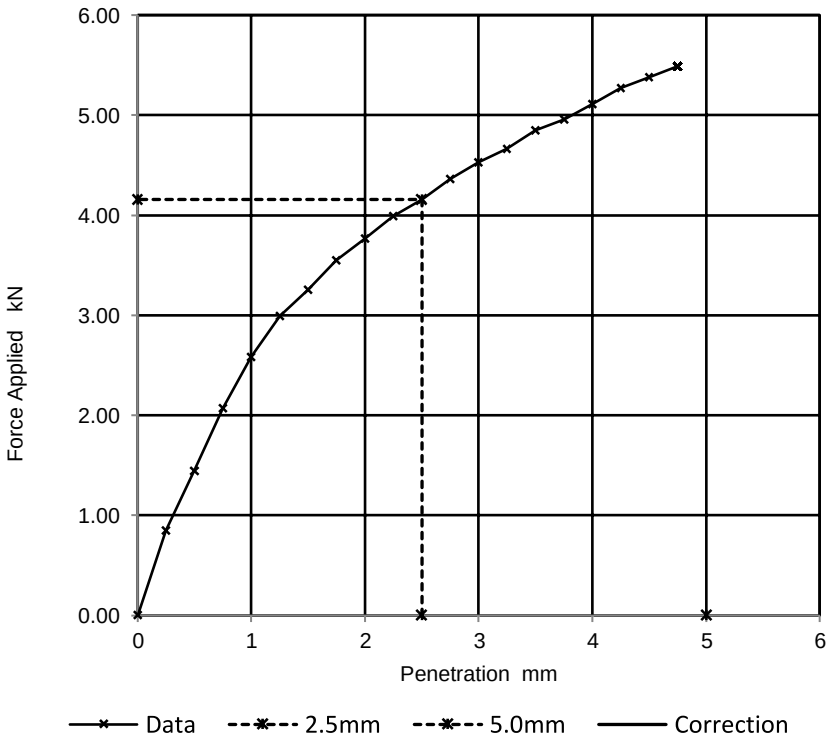
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	119	0.85
0.50	202	1.44
0.75	290	2.07
1.00	362	2.58
1.25	420	2.99
1.50	457	3.26
1.75	498	3.55
2.00	528	3.76
2.25	560	3.99
2.50	583	4.16
2.75	612	4.36
3.00	635	4.53
3.25	654	4.66
3.50	680	4.85
3.75	695	4.96
4.00	717	5.11
4.25	739	5.27
4.50	755	5.38
4.75	770	5.49
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	31	-	**31**	8.4

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S4
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	05/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	13

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

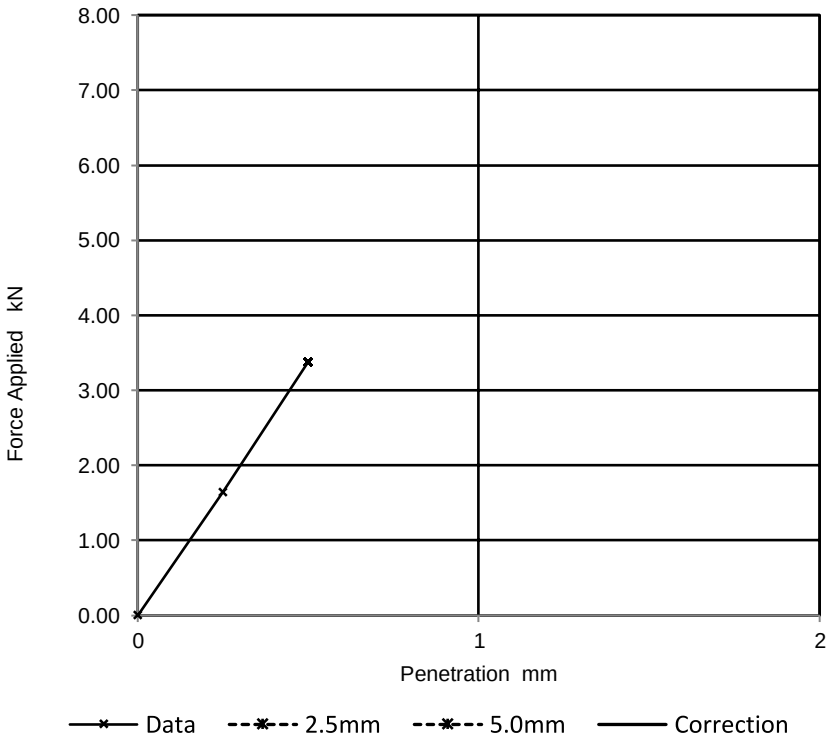
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	231	1.65
0.50	474	3.38
0.75		
1.00		
1.25		
1.50		
1.75		
2.00		
2.25		
2.50		
2.75		
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	-	-	**>30**	7.0

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

Tel: 01923 711 288
Email: James@k4soils.com

Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S5
Site Name	Eastergate			Depth m	0.20
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	14

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

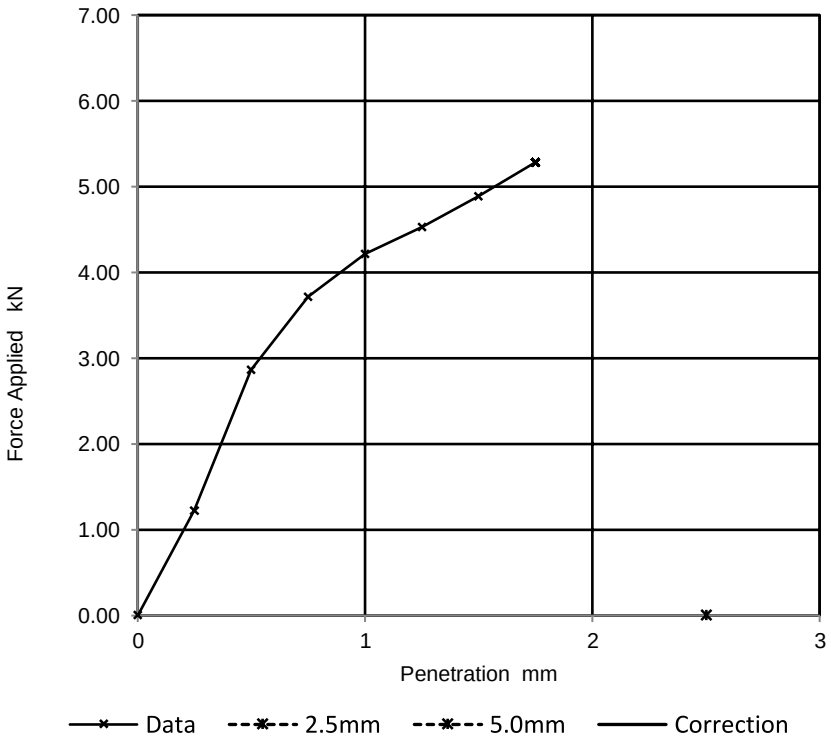
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	171	1.22
0.50	402	2.87
0.75	521	3.71
1.00	591	4.21
1.25	635	4.53
1.50	686	4.89
1.75	741	5.28
2.00		
2.25		
2.50		
2.75		
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	-	-	**>30**	8.6

Test Report by K4 SOILS LABORATORY
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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

In Situ California Bearing Ratio (CBR)

				Job Ref	24814
				CBR No.	CBR S6
Site Name	Eastergate			Depth m	0.25
Project No.	-	Client	Wilson Bailey	Date of Test	04/07/2018
Soil Description	Brown gravelly clayey silty SAND with occasional rootlets (gravel is fmc and sub-angular to sub-rounded)				
Test Method	BS1377 : Part 9 : 1990, clause 4.3			CBR Test Number	15

Note: Test only applicable when maximum particle size beneath the plunger does not exceed 20mm

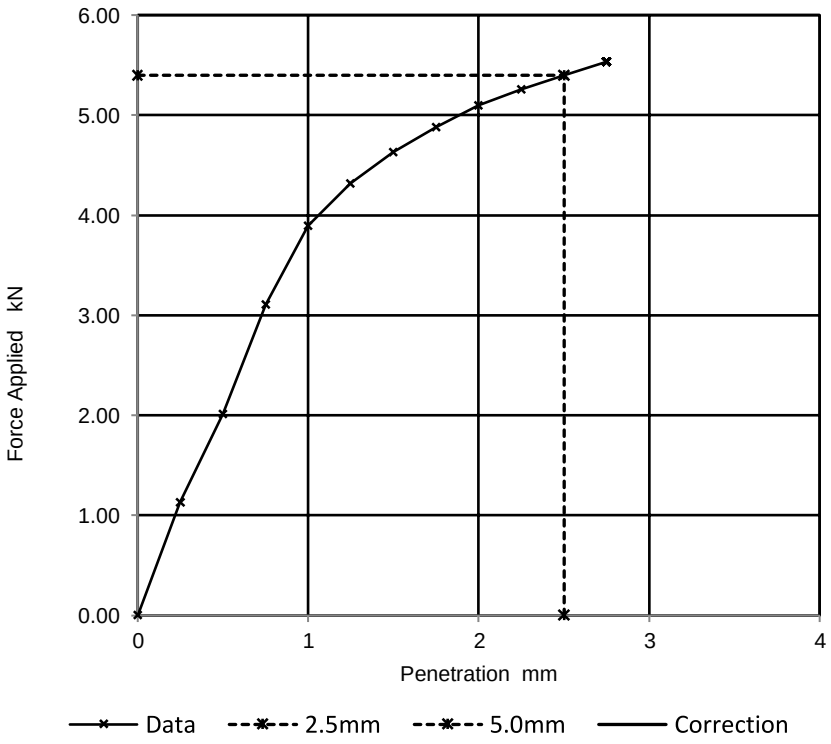
Rate if Strain	1.00	mm/min
Mass of Surcharge	4.6	kg
Proving Ring Factor	7.13	N/div

Temperature	26	0C
Environmental Conditions	Clear	

Readings

Penetration of Plunger mm	Force on Plunger: Dial Reading	Force on Plunger: Load kN
0.00	0	0.00
0.25	158	1.13
0.50	282	2.01
0.75	436	3.11
1.00	546	3.89
1.25	606	4.32
1.50	650	4.63
1.75	685	4.88
2.00	715	5.10
2.25	738	5.26
2.50	757	5.40
2.75	776	5.53
3.00		
3.25		
3.50		
3.75		
4.00		
4.25		
4.50		
4.75		
5.00		
5.25		
5.50		
5.75		
6.00		
6.25		
6.50		
6.75		
7.00		
7.25		
7.50		

Force versus Penetration Plot



Remarks

Maximum Kentledge Reached

Results

Curve correction applied	CBR Values, % Penetration 2.5mm	CBR Values, % Penetration 5mm	CBR Value	Moisture Content %
No	41	-	**41**	9.9

Test Report by K4 SOILS LABORATORY
Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU

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Checked and Approved

Initials: **J.P**

Date: 10/07/2018

Dominic Brightman
Wilson Bailey Geotechnical & Environmental Ltd
Carters Cottage
Sherrington
Wiltshire
BA12 0SN

DETS Ltd
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Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410
russell.jarvis@qtsenvironmental.com

DETS Report No: 18-78602

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	12/07/2018
Report Issue Number:	1
Reporting Date:	18/07/2018

Authorised by:

Kevin Old
Associate Director of Laboratory

Authorised by:

Russell Jarvis
Associate Director of Client Services

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH1	BH1	BH3	BH4	BH5
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.50	0.25
Reporting Date: 18/07/2018	**QTSE Sample No**	346713	346714	346715	346716	346717

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.2	7.3	6.9	7.2	6.4
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	1.1	0.4	0.7	0.5	1.1
Arsenic (As)	mg/kg	< 2	MCERTS	10	7	9	11	9
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2	< 0.2	< 0.2	< 0.2	0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	20	21	23	32	19
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	14	11	11	17	13
Lead (Pb)	mg/kg	< 3	MCERTS	36	13	15	26	25
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	14	20	16	21	13
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	57	39	49	57	50
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH7	BH7	BH9	BH11	BH11
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.25	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346718	346719	346720	346721	346722

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	6.2	7.0	6.6	6.2	7.1
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	0.9	0.7	1.4	0.9	0.7
Arsenic (As)	mg/kg	< 2	MCERTS	8	12	9	9	10
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	0.3	0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	19	33	20	21	30
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	10	18	13	12	16
Lead (Pb)	mg/kg	< 3	MCERTS	17	15	29	21	15
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	13	29	14	15	20
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	46	55	50	50	54
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH12	BH13	BH14	BH15	BH15
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.25	0.50	0.50	0.25
Reporting Date: 18/07/2018	**QTSE Sample No**	346723	346724	346725	346726	346727

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.3	6.6	7.1	7.0	6.7
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	0.6	1	0.7	0.5	0.8
Arsenic (As)	mg/kg	< 2	MCERTS	11	9	10	11	8
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	29	19	30	31	17
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	16	14	15	15	10
Lead (Pb)	mg/kg	< 3	MCERTS	14	22	18	15	18
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	23	14	22	31	13
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	51	49	52	55	42
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
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Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied			
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Eastergate Development Site	**TP / BH No**	BH17	BH18			
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied			
Order No: None Supplied	**Depth (m)**	0.25	0.50			
Reporting Date: 18/07/2018	**QTSE Sample No**	346728	346729			

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected			
pH	pH Units	N/a	MCERTS	6.7	7.1			
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	0.6	0.4			
Arsenic (As)	mg/kg	< 2	MCERTS	8	11			
W/S Boron	mg/kg	< 1	NONE	< 1	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	19	29			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	10	15			
Lead (Pb)	mg/kg	< 3	MCERTS	15	12			
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	14	24			
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3			
Zinc (Zn)	mg/kg	< 3	MCERTS	45	51			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
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Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	TP / BH No	BH1	BH1	BH3	BH4	BH5
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.25	0.50	0.25	0.50	0.25
Reporting Date: 18/07/2018	QTSE Sample No	346713	346714	346715	346716	346717

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.17
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.63
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.54
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.34
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.39
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.48
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.20
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.37
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.20
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.16
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	3.5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
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Maidstone
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Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	TP / BH No	BH7	BH7	BH9	BH11	BH11
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.25	0.50	0.25	0.25	0.50
Reporting Date: 18/07/2018	QTSE Sample No	346718	346719	346720	346721	346722

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.11	< 0.1	0.23	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.37	< 0.1	0.63	0.24	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	0.31	< 0.1	0.51	0.20	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.20	< 0.1	0.30	0.12	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.24	< 0.1	0.33	0.13	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.33	< 0.1	0.31	0.16	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.11	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.24	< 0.1	0.21	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.16	< 0.1	0.14	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	0.12	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2.1	< 1.6	2.9	< 1.6	< 1.6

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

DETS Ltd
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Rose Lane
Lenham Heath
Maidstone
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Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	TP / BH No	BH12	BH13	BH14	BH15	BH15
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.50	0.25	0.50	0.50	0.25
Reporting Date: 18/07/2018	QTSE Sample No	346723	346724	346725	346726	346727

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.20	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	0.16	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	0.12	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	0.12	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied			
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied			
Site Reference: Eastergate Development Site	TP / BH No	BH17	BH18			
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied			
Order No: None Supplied	Depth (m)	0.25	0.50			
Reporting Date: 18/07/2018	QTSE Sample No	346728	346729			

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH1	BH1	BH3	BH4	BH5
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.50	0.25
Reporting Date: 18/07/2018	**QTSE Sample No**	346713	346714	346715	346716	346717

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH7	BH7	BH9	BH11	BH11
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.25	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346718	346719	346720	346721	346722

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH12	BH13	BH14	BH15	BH15
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.25	0.50	0.50	0.25
Reporting Date: 18/07/2018	**QTSE Sample No**	346723	346724	346725	346726	346727

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied			
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied			
Site Reference: Eastergate Development Site	TP / BH No	BH17	BH18			
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied			
Order No: None Supplied	Depth (m)	0.25	0.50			
Reporting Date: 18/07/2018	QTSE Sample No	346728	346729			

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3			
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3			
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10			
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10			
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21			
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH1	BH1	BH3	BH4	BH5
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.50	0.25
Reporting Date: 18/07/2018	**QTSE Sample No**	346713	346714	346715	346716	346717

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	3
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 18-78602	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH7	BH7	BH9	BH11	BH11
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.25	0.50	0.25	0.25	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346718	346719	346720	346721	346722

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	7	< 2	10	3	< 2
o-xylene	ug/kg	< 2	MCERTS	4	< 2	5	2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Tel : 01622 850410

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	TP / BH No	BH12	BH13	BH14	BH15	BH15
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.50	0.25	0.50	0.50	0.25
Reporting Date: 18/07/2018	QTSE Sample No	346723	346724	346725	346726	346727

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	3	< 2	< 2	3
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Maidstone
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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 18-78602	Date Sampled	None Supplied	None Supplied			
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied	None Supplied			
Site Reference: Eastergate Development Site	TP / BH No	BH17	BH18			
Project / Job Ref: None Supplied	Additional Refs	None Supplied	None Supplied			
Order No: None Supplied	Depth (m)	0.25	0.50			
Reporting Date: 18/07/2018	QTSE Sample No	346728	346729			

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2			
Toluene	ug/kg	< 5	MCERTS	< 5	< 5			
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2			
p & m-xylene	ug/kg	< 2	MCERTS	4	< 2			
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2			
MTBE	ug/kg	< 5	MCERTS	< 5	< 5			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78602	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 18/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 346713	BH1	None Supplied	0.25	7.9	Brown sandy clay
^ 346714	BH1	None Supplied	0.50	10.5	Brown sandy clay with stones
^ 346715	BH3	None Supplied	0.25	8.9	Brown sandy clay
^ 346716	BH4	None Supplied	0.50	12.6	Brown sandy clay
^ 346717	BH5	None Supplied	0.25	8.1	Brown sandy clay
^ 346718	BH7	None Supplied	0.25	7.7	Brown sandy clay with vegetation
^ 346719	BH7	None Supplied	0.50	13.8	Brown sandy clay with stones
^ 346720	BH9	None Supplied	0.25	6	Brown sandy clay with vegetation
^ 346721	BH11	None Supplied	0.25	7.8	Brown sandy clay with vegetation
^ 346722	BH11	None Supplied	0.50	12.8	Brown sandy clay
^ 346723	BH12	None Supplied	0.50	14.3	Brown sandy clay with stones
^ 346724	BH13	None Supplied	0.25	8.5	Brown sandy clay with stones
^ 346725	BH14	None Supplied	0.50	13.9	Brown sandy clay
^ 346726	BH15	None Supplied	0.50	14	Brown sandy clay with stones
^ 346727	BH15	None Supplied	0.25	8.3	Brown sandy clay with vegetation
^ 346728	BH17	None Supplied	0.25	8.5	Brown sandy clay
^ 346729	BH18	None Supplied	0.50	13.3	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78602
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 18/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

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DETS Report No: 18-78603

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	12/07/2018
Report Issue Number:	1
Reporting Date:	18/07/2018

Authorised by:

Kevin Old
Associate Director of Laboratory

Authorised by:

Russell Jarvis
Associate Director of Client Services

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4480

Soil Analysis Certificate							
DETS Report No: 18-78603	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH R2	BH R4	BH R6	BH R8	BH R10
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.50	0.50	0.50	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346730	346731	346732	346733	346734

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	**MCERTS**	7.0	7.0	7.0	7.0	7.0
Total Organic Carbon (TOC)	%	< 0.1	**MCERTS**	1	0.7	0.6	0.5	0.7
Arsenic (As)	mg/kg	< 2	**MCERTS**	8	7	7	7	7
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	**MCERTS**	17	16	20	17	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	**MCERTS**	12	12	12	12	11
Lead (Pb)	mg/kg	< 3	**MCERTS**	23	13	12	13	14
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	**MCERTS**	12	12	14	13	11
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	**MCERTS**	89	48	44	49	67
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 18-78603	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH R2	BH R4	BH R6	BH R8	BH R10
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.50	0.50	0.50	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346730	346731	346732	346733	346734

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	0.13
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Soil Analysis Certificate - TPH CWG Banded							
DETS Report No: 18-78603	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH R2	BH R4	BH R6	BH R8	BH R10
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.50	0.50	0.50	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346730	346731	346732	346733	346734

Determinand	**Unit**	**RL**	**Accreditation**					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	**MCERTS**	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	**MCERTS**	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 18-78603	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Eastergate Development Site	**TP / BH No**	BH R2	BH R4	BH R6	BH R8	BH R10
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	**Depth (m)**	0.50	0.50	0.50	0.50	0.50
Reporting Date: 18/07/2018	**QTSE Sample No**	346730	346731	346732	346733	346734

Determinand	**Unit**	**RL**	**Accreditation**					
Benzene	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	**MCERTS**	< 2	2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	**MCERTS**	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	**MCERTS**	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78603	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 18/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 346730	BH R2	None Supplied	0.50	6.3	Brown sandy clay with stones
^ 346731	BH R4	None Supplied	0.50	5.9	Brown sandy clay
^ 346732	BH R6	None Supplied	0.50	9.7	Brown sandy clay with stones
^ 346733	BH R8	None Supplied	0.50	8.1	Brown sandy clay with stones
^ 346734	BH R10	None Supplied	0.50	6	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78603
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 18/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

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DETS Report No: 18-78604

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	12/07/2018
Report Issue Number:	1
Reporting Date:	18/07/2018

Authorised by:

Kevin Old
Associate Director of Laboratory

Authorised by:

Russell Jarvis
Associate Director of Client Services

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mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

UKAS TESTING 4480

Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3

DETS Report No: 18-78604	**Date Sampled**	None Supplied	
Wilson Bailey Geotechnical & Environmental Ltd	**Time Sampled**	None Supplied	
Site Reference: Eastergate Development Site	**TP / BH No**	Clay WAC	
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	
Order No: None Supplied	**Depth (m)**	None Supplied	
Reporting Date: 18/07/2018	**QTSE Sample No**	346735	

Determinand	**Unit**	**MDL**		**Landfill Waste Acceptance Criteria Limits**		
				Inert Waste Landfill	**Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
TOC[MU]	%	< 0.1	0.4	3%	5%	6%
Loss on Ignition	%	< 0.01	2.70	--	--	10%
BTEX[MU]	mg/kg	< 0.05	< 0.05	6	--	--
Sum of PCBs	mg/kg	< 0.1	< 0.1	1	--	--
Mineral Oil[MU]	mg/kg	< 10	< 10	500	--	--
Total PAH[MU]	mg/kg	< 1.7	< 1.7	100	--	--
pH[MU]	pH Units	N/a	7.0	--	>6	--
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1	--	To be evaluated	To be evaluated

Eluate Analysis	**2:1 mg/l**	**8:1 mg/l**		**Cumulative 10:1 mg/kg**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)**		
Arsenic[U]	< 0.01	< 0.01		< 0.2	0.5	2	25
Barium[U]	< 0.02	< 0.02		< 0.1	20	100	300
Cadmium[U]	< 0.0005	< 0.0005		< 0.02	0.04	1	5
Chromium[U]	< 0.005	< 0.005		< 0.20	0.5	10	70
Copper[U]	< 0.01	< 0.01		< 0.5	2	50	100
Mercury[U]	< 0.005	< 0.005		< 0.01	0.01	0.2	2
Molybdenum[U]	< 0.001	< 0.001		< 0.1	0.5	10	30
Nickel[U]	< 0.007	< 0.007		< 0.2	0.4	10	40
Lead[U]	< 0.005	< 0.005		< 0.2	0.5	10	50
Antimony[U]	< 0.005	< 0.005		< 0.06	0.06	0.7	5
Selenium[U]	< 0.005	< 0.005		< 0.1	0.1	0.5	7
Zinc[U]	< 0.005	< 0.005		< 0.2	4	50	200
Chloride[U]	2	1		14	800	15000	25000
Fluoride[U]	< 0.5	< 0.5		< 1	10	150	500
Sulphate[U]	1	< 1		< 20	1000	20000	50000
TDS	58	43		447	4000	60000	100000
Phenol Index	< 0.01	< 0.01		< 0.5	1	-	-
DOC	3.3	9.2		85.5	500	800	1000
Leach Test Information							
Sample Mass (kg)	0.20						
Dry Matter (%)	85.4						
Moisture (%)	17						
Stage 1							
Volume Eluate L2 (litres)	0.32						
Filtered Eluate VE1 (litres)	0.20						

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and QTS Environmental cannot be held responsible for any discrepencies with current legislation
M Denotes MCERTS accredited test
U Denotes ISO17025 accredited test

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78604	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 18/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 346735	Clay WAC	None Supplied	None Supplied	14.5	Brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78604
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 18/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

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DETS Report No: 18-78605

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	12/07/2018
Report Issue Number:	1
Reporting Date:	18/07/2018

Authorised by:

Kevin Old
Associate Director of Laboratory

Authorised by:

Russell Jarvis
Associate Director of Client Services

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Soil Analysis Certificate							
DETS Report No: 18-78605	Date Sampled	None Supplied					
Wilson Bailey Geotechnical & Environmental Ltd	Time Sampled	None Supplied					
Site Reference: Eastergate Development Site	TP / BH No	TS/BS					
Project / Job Ref: None Supplied	Additional Refs	None Supplied					
Order No: None Supplied	Depth (m)	None Supplied					
Reporting Date: 18/07/2018	QTSE Sample No	346736					

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected				
pH	pH Units	N/a	MCERTS	7.1				
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	1.2				
Arsenic (As)	mg/kg	< 2	MCERTS	10				
W/S Boron	mg/kg	< 1	NONE	< 1				
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3				
Chromium (Cr)	mg/kg	< 2	MCERTS	17				
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2				
Copper (Cu)	mg/kg	< 4	MCERTS	14				
Lead (Pb)	mg/kg	< 3	MCERTS	35				
Mercury (Hg)	mg/kg	< 1	NONE	< 1				
Nickel (Ni)	mg/kg	< 3	MCERTS	13				
Selenium (Se)	mg/kg	< 3	NONE	< 3				
Zinc (Zn)	mg/kg	< 3	MCERTS	136				
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C
Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 18-78605	**Date Sampled**	None Supplied					
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied					
Site Reference: Eastergate Development Site	**TP / BH No**	TS/BS					
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied					
Order No: None Supplied	**Depth (m)**	None Supplied					
Reporting Date: 18/07/2018	**QTSE Sample No**	346736					

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Phenanthrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Fluoranthene	mg/kg	< 0.1	**MCERTS**	0.12				
Pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Chrysene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.12				
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	< 0.1				
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	< 1.6				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - TPH CWG Banded							
DETS Report No: 18-78605	**Date Sampled**	None Supplied					
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied					
Site Reference: Eastergate Development Site	**TP / BH No**	TS/BS					
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied					
Order No: None Supplied	**Depth (m)**	None Supplied					
Reporting Date: 18/07/2018	**QTSE Sample No**	346736					

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01				
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05				
Aliphatic >C8 - C10	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C10 - C12	mg/kg	< 2	**MCERTS**	< 2				
Aliphatic >C12 - C16	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C16 - C21	mg/kg	< 3	**MCERTS**	< 3				
Aliphatic >C21 - C34	mg/kg	< 10	**MCERTS**	< 10				
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21				
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01				
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05				
Aromatic >C8 - C10	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C10 - C12	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C12 - C16	mg/kg	< 2	**MCERTS**	< 2				
Aromatic >C16 - C21	mg/kg	< 3	**MCERTS**	< 3				
Aromatic >C21 - C35	mg/kg	< 10	**MCERTS**	< 10				
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21				
Total >C5 - C35	mg/kg	< 42	NONE	< 42				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - BTEX / MTBE							
DETS Report No: 18-78605	Date Sampled	None Supplied					
Wilson Bailey Geotechnical & Environmental L	Time Sampled	None Supplied					
Site Reference: Eastergate Development Site	TP / BH No	TS/BS					
Project / Job Ref: None Supplied	Additional Refs	None Supplied					
Order No: None Supplied	Depth (m)	None Supplied					
Reporting Date: 18/07/2018	QTSE Sample No	346736					

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2				
Toluene	ug/kg	< 5	MCERTS	< 5				
Ethylbenzene	ug/kg	< 2	MCERTS	< 2				
p & m-xylene	ug/kg	< 2	MCERTS	10				
o-xylene	ug/kg	< 2	MCERTS	4				
MTBE	ug/kg	< 5	MCERTS	< 5				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78605	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 18/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 346736	TS/BS	None Supplied	None Supplied	5.3	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

& samples received in inappropriate containers for hydrocarbon analysis

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78605
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 18/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

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AR As Received

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DETS Report No: 18-78606

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	12/07/2018
Report Issue Number:	1
Reporting Date:	20/07/2018

Authorised by:

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Associate Director of Laboratory

Authorised by:

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BS3882 Topsoil Suite							
DETS Report No: 18-78606		Date Sampled	None Supplied	Compliance with Range			
Wilson Bailey Geotechnical & Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Eastergate Development Site		TP / BH No	TS/BS				
Project / Job Ref: None Supplied		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	None Supplied				
Reporting Date: 20/07/2018		QTSE Sample No	346737				
Determinand	**Reporting Unit**	**RL**					
Soil Texture							
Clay Content (S)	%	N/a	21.8	5 - 35			
Silt Content (S)	%	N/a	58.9	0 - 65			
Sand Content (S)	%	N/a	19.3	**30 - 85**			
Textural Class (S)	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	3.50	**Clay Content 5 - 20%**			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	**5 - 30**	2 - 20	**5 - 20**
Coarse Fragment Content							
>2mm (S)	%	N/a	3.2	0 - 30	0 - 30	0 - 30	0 - 30
>20mm (S)	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm (S)	%	N/a	0.0	0	0	0	0
pH MU	pH Units	N/a	7.3	5.5 - 8.5	**3.5 - 5.5**	3.5 - 9.0	**7.5 - 9.0**
Carbonate	%	< 0.1	< 0.1				**> 1**
Available Plant Nutrients							
Total Nitrogen (S)	%	< 0.01	0.14	**≥ 0.15**	**≥ 0.15**		**≥ 0.15**
Phosphorus (Extractable) (S)	mg/l	< 3	31	16 - 140	16 - 140	**≤ 15**	16 - 140
Potassium (Extractable) (S)	mg/l	< 20	236	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) (S)	mg/l	< 1	78	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio (S)	:1	< 0.1	10.4	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium (S)	%	< 0.1	1.0				
Phytotoxic Elements (by soil pH)				**Multipurpose & Specific Purpose Topsoils at pH range**			
				< 6.0	6.0 - 7.0		> 7.0
Zinc MU	mg/kg	< 3	126	< 200	< 200		< 300
Copper MU	mg/kg	< 4	13	< 100	< 135		< 200
Nickel MU	mg/kg	< 3	12	< 60	< 75		< 110
Visible Contaminants (Air Dried Soil)							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
Additional Analytes							
Available Sodium (S)	mg/l	< 1	18				
Available Calcium (S)	mg/l	< 1	1310				
Electrical Conductivity	uS/cm	< 5	1938	3300			
OVERALL COMPLIANCY				N	N	N	N

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and QTS Environmental cannot be held responsible for any discrepencies with current legislation
M Denotes MCERTS accredited test
U Denotes ISO17025 accredited test

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4480

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78606	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 20/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 346737	TS/BS	None Supplied	None Supplied	5.3	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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4480

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78606
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 20/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received

Dominic Brightman
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DETS Report No: 18-78859

Site Reference:	Eastergate Development Site
Project / Job Ref:	None Supplied
Order No:	None Supplied
Sample Receipt Date:	12/07/2018
Sample Scheduled Date:	16/07/2018
Report Issue Number:	1
Reporting Date:	20/07/2018

Authorised by:

Kevin Old
Associate Director of Laboratory

Authorised by:

Russell Jarvis
Associate Director of Client Services

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Soil Analysis Certificate - Organochlorine Pesticides							
DETS Report No: 18-78859	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied		
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied		
Site Reference: Eastergate Development Site	**TP / BH No**	BH14	BH15	BH17	BH18		
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	**Depth (m)**	0.50	0.25	0.25	0.50		
Reporting Date: 20/07/2018	**QTSE Sample No**	347623	347624	347625	347626		

Determinand	**Unit**	**RL**	**Accreditation**					
Aldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
alpha-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
beta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
cis-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
delta-HCH	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Dieldrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Endosulfan A	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Endosulfan B	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Endrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
gamma-HCH (Lindane)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Heptachlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Heptachlor epoxide	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Hexachlorobenzene (HCB)	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Isodrin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Methoxychlor	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
o,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
o,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
o,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
p,p' - DDD	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
p,p' - DDE	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
p,p' - DDT	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
trans-chlordane	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	
Trifluralin	mg/kg	< 0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - Organophosphorus Pesticides							
DETS Report No: 18-78859	**Date Sampled**	None Supplied	None Supplied	None Supplied	None Supplied		
Wilson Bailey Geotechnical & Environmental L	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied		
Site Reference: Eastergate Development Site	**TP / BH No**	BH14	BH15	BH17	BH18		
Project / Job Ref: None Supplied	**Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	**Depth (m)**	0.50	0.25	0.25	0.50		
Reporting Date: 20/07/2018	**QTSE Sample No**	347623	347624	347625	347626		

Determinand	**Unit**	**RL**	**Accreditation**					
Azinphos-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Chlorfenvinphos, alpha	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Chlorfenvinphos, beta	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Chlorpyriphos-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Diazinon	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Dichlorvos	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Dimethoate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Fenitrothion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Fenthion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Malathion	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Mevinphos, €	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Mevinphos, (Z)	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Parathion-ethyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Parathion-methyl	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	
Phorate	mg/kg	< 0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 18-78859	
Wilson Bailey Geotechnical & Environmental Ltd	
Site Reference: Eastergate Development Site	
Project / Job Ref: None Supplied	
Order No: None Supplied	
Reporting Date: 20/07/2018	

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
^ 347623	BH14	None Supplied	0.50	12.7	Brown sandy clay
^ 347624	BH15	None Supplied	0.25	8.7	Brown sandy clay
^ 347625	BH17	None Supplied	0.25	8.4	Brown sandy clay
^ 347626	BH18	None Supplied	0.50	13.4	Brown sandy clay

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample I/S

Unsuitable Sample U/S

^ no sampling date provided; unable to confirm if samples are within acceptable holding times

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-78859
Wilson Bailey Geotechnical & Environmental Ltd
Site Reference: Eastergate Development Site
Project / Job Ref: None Supplied
Order No: None Supplied
Reporting Date: 20/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received