

TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 54964.2.1.5

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

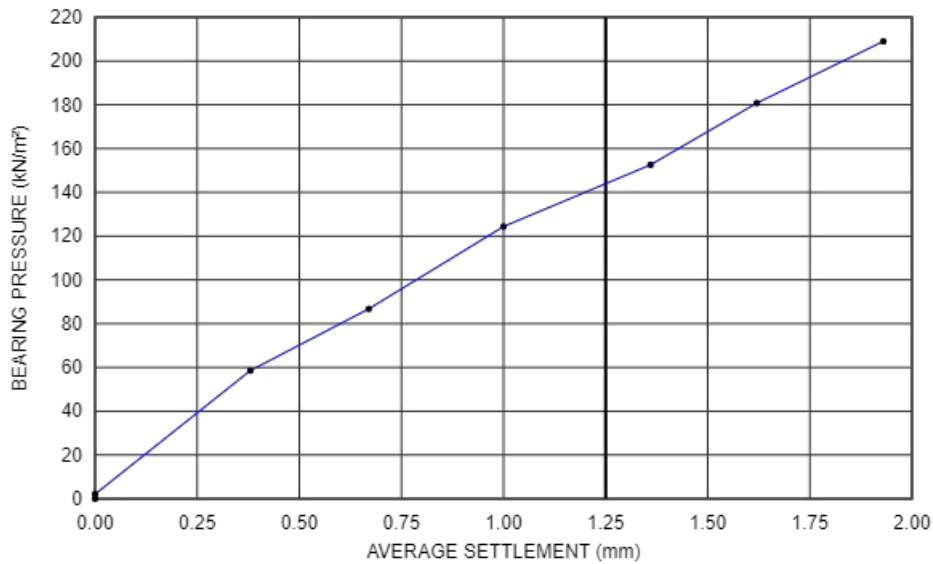
DATE COMPLETED: 19/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 4 Layer 5 Test 1 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 16T Roller Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 144 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 17 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 17 %

Remarks:

Report Format: STP S8 rev.1

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Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 54964.2.1.5

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	20.72	20.67	20.80	0.00	0.00	0.00	0.00
9.5	58.5	20.34	20.24	20.47	0.38	0.43	0.33	0.38
14.1	86.7	20.07	20.01	20.11	0.65	0.66	0.69	0.67
20.2	124.3	19.76	19.77	19.67	0.96	0.90	1.13	1.00
24.8	152.6	19.44	19.37	19.31	1.28	1.30	1.49	1.36
29.4	180.8	19.15	19.11	19.07	1.57	1.56	1.73	1.62
34.0	209.0	18.86	18.80	18.74	1.86	1.87	2.06	1.93

Remarks:

 For and on behalf of CET
 Lee Honey - Operations Supervisor



 Approved Signatory
 22-Nov-18


0927

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 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 54964.2.1.6

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

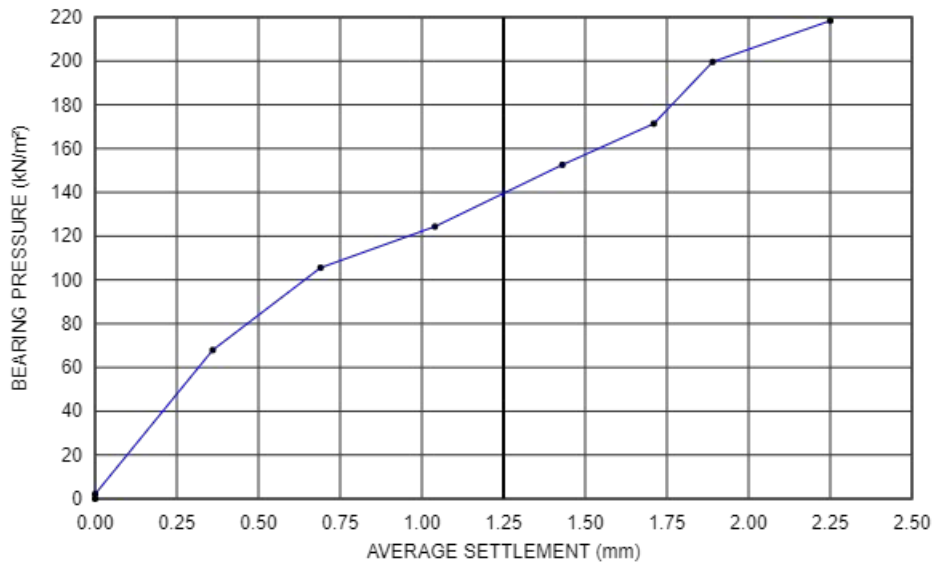
DATE COMPLETED: 19/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 4 Layer 5 Test 2 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 16T Roller Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 139 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 16 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 16 %

Remarks:

Report Format: STP S8 rev.1

TEST REPORT:
Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 54964.2.1.6

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	20.72	20.80	20.64	0.00	0.00	0.00	0.00
11.0	67.9	20.34	20.46	20.27	0.38	0.34	0.37	0.36
17.2	105.5	20.04	20.07	19.99	0.68	0.73	0.65	0.69
20.2	124.3	19.64	19.75	19.64	1.08	1.05	1.00	1.04
24.8	152.6	19.30	19.27	19.30	1.42	1.53	1.34	1.43
27.9	171.4	19.01	19.03	19.00	1.71	1.77	1.64	1.71
32.5	199.6	18.89	18.84	18.77	1.83	1.96	1.87	1.89
35.5	218.4	18.55	18.47	18.39	2.17	2.33	2.25	2.25

Remarks:

 For and on behalf of CET
 Lee Honey - Operations Supervisor



 Approved Signatory
 22-Nov-18


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TEST REPORT: **Estimation of In-Situ Dry Density And Relative Compaction**
 CET's In-House Procedure STP NDM-S - Method C (Direct transmission)

REPORT NUMBER: 491204 / 55649.1.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

DATE COMPLETED: 26/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

GAUGE MODEL No: 3440 SUPPLIER: Erith

GAUGE SERIAL No: 15410 MATERIAL: 6F2

CORRECTION FACTORS: Bulk $\gamma=1$ LOCATION: Gas Holder 3
 Moisture $b=1$

VARIATIONS FROM PROCEDURE: N/A

MAX DRY DENSITY: 2.03 Mg/m³ COMPLIANCE LIMITS: 95% Minimum Compaction

TEST RESULTS

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Gas Holder 3 Layer 1 Test 1	2.061	0.126	2.061	6.5	1.94	95
	2.052	0.110	2.052	5.7		
Gas Holder 3 Layer 1 Test 2	2.057	0.122	2.057	6.3	1.94	96
	2.068	0.117	2.068	6.0		
Gas Holder 3 Layer 2 Test 1	2.060	0.128	2.060	6.6	1.93	95
	2.055	0.121	2.055	6.3		
Gas Holder 3 Layer 2 Test 2	2.046	0.115	2.046	6.0	1.93	95
	2.057	0.122	2.057	6.3		

Remarks:
 * Denotes specification non-compliance (if applicable)

For and on behalf of CET
 Matt Butt - Operations Supervisor



Approved Signatory
 27-Nov-18



0927

Report Format: S/Rep STP NDM-S/rev.2

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 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55649.2.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

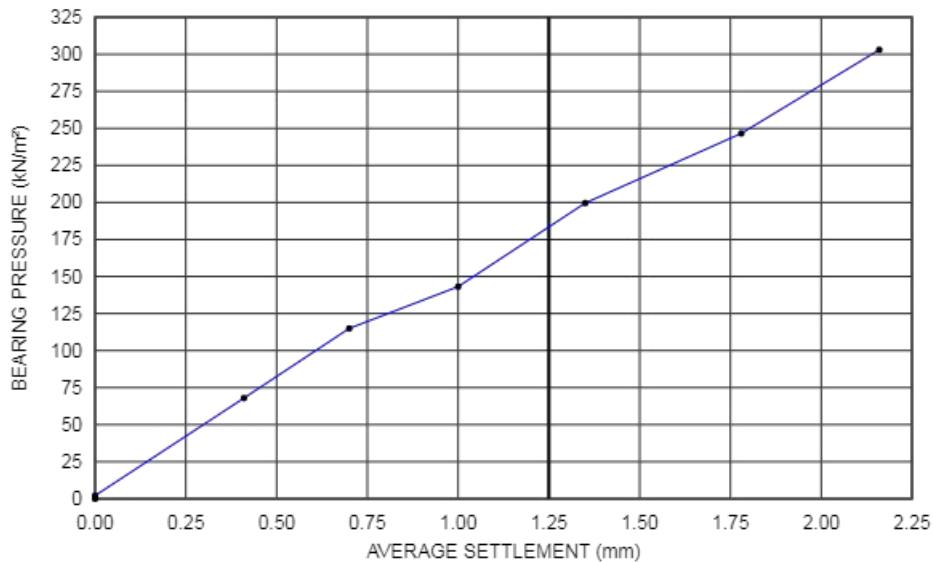
DATE COMPLETED: 26/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 1 Test 1 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 13T Excavator Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 183 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 26 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 26 %

Remarks:

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REPORT NUMBER:

491204 / 55649.2.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	21.10	20.52	20.68	0.00	0.00	0.00	0.00
11.0	67.9	20.77	20.03	20.27	0.33	0.49	0.41	0.41
18.7	114.9	20.51	19.73	19.97	0.59	0.79	0.71	0.70
23.3	143.2	20.30	19.45	19.54	0.80	1.07	1.14	1.00
32.5	199.6	19.98	19.05	19.22	1.12	1.47	1.46	1.35
40.1	246.6	19.62	18.58	18.77	1.48	1.94	1.91	1.78
49.3	303.0	19.27	18.16	18.39	1.83	2.36	2.29	2.16

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 27-Nov-18


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 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55649.2.1.2

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

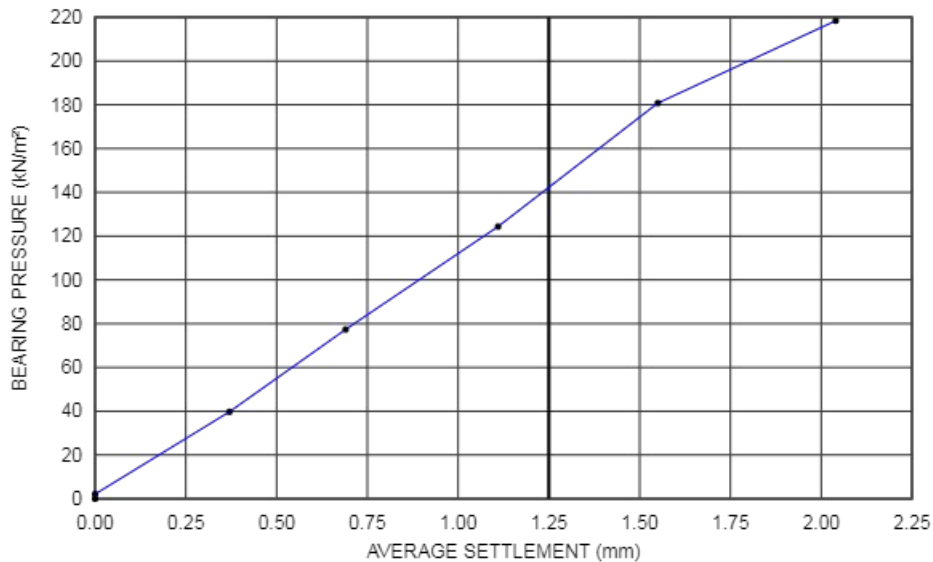
DATE COMPLETED: 26/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 1 Test 2 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 13T Excavator Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 142 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 17 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 17 %

Remarks:

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 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55649.2.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	20.40	20.33	20.55	0.00	0.00	0.00	0.00
6.5	39.7	20.02	19.97	20.19	0.38	0.36	0.36	0.37
12.6	77.3	19.73	19.73	19.74	0.67	0.60	0.81	0.69
20.2	124.3	19.33	19.38	19.24	1.07	0.95	1.31	1.11
29.4	180.8	18.86	19.00	18.76	1.54	1.33	1.79	1.55
35.5	218.4	18.30	18.51	18.34	2.10	1.82	2.21	2.04

Remarks:

For and on behalf of CET
 Matt Butt - Operations Supervisor



Approved Signatory
 27-Nov-18



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REPORT NUMBER: 491204 / 55649.2.1.3

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

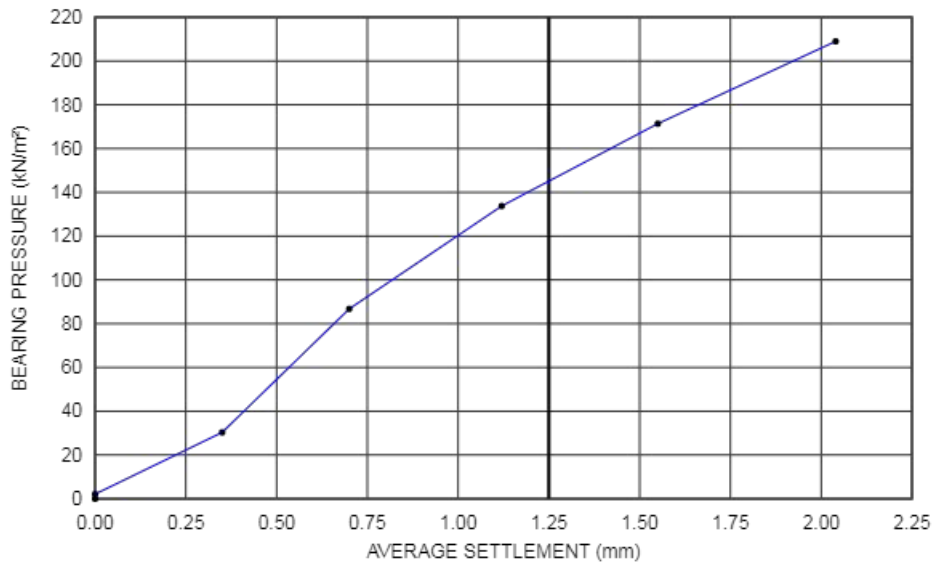
DATE COMPLETED: 26/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 2 Test 1 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 13T Excavator Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 145 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 17 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 17 %

Remarks:

Report Format: STP S8 rev.1

TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55649.2.1.3

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	20.30	20.25	20.38	0.00	0.00	0.00	0.00
4.9	30.3	19.90	19.92	20.07	0.40	0.33	0.31	0.35
14.1	86.7	19.52	19.58	19.73	0.78	0.67	0.65	0.70
21.7	133.8	19.06	19.14	19.37	1.24	1.11	1.01	1.12
27.9	171.4	18.60	18.66	19.02	1.70	1.59	1.36	1.55
34.0	209.0	18.03	18.12	18.67	2.27	2.13	1.71	2.04

Remarks:

For and on behalf of CET
 Matt Butt - Operations Supervisor



Approved Signatory
 27-Nov-18



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TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55649.2.1.4

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

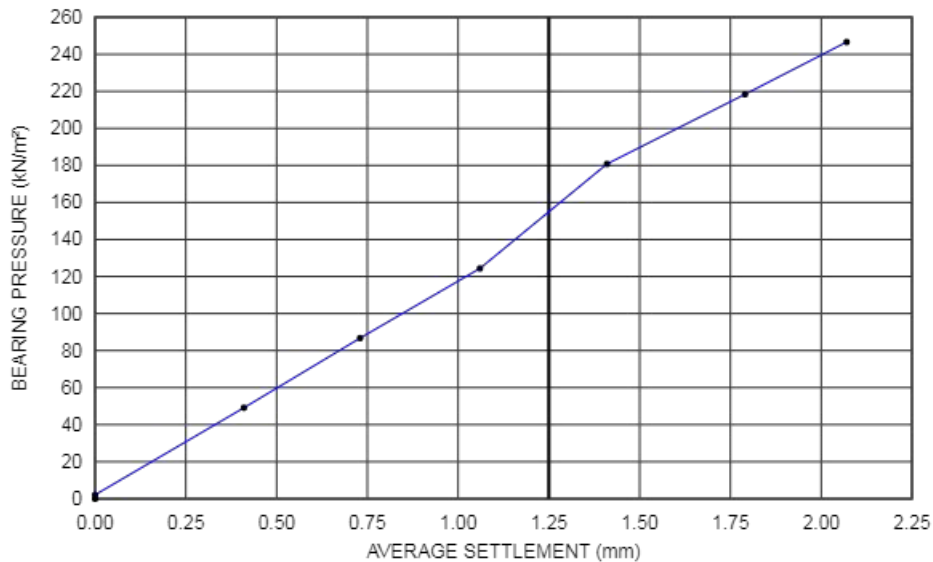
DATE COMPLETED: 26/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Dan Lewis SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 2 Test 2 MATERIAL: 6F2

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 13T Excavator Plate Diameter: 455 mm Plate Area: 0.162597 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 155 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 19 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 19 %

Remarks:

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Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 55649.2.1.4

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	21.12	20.70	21.22	0.00	0.00	0.00	0.00
8.0	49.1	20.67	20.34	20.81	0.45	0.36	0.41	0.41
14.1	86.7	20.33	20.07	20.46	0.79	0.63	0.76	0.73
20.2	124.3	20.02	19.71	20.14	1.10	0.99	1.08	1.06
29.4	180.8	19.66	19.38	19.77	1.46	1.32	1.45	1.41
35.5	218.4	19.34	19.07	19.27	1.78	1.63	1.95	1.79
40.1	246.6	19.12	18.74	18.97	2.00	1.96	2.25	2.07

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 27-Nov-18


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TEST REPORT: **Estimation of In-Situ Dry Density And Relative Compaction**
 CET's In-House Procedure STP NDM-S - Method A (Direct transmission)

REPORT NUMBER: 491204 / 55753.1.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

DATE COMPLETED: 27/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Scott Tippet SITE: Sevenoaks Gas Holder Site

GAUGE MODEL No: T3440 SUPPLIER: Erith

GAUGE SERIAL No: 15100 MATERIAL: 6F2

CORRECTION FACTORS: Bulk $\gamma=1$ LOCATION: Gas holder
 Moisture $b=1$

VARIATIONS FROM PROCEDURE: N/A

MAX DRY DENSITY: 2.03 Mg/m³ COMPLIANCE LIMITS: 95% Minimum Compaction

TEST RESULTS

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Gas holder layer 3 Test 1	2.215	0.281	2.215	15	1.94	96
	2.203	0.259	2.203	13		
Gas holder layer 3 Test 2	2.276	0.301	2.276	15	1.99	98
	2.292	0.293	2.292	15		
Gas Holder Layer 4 Test 1	2.345	0.305	2.345	15	2.04	101
	2.361	0.312	2.361	15		
Gas Holder Layer 4 Test 2	2.298	0.315	2.298	16	1.99	98
	2.309	0.320	2.309	16		

Remarks:
 * Denotes specification non-compliance (if applicable)

For and on behalf of CET
 Phil Mayhew - Operations Manager



Approved Signatory
 28-Nov-18



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Report Format: S/Rep STP NDM-S/rev.2

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TEST REPORT: **Determination of Load vs Settlement (Incremental Loading)**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55753.6.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

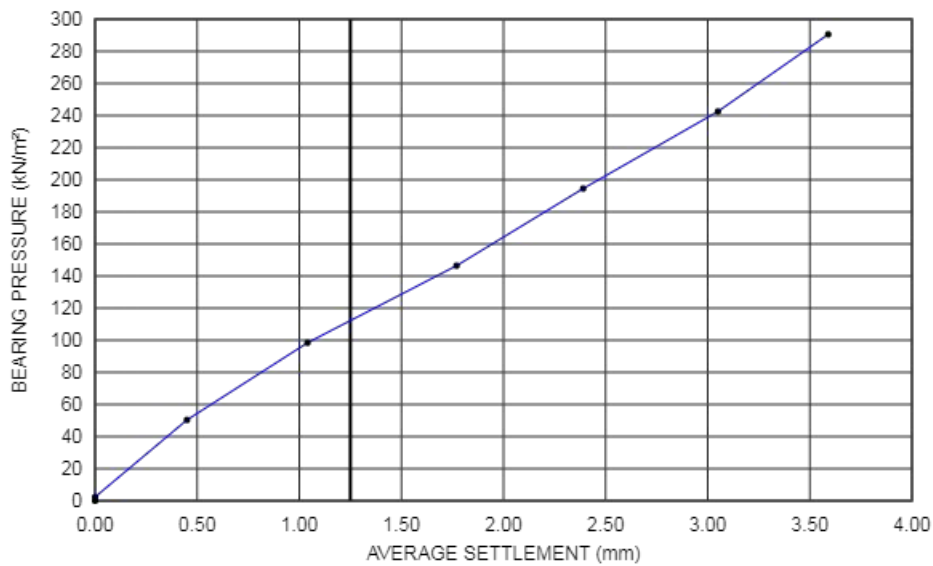
DATE COMPLETED: 27/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Scott Tippett SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder Layer 3 Test 1 MATERIAL: 6F2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m²	mm			mm			mm
0.0	0.0	24.56	23.86	21.08	0.00	0.00	0.00	0.00
8.0	50.4	24.00	23.50	20.65	0.56	0.36	0.43	0.45
15.7	98.4	23.55	22.88	19.94	1.01	0.98	1.14	1.04
23.4	146.4	22.80	22.11	19.29	1.76	1.75	1.79	1.77
31.1	194.5	22.18	21.52	18.64	2.38	2.34	2.44	2.39
38.7	242.5	21.51	20.85	17.99	3.05	3.01	3.09	3.05
46.4	290.6	21.00	20.29	17.45	3.56	3.57	3.63	3.59

APPLIED LOAD vs SETTLEMENT RELATIONSHIP

Equipment Details

Type of Kentledge: 35T 360
 Plate Diameter: 451 mm
 Plate Area: 0.159751 m²
 Plate Correction: 0.64

Average Bearing Pressure

Average Bearing Pressure (P) at 1.25mm penetration
 P = 112 kN / m²

Estimated C.B.R Value

Estimated C.B.R at 1.25mm penetration
 Estimated C.B.R = 11 %

Remarks:

For and on behalf of CET
 Phil Mayhew - Operations Manager



Approved Signatory
 28-Nov-18



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TEST REPORT: **Determination of Load vs Settlement (Incremental Loading)**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55753.6.1.2

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

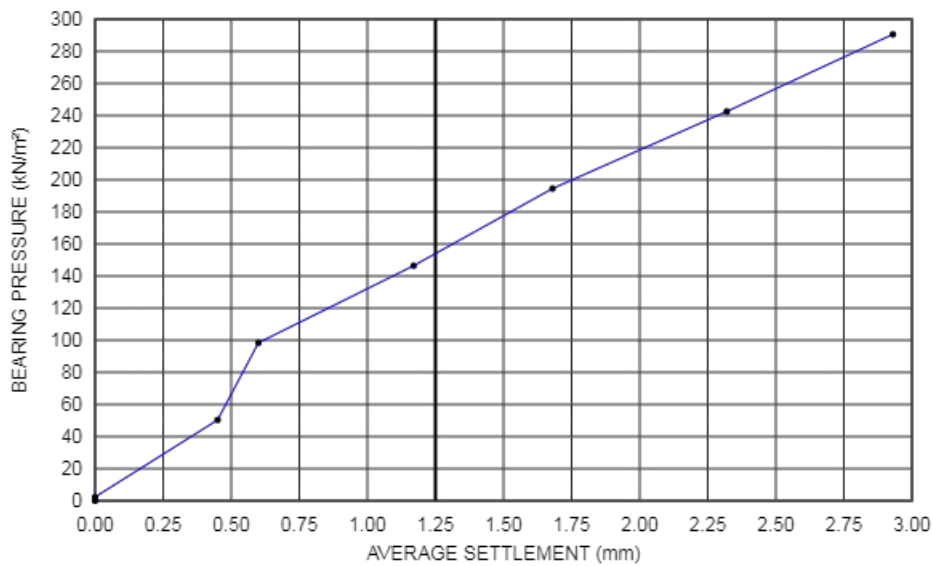
DATE COMPLETED: 27/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Scott Tippett SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder Layer 3 Test 2 MATERIAL: 6F2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m²	mm			mm			mm
0.0	0.0	20.75	25.20	25.32	0.00	0.00	0.00	0.00
8.0	50.4	20.30	24.75	24.88	0.45	0.45	0.44	0.45
15.7	98.4	20.73	24.47	24.28	0.02	0.73	1.04	0.60
23.4	146.4	20.00	24.01	23.76	0.75	1.19	1.56	1.17
31.1	194.5	19.49	23.57	23.17	1.26	1.63	2.15	1.68
38.7	242.5	18.92	22.89	22.50	1.83	2.31	2.82	2.32
46.4	290.6	18.35	22.20	21.92	2.40	3.00	3.40	2.93

APPLIED LOAD vs SETTLEMENT RELATIONSHIP

Equipment Details

Type of Kentledge: 35T 360
 Plate Diameter: 451 mm
 Plate Area: 0.159751 m²
 Plate Correction: 0.64

Average Bearing Pressure

Average Bearing Pressure (P) at 1.25mm penetration
 P = 154 kN / m²

Estimated C.B.R Value

Estimated C.B.R at 1.25mm penetration
 Estimated C.B.R = 19 %

Remarks:

For and on behalf of CET
 Phil Mayhew - Operations Manager



Approved Signatory
 28-Nov-18



0927

Report Format: STP S8 rev.1

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Report version 1

Page 1 of 1

TEST REPORT: **Determination of Load vs Settlement (Incremental Loading)**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55753.6.1.3

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

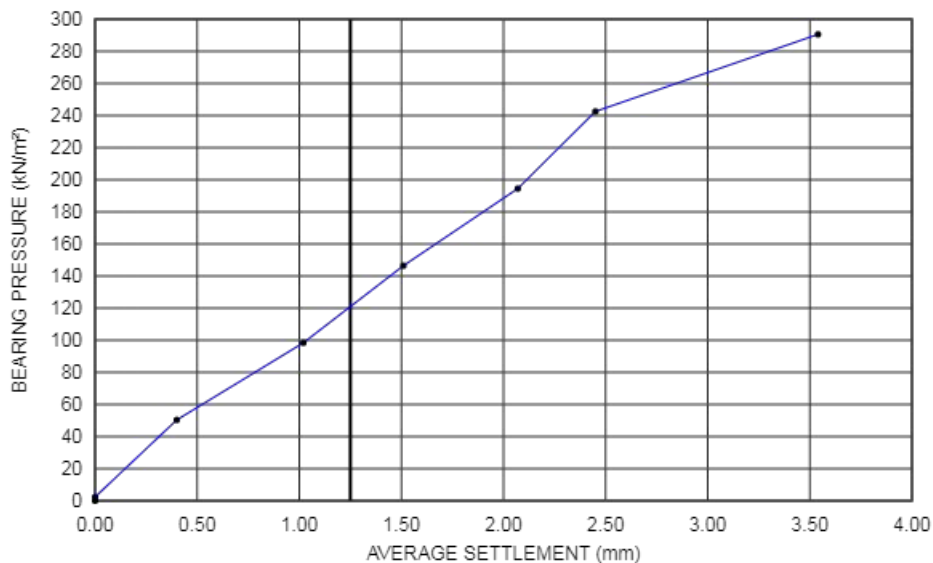
DATE COMPLETED: 27/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Scott Tippett SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder Layer 4 Test 2 MATERIAL: 6F2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m²	mm			mm			mm
0.0	0.0	25.46	19.86	21.47	0.00	0.00	0.00	0.00
8.0	50.4	25.08	19.45	21.06	0.38	0.41	0.41	0.40
15.7	98.4	24.51	18.83	20.39	0.95	1.03	1.08	1.02
23.4	146.4	24.02	18.35	19.88	1.44	1.51	1.59	1.51
31.1	194.5	23.50	17.80	19.27	1.96	2.06	2.20	2.07
38.7	242.5	23.11	17.44	18.89	2.35	2.42	2.58	2.45
46.4	290.6	20.70	16.98	18.48	4.76	2.88	2.99	3.54

APPLIED LOAD vs SETTLEMENT RELATIONSHIP

Equipment Details

Type of Kentledge: 35T 360
 Plate Diameter: 451 mm
 Plate Area: 0.159751 m²
 Plate Correction: 0.64

Average Bearing Pressure

Average Bearing Pressure (P) at 1.25mm penetration
 P = 121 kN / m²

Estimated C.B.R Value

Estimated C.B.R at 1.25mm penetration
 Estimated C.B.R = 12 %

Remarks:

For and on behalf of CET
 Phil Mayhew - Operations Manager



Approved Signatory
 28-Nov-18



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TEST REPORT: **Determination of Load vs Settlement (Incremental Loading)**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 55753.6.1.4

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

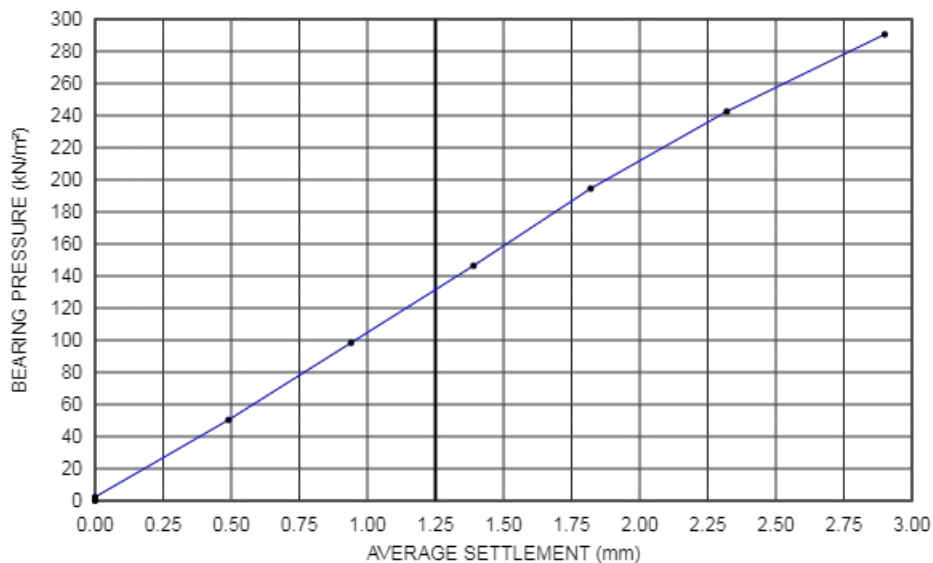
DATE COMPLETED: 27/11/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Scott Tippett SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder Layer 4 Test 1 MATERIAL: 6F2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m²	mm			mm			mm
0.0	0.0	23.42	23.48	23.51	0.00	0.00	0.00	0.00
8.0	50.4	22.95	22.97	23.02	0.47	0.51	0.49	0.49
15.7	98.4	22.47	22.51	22.62	0.95	0.97	0.89	0.94
23.4	146.4	22.02	22.02	22.19	1.40	1.46	1.32	1.39
31.1	194.5	21.60	21.61	21.74	1.82	1.87	1.77	1.82
38.7	242.5	21.15	21.17	21.12	2.27	2.31	2.39	2.32
46.4	290.6	20.58	20.62	20.51	2.84	2.86	3.00	2.90

APPLIED LOAD vs SETTLEMENT RELATIONSHIP

Equipment Details

Type of Kentledge: 35T 360
 Plate Diameter: 451 mm
 Plate Area: 0.159751 m²
 Plate Correction: 0.64

Average Bearing Pressure

Average Bearing Pressure (P) at 1.25mm penetration
 P = 131 kN / m²

Estimated C.B.R Value

Estimated C.B.R at 1.25mm penetration
 Estimated C.B.R = 14 %

Remarks:

For and on behalf of CET
 Phil Mayhew - Operations Manager



Approved Signatory
 28-Nov-18



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Report Format: STP S8 rev.1

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Page 1 of 1

TEST REPORT: **Estimation of In-Situ Dry Density And Relative Compaction**
 CET's In-House Procedure STP NDM-S - Method A (Direct transmission)

REPORT NUMBER: 491204 / 56737.1.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

DATE COMPLETED: 07/12/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Daniel Hockley SITE: Sevenoaks Gas Holder Site

GAUGE MODEL No: T3440 SUPPLIER: Site Won - Gas Holder Base

GAUGE SERIAL No: 18445 MATERIAL: Mixed Crush

CORRECTION FACTORS: Bulk $\gamma=1$ LOCATION: Gas Holder 3
 Moisture $b=1$

VARIATIONS FROM PROCEDURE: N/A

MAX DRY DENSITY: 2.03 Mg/m³ COMPLIANCE LIMITS: 95% Minimum Compaction

TEST RESULTS

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Layer 5 NDM 1	2.156	0.156	2.156	7.8	1.99	98
	2.149	0.177	2.149	9.0		
Layer 5 NDM 2	2.099	0.164	2.099	8.5	1.93	95
	2.107	0.176	2.107	9.1		
Layer 6 NDM 1	2.085	0.155	2.085	8.0	1.97	97
	2.158	0.138	2.158	6.8		
Layer 6 NDM 2	2.097	0.180	2.097	9.4	1.93	95
	2.111	0.166	2.111	8.5		

Remarks:
 * Denotes specification non-compliance (if applicable)

For and on behalf of CET
 Matt Butt - Operations Supervisor



Approved Signatory
 10-Dec-18



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Report Format: S/Rep STP NDM-S/rev.2

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TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 56737.2.1.1

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

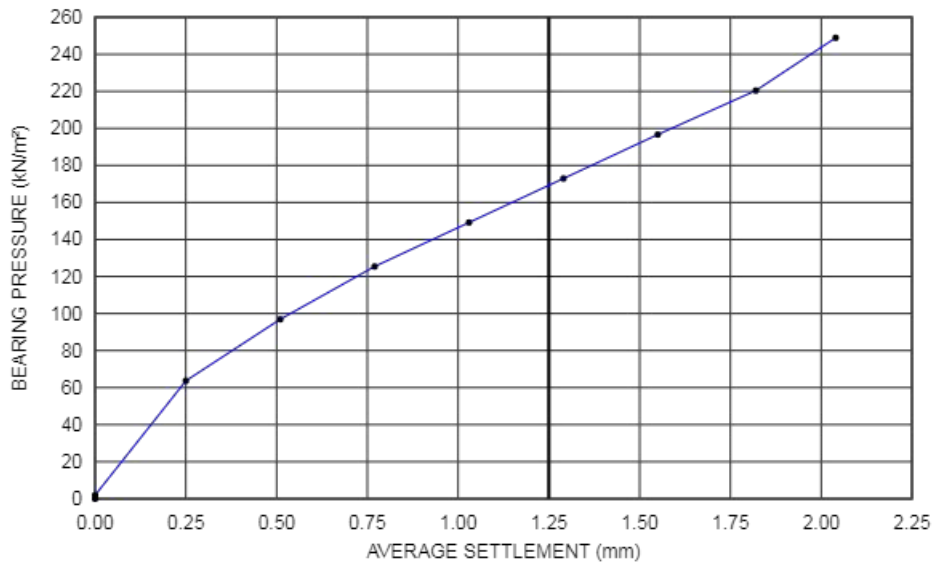
DATE COMPLETED: 07/12/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Daniel Hockley SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 5 CBR 1 MATERIAL: Mixed Crush

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 22 tonne 360 Plate Diameter: 453 mm Plate Area: 0.161171 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 169 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 22 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 22 %

Remarks:

Report Format: STP S8 rev.1

TEST REPORT:
Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 56737.2.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	19.65	18.33	21.96	0.00	0.00	0.00	0.00
10.3	63.7	19.41	18.07	21.70	0.24	0.26	0.26	0.25
15.6	96.9	19.14	17.80	21.47	0.51	0.53	0.49	0.51
20.2	125.4	18.87	17.54	21.22	0.78	0.79	0.74	0.77
24.0	149.2	18.60	17.28	20.96	1.05	1.05	1.00	1.03
27.9	172.9	18.34	17.02	20.70	1.31	1.31	1.26	1.29
31.7	196.7	18.08	16.75	20.47	1.57	1.58	1.49	1.55
35.5	220.4	17.80	16.48	20.21	1.85	1.85	1.75	1.82
40.1	248.9	17.64	16.23	19.95	2.01	2.10	2.01	2.04

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 10-Dec-18


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TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 56737.2.1.2

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

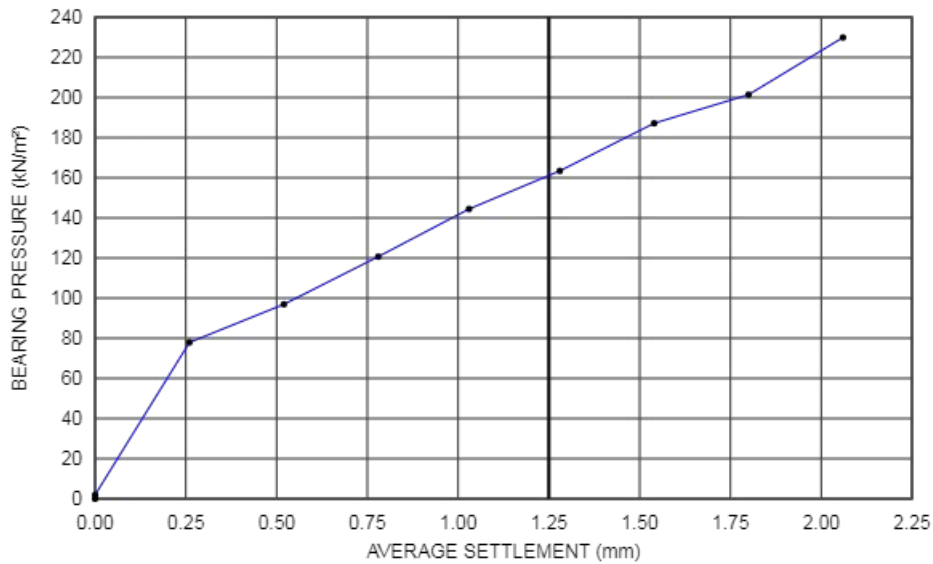
DATE COMPLETED: 07/12/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Daniel Hockley SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 5 CBR 2 MATERIAL: Mixed Crush

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 22 tonne 360 Plate Diameter: 453 mm Plate Area: 0.161171 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 161 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 21 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 21 %

Remarks:

Report Format: STP S8 rev.1

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TEST REPORT:
Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 56737.2.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	17.34	22.82	19.71	0.00	0.00	0.00	0.00
12.6	77.9	17.06	22.56	19.47	0.28	0.26	0.24	0.26
15.6	96.9	16.80	22.29	19.23	0.54	0.53	0.48	0.52
19.4	120.7	16.53	22.03	18.97	0.81	0.79	0.74	0.78
23.3	144.4	16.27	21.76	18.74	1.07	1.06	0.97	1.03
26.3	163.4	16.03	21.50	18.51	1.31	1.32	1.20	1.28
30.2	187.2	15.75	21.23	18.27	1.59	1.59	1.44	1.54
32.5	201.4	15.49	20.95	18.02	1.85	1.87	1.69	1.80
37.1	229.9	15.23	20.71	17.75	2.11	2.11	1.96	2.06

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 10-Dec-18


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TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 56737.2.1.3

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

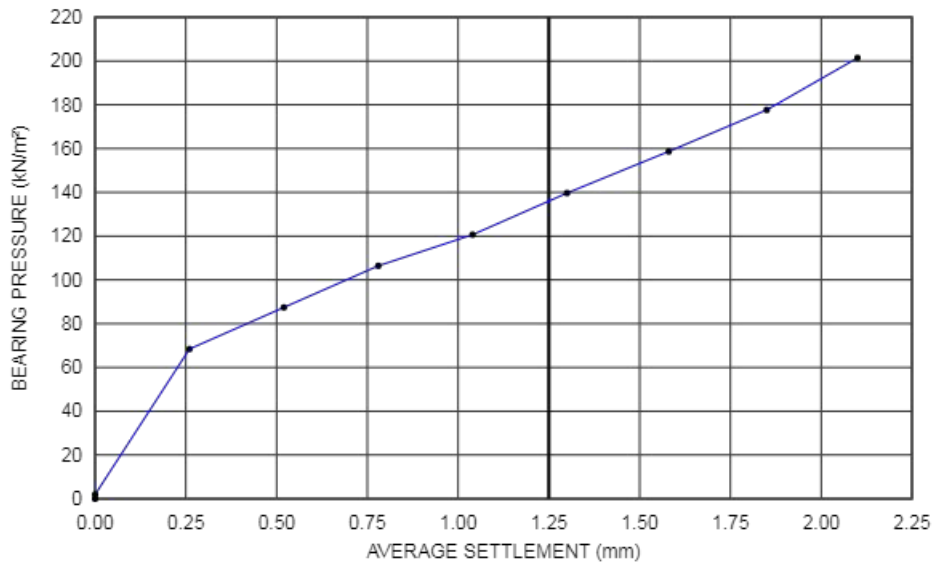
DATE COMPLETED: 07/12/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Daniel Hockley SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 6 CBR 1 MATERIAL: Mixed Crush

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 22 tonne 360 Plate Diameter: 453 mm Plate Area: 0.161171 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 136 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 15 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 15 %

Remarks:

Report Format: STP S8 rev.1

TEST REPORT:
Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 56737.2.1.3

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	22.93	20.02	17.56	0.00	0.00	0.00	0.00
11.0	68.4	22.70	19.75	17.29	0.23	0.27	0.27	0.26
14.1	87.4	22.43	19.49	17.03	0.50	0.53	0.53	0.52
17.2	106.4	22.19	19.23	16.75	0.74	0.79	0.81	0.78
19.4	120.7	21.93	18.97	16.48	1.00	1.05	1.08	1.04
22.5	139.7	21.67	18.71	16.22	1.26	1.31	1.34	1.30
25.6	158.7	21.41	18.43	15.94	1.52	1.59	1.62	1.58
28.6	177.7	21.13	18.17	15.67	1.80	1.85	1.89	1.85
32.5	201.4	20.87	17.92	15.41	2.06	2.10	2.15	2.10

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 10-Dec-18


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Report version 1

Page 2 of 2

TEST REPORT: **Estimation of California Bearing Ratio**
 Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER: 491204 / 56737.2.1.4

CLIENT REF: 491204 CLIENT: ERITH CONTRACTORS LTD

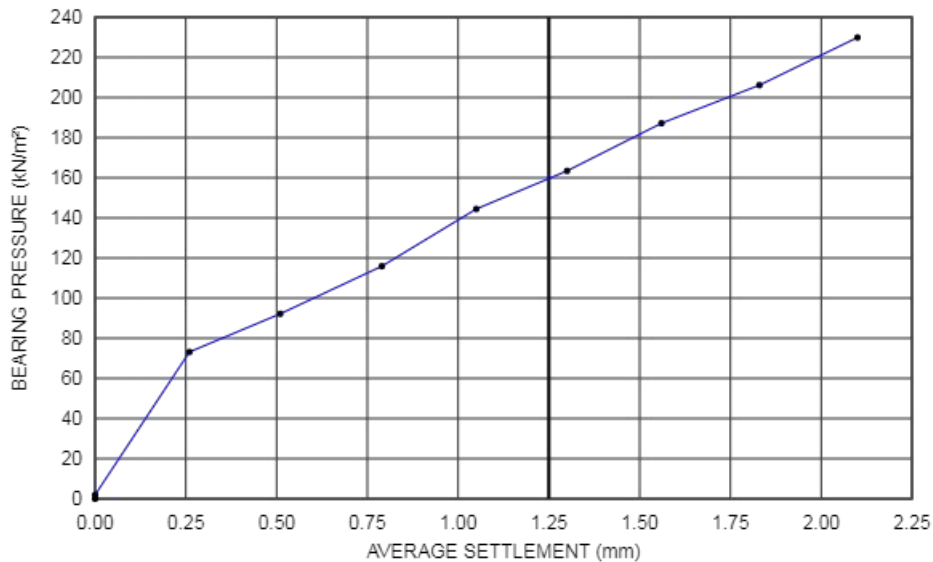
DATE COMPLETED: 07/12/2018 ADDRESS: Erith House, 7 Queen Street, Erith, DA8 1RO

TESTED BY: Daniel Hockley SITE: Sevenoaks Gas Holder Site

LOCATION: Gas Holder 3 Layer 6 CBR 2 MATERIAL: Mixed Crush

Equipment Details	Average Bearing Pressure	Estimated C.B.R Value
Type of Kentledge: 22 tonne 360 Plate Diameter: 453 mm Plate Area: 0.161171 m ² Plate Correction: 0.65	Average Bearing Pressure (P) at 1.25mm penetration P = 160 kN / m ²	Estimated C.B.R at 1.25mm penetration Estimated C.B.R = 20 %

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Estimated C.B.R: 20 %

Remarks:

Report Format: STP S8 rev.1

TEST REPORT:
Estimation of California Bearing Ratio

Tested in accordance with BS 1377-9 : 1990 & Design Manual for Roads and Bridges Vol. 7, Sect. 2 HD 25-94

REPORT NUMBER:

491204 / 56737.2.1.4

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.0	0.0	19.94	22.41	19.28	0.00	0.00	0.00	0.00
11.8	73.2	19.68	22.13	19.03	0.26	0.28	0.25	0.26
14.9	92.2	19.42	21.90	18.77	0.52	0.51	0.51	0.51
18.7	115.9	19.15	21.63	18.48	0.79	0.78	0.80	0.79
23.3	144.4	18.88	21.38	18.22	1.06	1.03	1.06	1.05
26.3	163.4	18.65	21.14	17.94	1.29	1.27	1.34	1.30
30.2	187.2	18.41	20.88	17.67	1.53	1.53	1.61	1.56
33.2	206.2	18.13	20.61	17.40	1.81	1.80	1.88	1.83
37.1	229.9	17.86	20.33	17.13	2.08	2.08	2.15	2.10

Remarks:

 For and on behalf of CET
 Matt Butt - Operations Supervisor



 Approved Signatory
 10-Dec-18


0927

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Report version 1

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Project:	Crampton Road - Sevenoaks
Title:	Plate Bearing Test Report
Client:	Erith Contractors
Project Ref:	SC-1815
Report Number:	SC-1815-PBT-01
Date:	11/09/2018

52-54 St John Street,
Clerkenwell,
London,
EC1M 4HF

Tel: 0370 950 7707
Mail: info@swantest.co.uk
Web: www.swantest.co.uk

The contents of this report are confidential and for the clients use only.

GENERAL INFORMATION	
Client:	Erith Contractors
Site Address:	Crampton's road, Sevenoaks, Kent, TN14 5DS
Client Contact:	Laurie Craig
Test Date:	11/09/2018
Weather Conditions:	Dry & 18°C

Test Carried Out By:	Craig Smith	
Report By:	Name: Craig Smith	Signature: 
Checked By:	Name: Tony To	Signature: 

TEST EQUIPMENT		
	Equipment Number	Serial Number
Hydraulic Pump:	Hi-force	HP03
Hydraulic Jack:	RCH 110	HJ16
Tester:	Plateman SN40	PBT03
Plate Size:	600mm	

Procedure:	SWAN-PBT-001 Rev 2
Risk Assessment / Method Statement	SC-1815-MS-02
Test Brief:	SC-1815-TB-01

The tests are based on the requirements of BS 1377: Part 9: 1990; Section 4.1



Contents:

- Test Details
- Location Map
- Results
- Test Results Breakdowns

Test Details:



Figure 1: Typical PBT Setup

A total of 4 plate bearing tests were implemented. The location of each test is shown in figure 2:



Figure 2: Location Image

Results:**Table 1:** Interpreted CBR (%)

Test No.	Maximum Bearing Pressure (kN/m ²)	Maximum Settlement (mm)	Interpreted CBR (%)
PBT01	298	1.70	21
PBT02	307	2.77	8.5
PBT03	311	0.79	>50
PBT04	300	0.69	>50

NOTE: The CBR value can significantly vary if the water percentage of the soil/aggregate changes. The values presented in Table 1 and later pages reflect only the ground conditions at the time of testing.



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Crampton Road - Sevenoaks	Test No:	SC-1815-PBT-01-01
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-01
		Date Tested	11.09.18
		Date Reported	12.09.18
Technician	Craig Smith	Weather Conditions	Dry
Location	See Location Image	Plate Dia (mm)	600
GPS Coord's	E 0° 11' 27.9", N 51° 17' 35.5"	m to excavation wall	
Material Type	6F2	Depth (m)	
No Cycles	1	Reaction Type	35T

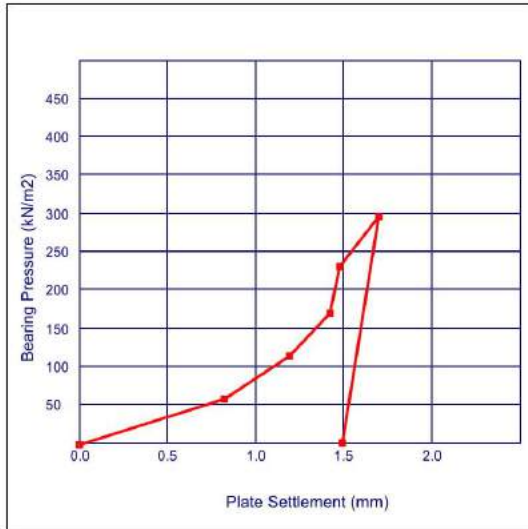


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.82	59.9
1.19	116.1
1.42	172.2
1.47	233.0
1.70	298.2
1.49	2.5

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
298
1.70
104.6
84.1
21

Comments:



Approved Signature
Swantest
 Craig Smith
 Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Crampton Road - Sevenoaks	Test No:	SC-1815-PBT-01-02
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-01
		Date Tested	11.09.18
		Date Reported	12.09.18
Technician	Craig Smith	Weather Conditions	Dry
Location	See Location Image	Plate Dia (mm)	600
GPS Coord's	E 0° 11' 28.1", N 51° 17' 36.0"	m to excavation wall	
Material Type	6F2	Depth (m)	
No Cycles	1	Reaction Type	35T

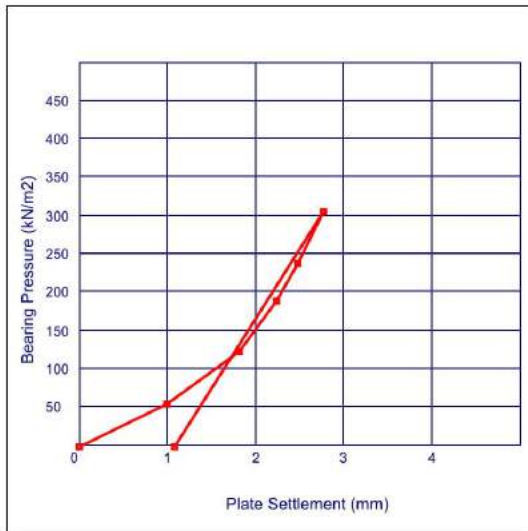


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.99	56.2
1.81	124.5
2.23	190.4
2.47	239.3
2.77	307.5
1.08	0.2

Maximum Applied Pressure (kPa):	Cycle 1
Maximum deformation (mm):	307
Modulus of subgrade reaction K (MN/m³):	2.77
K762 (MN/m³):	62.2
Estimated CBR (%):	50.0
	8.5

Comments:



Approved Signature
Swantest
Craig Smith
Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Crampton Road - Sevenoaks	Test No:	SC-1815-PBT-01-03
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-01
		Date Tested	11.09.18
		Date Reported	12.09.18
Technician	Craig Smith	Weather Conditions	Dry
Location	See Location Image	Plate Dia (mm)	600
GPS Coord's	E 0° 11' 28.4", N 51° 17' 35.7"	m to excavation wall	
Material Type	6F2	Depth (m)	
No Cycles	1	Reaction Type	35T

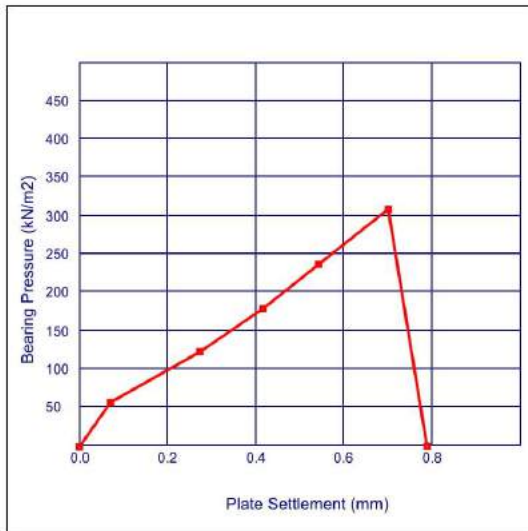


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.07	58.3
0.27	124.3
0.42	180.5
0.54	238.4
0.70	310.7
0.79	0.8

Maximum Applied Pressure (kPa):	Cycle 1
Maximum deformation (mm):	311
Modulus of subgrade reaction K (MN/m³):	0.79
K762 (MN/m³):	450.2
Estimated CBR (%):	362.1
	262

Comments:



Approved Signature
Swantest
Craig Smith
Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Crampton Road - Sevenoaks	Test No:	SC-1815-PBT-01-04
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-01
		Date Tested	11.09.18
		Date Reported	12.09.18
Technician	Craig Smith	Weather Conditions	Dry
Location	See Location Image	Plate Dia (mm)	600
GPS Coord's	E 0° 11' 28.3", N 51° 17' 35.6"	m to excavation wall	
Material Type	6F2	Depth (m)	
No Cycles	1	Reaction Type	35T

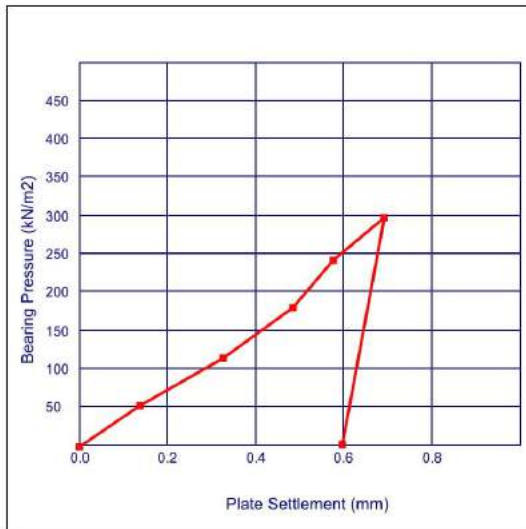


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.14	54.0
0.33	116.0
0.48	181.8
0.58	243.8
0.69	299.6
0.60	3.1

Maximum Applied Pressure (kPa):	Cycle 1
Maximum deformation (mm):	300
Modulus of subgrade reaction K (MN/m³):	0.69
K762 (MN/m³):	455.0
Estimated CBR (%):	366.0
	267

Comments:



Approved Signature
Swantest
Craig Smith
Test Engineer





Project:	Crampton Road - Sevenoaks
Title:	Plate Bearing Test Report
Client:	Erith Contractors
Project Ref:	SC-1815
Report Number:	SC-1815-PBT-02
Date:	05/10/2018

52-54 St John Street,
Clerkenwell,
London,
EC1M 4HF

Tel: 0370 950 7707
Mail: info@swantest.co.uk
Web: www.swantest.co.uk

The contents of this report are confidential and for the clients use only.

GENERAL INFORMATION	
Client:	Erith Contractors
Site Address:	Crampton's road, Sevenoaks, Kent, TN14 5DS
Client Contact:	Laurie Craig
Test Date:	03/10/2018
Weather Conditions:	Dry & 18°C

Test Carried Out By:	Tony To	
Report By:	Name: Tony To	Signature: 
Checked By:	Name: Craig Smith	Signature: 

TEST EQUIPMENT		
	Equipment Number	Serial Number
Hydraulic Pump:	Hi-force	HP03
Hydraulic Jack:	RCH 110	HJ16
Tester:	Plateman SN40	PBT03
Plate Size:	600mm	

Procedure:	SWAN-PBT-001 Rev 2
Risk Assessment / Method Statement	SC-1815-MS-02
Test Brief:	SC-1815-TB-01

The tests are based on the requirements of BS 1377: Part 9: 1990; Section 4.1



Contents:

- Test Details
- Location Map
- Results
- Test Results Breakdowns

Test Details:



Figure 1: Typical PBT Setup

A total of 4 plate bearing tests were implemented. The location of each test is shown in figure 2:

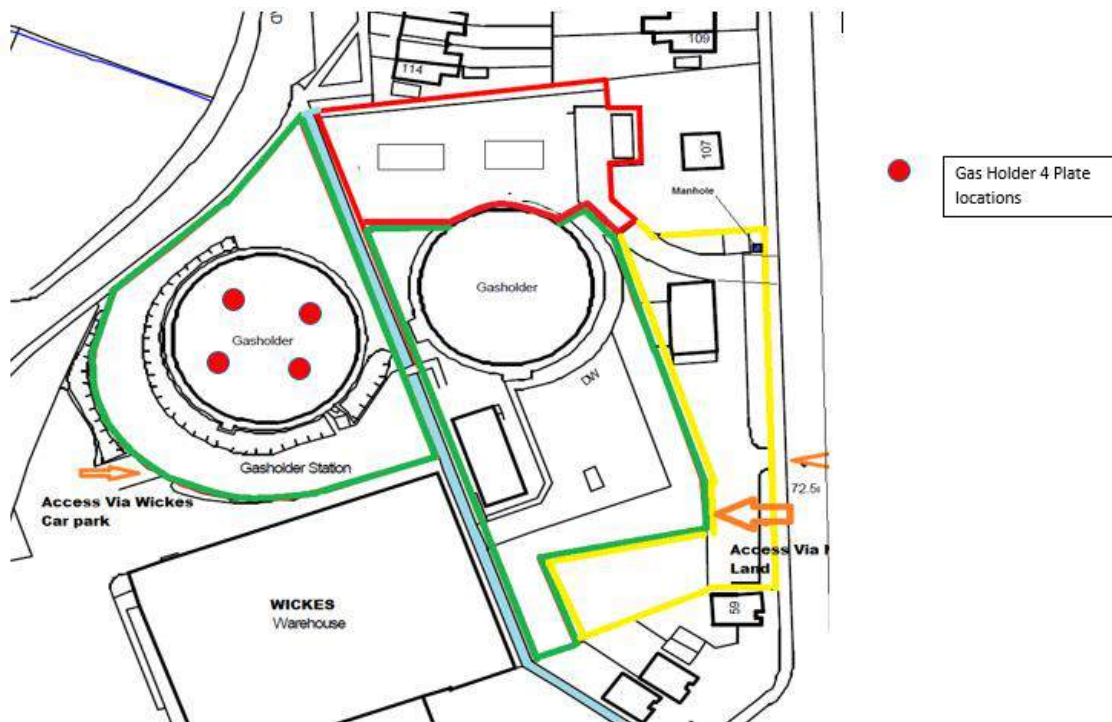


Figure 2: Location Image

Results:**Table 1:** Interpreted CBR (%)

Test No.	Maximum Bearing Pressure (kN/m ²)	Maximum Settlement (mm)	Interpreted CBR (%)
PBT01	449	1.66	>50
PBT02	456	2.08	41
PBT03	452	1.49	>50
PBT04	454	0.64	>50

NOTE: The CBR value can significantly vary if the water percentage of the soil/aggregate changes. The values presented in Table 1 and later pages reflect only the ground conditions at the time of testing.



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Sevenoaks	Test No:	SC-1815-PBT-02-01
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-02
		Date Tested	03.10.18
		Date Reported	05.10.18
Technician	Tony To	Weather Conditions	Dry
Location		Plate Dia (mm)	450
GPS Coord's	E 0° 11' 28.3", N 51° 17' 34.3"	m to excavation wall	
Material Type	CRUSH	Depth (m)	
No Cycles	1	Reaction Type	35T

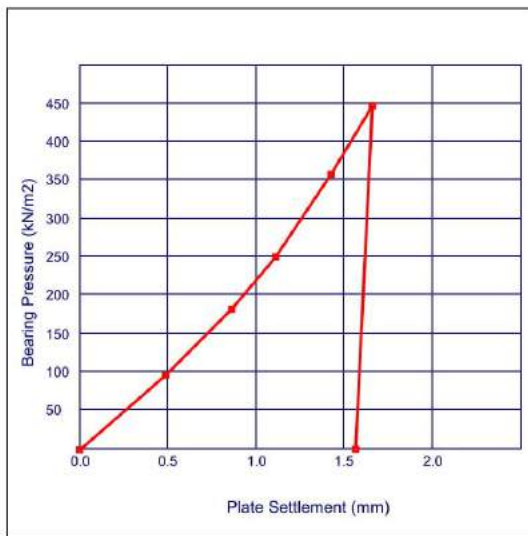


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.49	97.6
0.86	183.8
1.11	251.8
1.42	360.1
1.66	449.2
1.56	0.8

Maximum Applied Pressure (kPa):	Cycle 1
Maximum deformation (mm):	449
Modulus of subgrade reaction K (MN/m³):	1.66
K762 (MN/m³):	240.4
Estimated CBR (%):	149.8
	57

Comments:

Approved Signature
Swantest
Tony To
Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Sevenoaks	Test No:	SC-1815-PBT-02-02
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-02
		Date Tested	03.10.18
		Date Reported	05.10.18
Technician	Tony To	Weather Conditions	Dry
Location		Plate Dia (mm)	450
GPS Coord's	E 0° 11' 28.5", N 51° 17' 34.4"	m to excavation wall	
Material Type	CRUSH	Depth (m)	
No Cycles	1	Reaction Type	35T

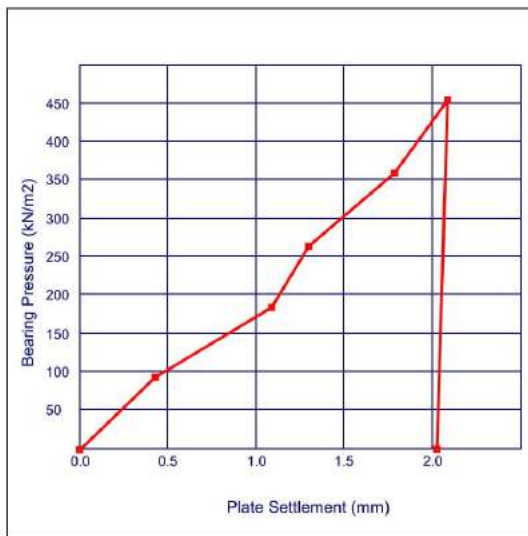


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.43	94.8
1.09	185.9
1.30	265.9
1.78	361.1
2.08	456.4
2.02	0.8

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
456
2.08
198.7
123.8
41

Comments:

Approved Signature
Swantest
 Tony To
 Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Sevenoaks	Test No:	SC-1815-PBT-02-03
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-02
		Date Tested	03.10.18
		Date Reported	05.10.18
Technician	Tony To	Weather Conditions	Dry
Location		Plate Dia (mm)	450
GPS Coord's	E 0° 11' 28.4", N 51° 17' 34.4"	m to excavation wall	
Material Type	CRUSH	Depth (m)	
No Cycles	1	Reaction Type	35T

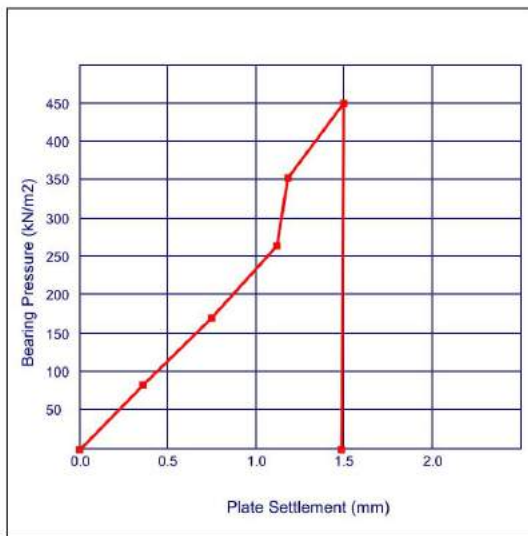


Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.36	84.8
0.75	172.5
1.12	266.5
1.18	354.9
1.49	452.4
1.48	0.1

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
452
1.49
301.7
188.0
84

Comments:

Approved Signature
Swantest
 Tony To
 Test Engineer



**TEST REPORT
DETERMINATION OF PLATE BEARING CAPACITY**

Project	Sevenoaks	Test No:	SC-1815-PBT-02-04
Client	Erith Contractors	Lab Ref No:	SC-1815-PBT-02
		Date Tested	03.10.18
		Date Reported	05.10.18
Technician	Tony To	Weather Conditions	Dry
Location		Plate Dia (mm)	450
GPS Coord's	E 0° 11' 28.6", N 51° 17' 34.1"	m to excavation wall	
Material Type	CRUSH	Depth (m)	
No Cycles	1	Reaction Type	35T

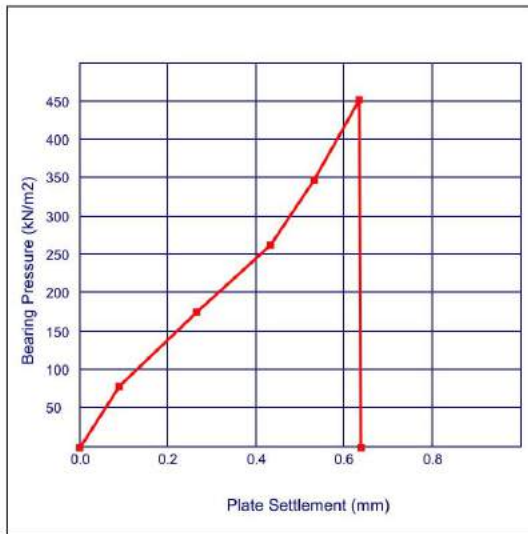


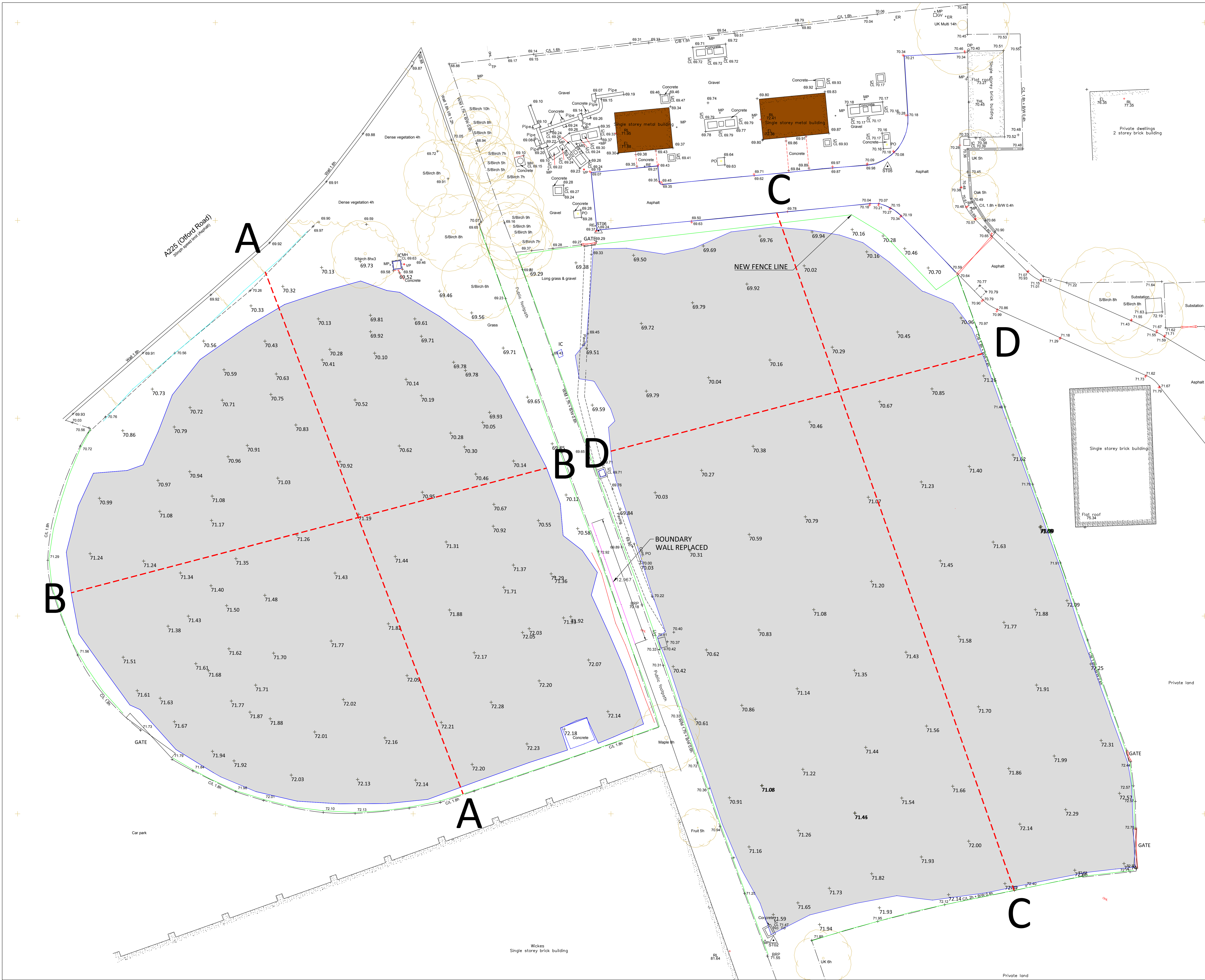
Plate Settlement (mm)	Bearing Pressure (kN/m ²)
0.00	0.0
0.09	80.5
0.26	177.2
0.43	264.8
0.53	349.9
0.63	454.0
0.64	0.0

Maximum Applied Pressure (kPa):
Maximum deformation (mm):
Modulus of subgrade reaction K (MN/m³):
K762 (MN/m³):
Estimated CBR (%):

Cycle 1
454
0.64
866.3
539.8
524

Comments:

Approved Signature
Swantest
 Tony To
 Test Engineer



OS NORTH

Topographical Abbreviations

A/R	Assumed Route	MKR	Marker
BH	Borehole	MT	Mercury Telecom Cover
BOL	Bollard	OHC	Overhead Cable
BT	British Telecom Cover	OHP	Overhead Pipe
BW	Barbed Wire Fence	OSBM	Ordinance Survey Bench Mark
BRW	Brickwork	PB	Post Box
CATV	Cable TV Cover	PGM	Permanent Ground Marker
CB	Close Boarded Fence	PIR	Post & Rail Fence
CCF	Closed Circuit TV	PW	Post & Wire Fence
CHX	Chainlink Fence	PWM	Post & Wire Mesh Fence
CHPL	Chimney Fluing Fence	RE	Rodding Eye
CL	Cover Level	RG	Road Gully
CM	Cable Marker	RN	Road Name
CP	Catch Pit	RS	Road Sign
CPL	Catch Pit Base Level	RW	Retaining Wall
DIA	Tree Hole (Diameter)	RWP	Rain Water Pipe
DK	Drop Kerb	SAP	Sapling
DP	Down Pipe	SC	Stop Cock
EJB	Electricity Junction Box	SC	Tree Canopy Spread (Radius)
EC	Electricity Cover	STA	Traverse Station
EP	Electricity Pole	SV	Stop Valve
ER	Earthing Rod	SVP	Soil Vent Pipe
FCL	Finished Ceiling Level	SW	Storm Water
FI	Fire Hydrant	TB	Telephone Box
FIG	Feed into Ground	TBM	Temporary Bench Mark
FW	Foul Water	TR	Taken From Records
G	Gully	TJB	Telephone Junction Box
GV	Gas Valve	TPT	Trail Pit
H	Height	TL	Traffic Light
IC	Inspection Cover	TP	Telephone Pole
IL	Invert Level	UTL	Unable To Lift
IR	Iron Railing Fence	UTT	Unable To Trace
KO	Kerb Outlet	VP	Vent Pipe
LB	Litter Bin	WKH	Water Key Hole
LC	Lamp Column	WM	Water Meter
LP	Lamp Post	WV	Water Valve
MH	Manhole		

6F2 BACKFILLED AREAS

Comments
 This plan should only be used for its original purpose. Erith accepts no responsibility for this plan if supplied to any party other than the original client.
 All dimensions should be checked on site prior to design and construction.
 Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

REV	COMMENT	DATE

Client: **SGN**

Project: **SEVENOAKS GASWORKS**

Title: **ASBUILT SURVEY**

Drawn by PV	Checked OD	Date 16-01-19	Authorised PV	Date 16-01-19
Original Scale 1:125	Date 16-01-19	Rev -	Paper A0	

Drawing Number: **8179-ASBUILT-005**



SECTION A-A

	Datum 65.000 M											
FINISHED GROUND LEVEL												
DEMOLISHED PROFILE	70.322	70.057	68.059	68.074	68.082	68.093	68.145	68.198	68.180	71.127	72.199	72.158
CHAINAGE	7.331	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000 61.071

SECTION B-B

	Datum 65.000 M											
FINISHED GROUND LEVEL												
DEMOLISHED PROFILE	71.276	71.285	71.250	70.024	68.101	68.222	68.163	68.104	68.087	68.081	68.633	69.874
CHAINAGE	4.087 5.000		10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	53.783

SECTION C-C

	Datum 65.000 M											
FINISHED GROUND LEVEL												
DEMOLISHED PROFILE	69.826	69.296	69.260	69.305	69.295	69.268	69.245	69.719	71.452	71.504	71.554	71.631
CHAINAGE	1.850	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000 60.000 65.000 70.000 73.388

SECTION D-D

	Datum 65.000 M							
FINISHED GROUND LEVEL								
DEMOLISHED PROFILE	69.613	69.180	69.230	69.233	69.263	69.308	69.261	69.468
CHAINAGE	60.493	65.000	70.000	75.000	80.000	85.000	90.000	95.000 99.328

Topographical Abbreviations

Topographical Abbreviations		OS NORTH	
A/R	Assumed Route	MKR	Marker
BH	Borehole	MT	Mercury Telecom Cover
BOL	Bollard	OHC	Overhead Cable
BT	British Telecom Cover	OHP	Overhead Pipe
BW	Barbed Wire Fence	OSBM	Ordinance Survey Bench Mark
BWK	Brickwork	PB	Post Box
CATV	Cable TV Cover	PGM	Permanent Ground Marker
CB	Close Boarded Fence	PR	Post & Rail Fence
CCTV	Closed Circuit TV	PWF	Post & Wire Fence
CHLK	Chainlink Fence	PWM	Post & Wire Mesh Fence
CHPL	Chestnut Paling Fence	RE	Rodding Eye
CL	Cover Level	RG	Road Gully
CM	Cable Marker	RN	Road Name
CP	Catch Pit	RS	Road Sign
CPL	Catch Pit Base Level	RW	Retaining Wall
DA	Tree Hole (Diameter)	RWP	Rain Water Pipe
DK	Drop Kerb	SAP	Sapling
DP	Down Pipe	SC	Stop Cock
EJB	Electricity Junction Box	SPR	Tree Canopy Spread (Radius)
EC	Electricity Cover	STA	Traverse Station
EP	Electricity Pole	SV	Stop Valve
ER	Earthing Rod	SVP	Soil Vent Pipe
FCL	Finished Ceiling Level	SW	Storm Water
FH	Fire Hydrant	TB	Telephone Box
FIG	Feed into Ground	TBM	Temporary Bench Mark
FW	Foul Water	TR	Taken From Records
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KO	Kerb Outlet	VP	Vent Pipe
LB	Litter Bin	WKH	Water Key Hole
LC	Lamp Column	WM	Water Meter
LP	Lamp Post	WV	Water Valve
MH	Manhole		

Comments

This plan should only be used for its original purpose. Erith accepts no responsibility for this plan if supplied to any party other than the original client.

All dimensions should be checked on site prior to design and construction.

Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

REV	COMMENT	DATE



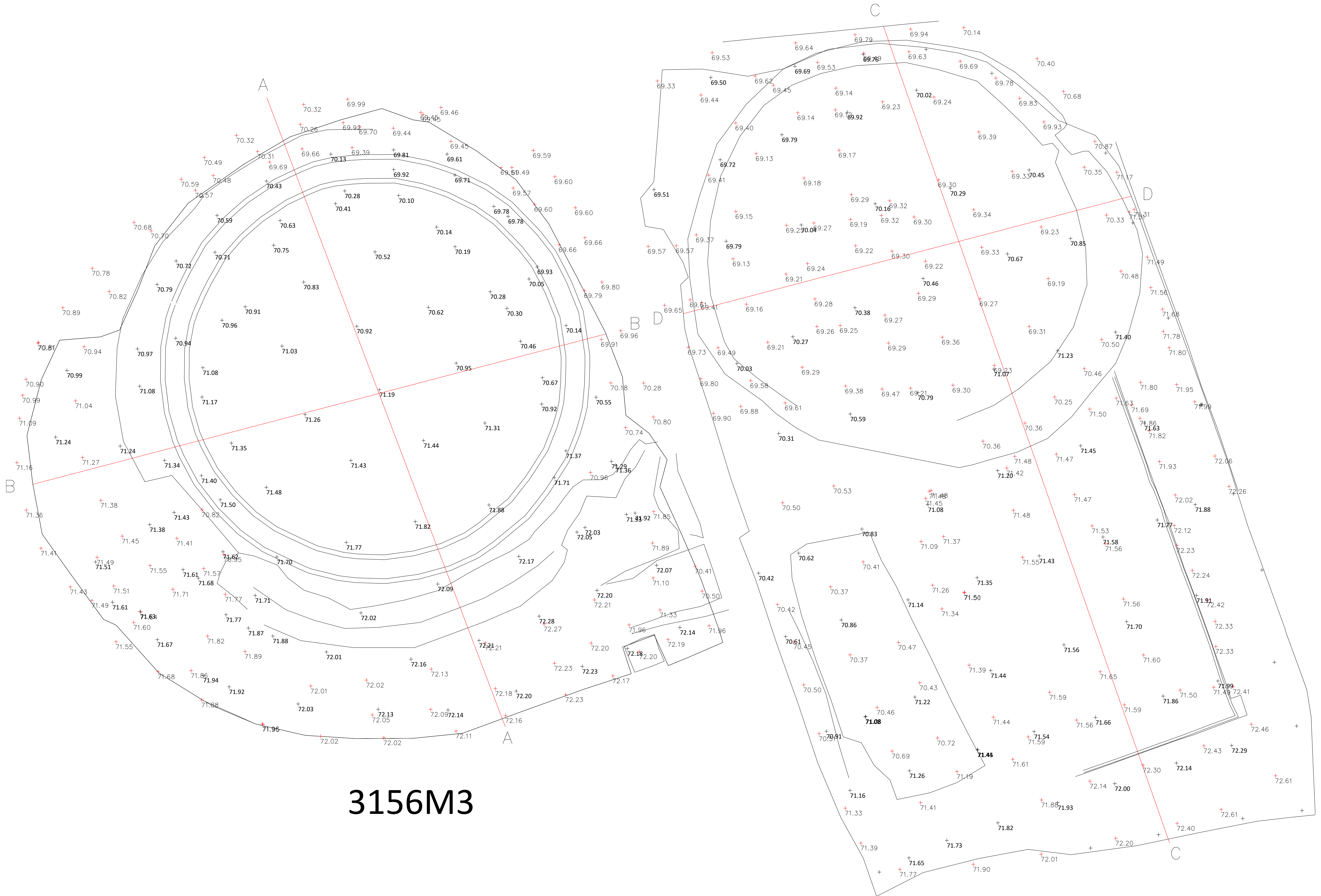
Client
SGN

Project
SEVENOAKS GASWORKS

Title
BACKFILL CROSS-SECTIONS

Drawn by	Checked	Date	Authorised	Date
PV	OD	16-01-19	PV	16-01-19
Original Scale	Date	Rev	Paper	
1:150	16-01-19	-	A0	

Drawing Number
8179-SECTIONS-006



3156M3

1098M3

