

## Trial Pit TP 3 Photographs



Not To Scale

**Project** : Land by 1 Ellerdale Road, London NW3

**Client** : Mr Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

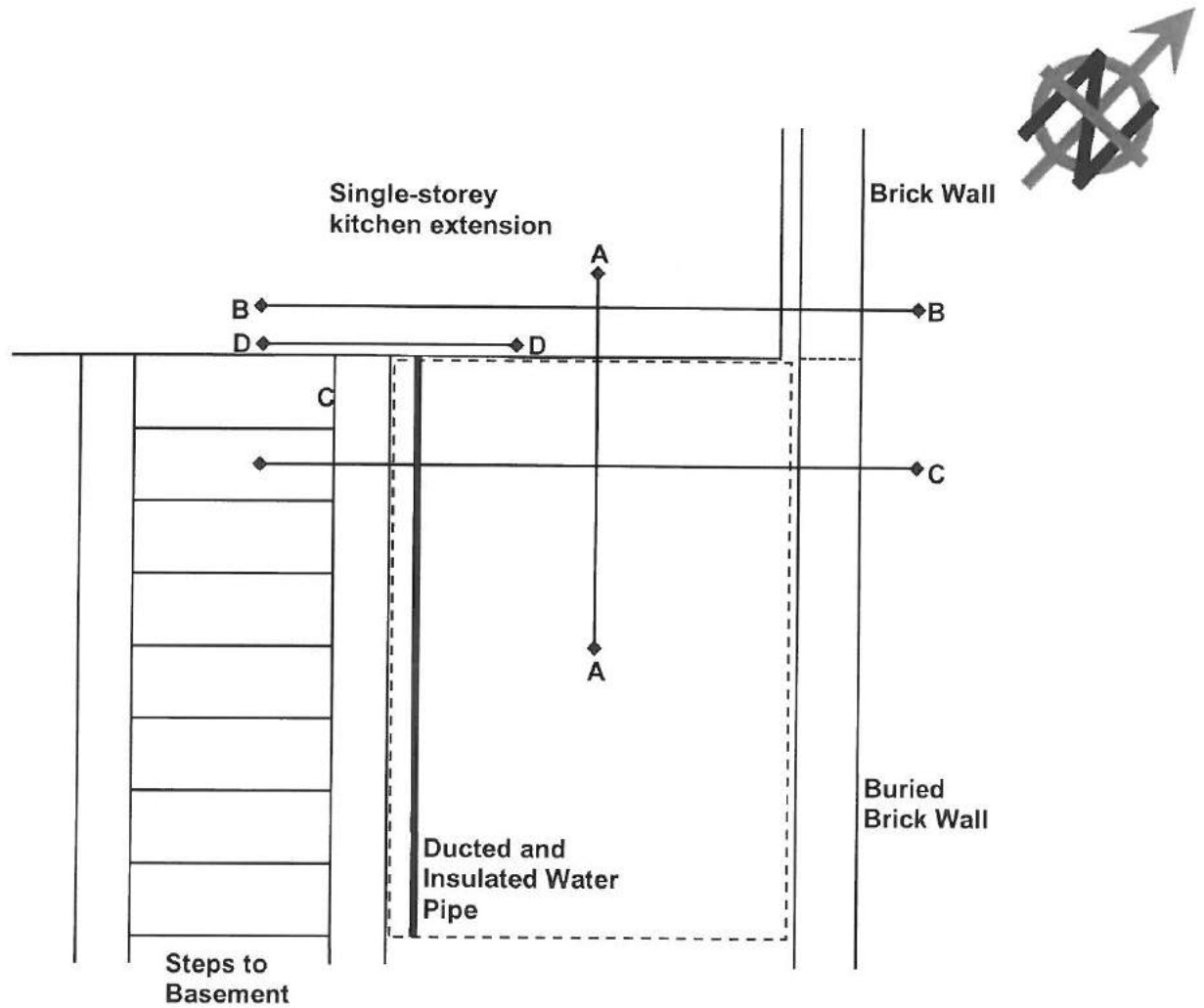
Peterborough

Tel : 01733 566566

**Project No.  
C13183**

<b>GROUND ENGINEERING</b> L I M I T E D Tel: 01733-566566 www.groundengineering.co.uk			Site: <b>LAND BY 1 ELLERDALE ROAD, LONDON NW3</b>		<b>TRIAL PIT TP4</b>		
			Date: 27/01/14 to 28/01/14	Pit Size: 1.10m L x 0.70m W x 3.00m D.		Ground Level: 49.42m. S.D.	
<b>Samples and in-situ Tests</b>			(Date) Water	Description of Strata	Legend	Depth m	S.D. Level m
Depth m	Type	Result					
0.10	D1			MADE GROUND - Soft, friable, dark grey, slightly sandy, gravelly CLAY and a manhole cover. Gravel of brick, metal, ceramic pipe, flint, slate, concrete and plastic.		0.45	48.97
0.40	D2			MADE GROUND - Firm, brown, sandy, gravelly CLAY. Gravel of flint, brick, concrete, plastic and metal.			
0.70	D3					1.05	48.37
1.00	D4			MADE GROUND - Firm, friable, brown, sandy, gravelly CLAY. Gravel of brick, concrete, plastic, flint, wood, metal pipe, coal and ash.			
1.30	D5					1.90	47.52
1.60	D6						
2.00	D7			MADE GROUND - Firm, friable, orange brown and dark brown mottled, slightly gravelly, sandy CLAY. Gravel of flint and coal.		2.20	47.22
2.30	D8			MADE GROUND - Brown, slightly gravelly, very silty SAND. Gravel of coal, flint and ash.			
2.60	D9					2.75	46.67
2.90	D10			MADE GROUND - Grey and grey brown, slightly gravelly, silty SAND. Gravel of flint, brick, and ash.			
				Pit completed at 3.00m depth		3.00	46.42
<b>KEY</b> D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample R - Root Sample W - Water Sample J - Jar Sample ▽ - Water Strike ▽ - Water Rise ▽c - Level on completion MP - Mackintosh Probe P ( ) - Hand Penetrometer Cohesion ( ) kPa V - Vane Shear Test Cohesion ( ) kPa			<b>REMARKS</b> 1. Live roots observed to 1.70m depth 2. Pit sides stable 3. Pit dry				
			<div> <div>Project No</div> <div>13183</div> </div> <div> <div>Scale</div> <div>1:25</div> </div> <div> <div>Page</div> <div>1/1</div> </div>				

# Trial Pit TP 4 Plan



Not To Scale

**Project** : Land by 1 Ellerdale Road, London NW3

**Client** : Mr Georg Galberg

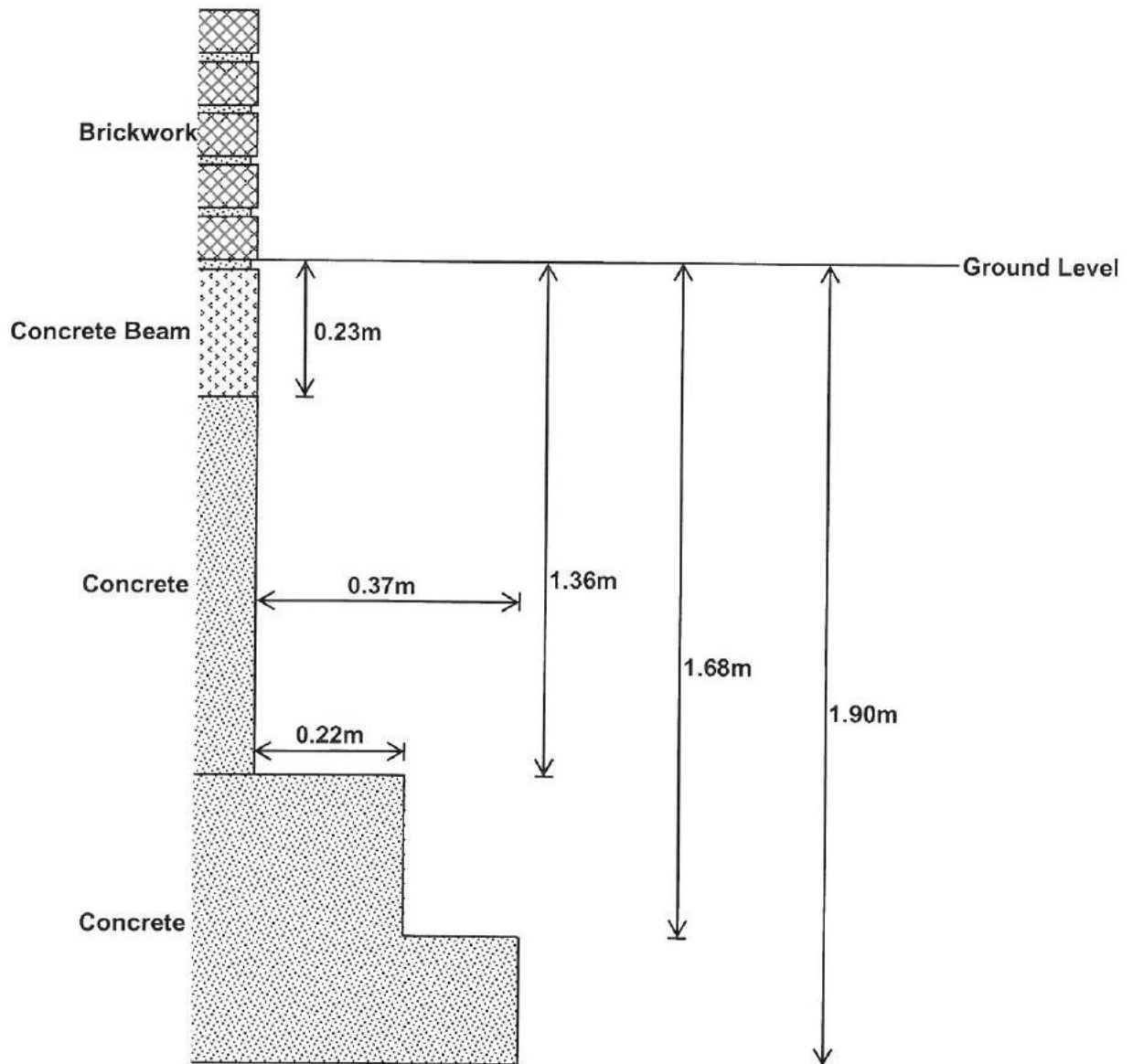
**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**

# **Trial Pit TP 4** **Cross Section A-A**



Not To Scale

**Project : Land by 1 Ellerdale Road, London NW3**

**Client : Mr Georg Galberg**

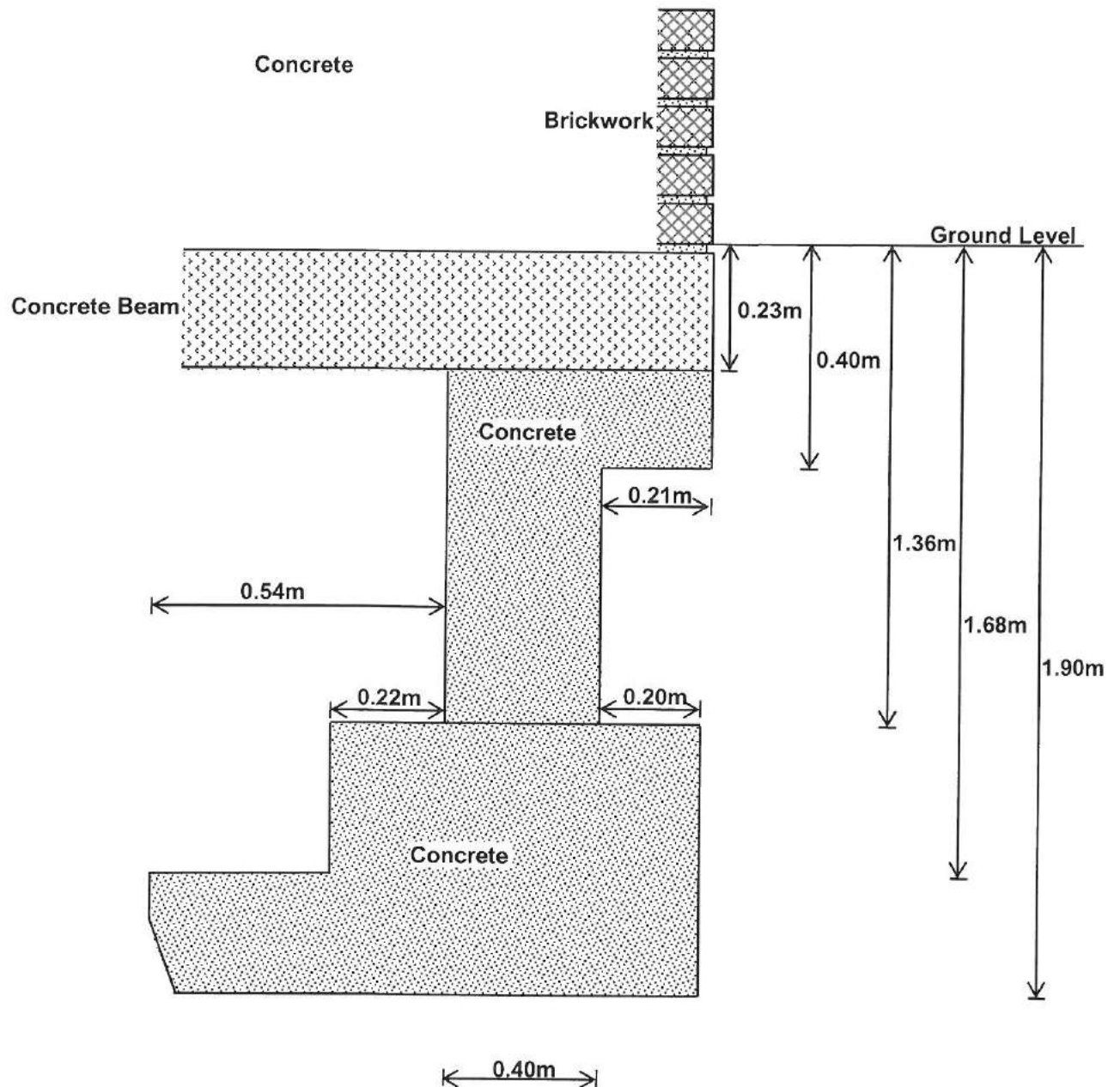
**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**

# Trial Pit TP 4 Cross Section B-B



Not To Scale

Project : Land by 1 Ellerdale Road, London NW3

Client : Mr Georg Galberg

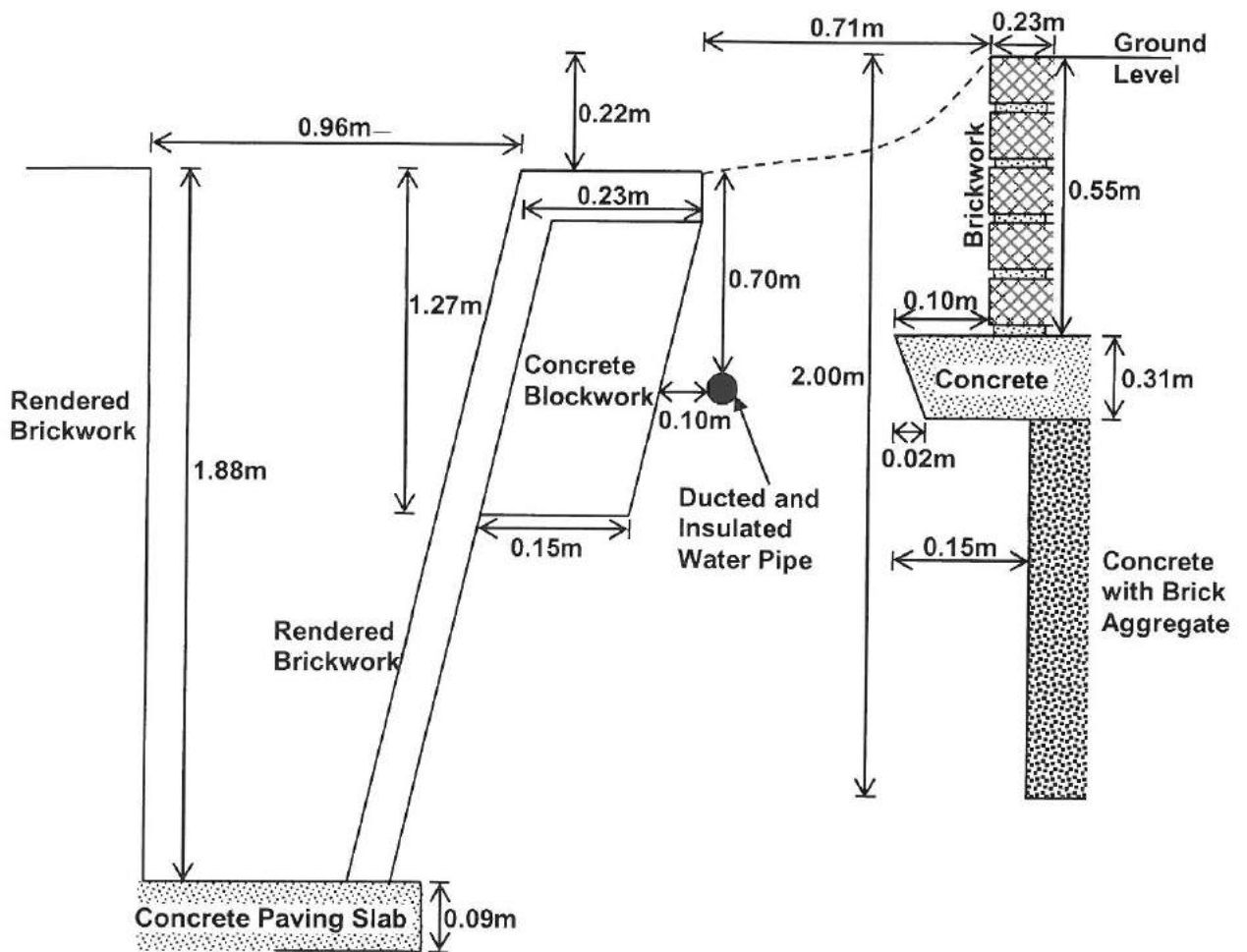
**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

Project No.  
C13183

# Trial Pit TP 4 Cross Section C-C



Not To Scale

**Project :** Land by 1 Ellerdale Road, London NW3

**Client :** Mr Georg Galberg

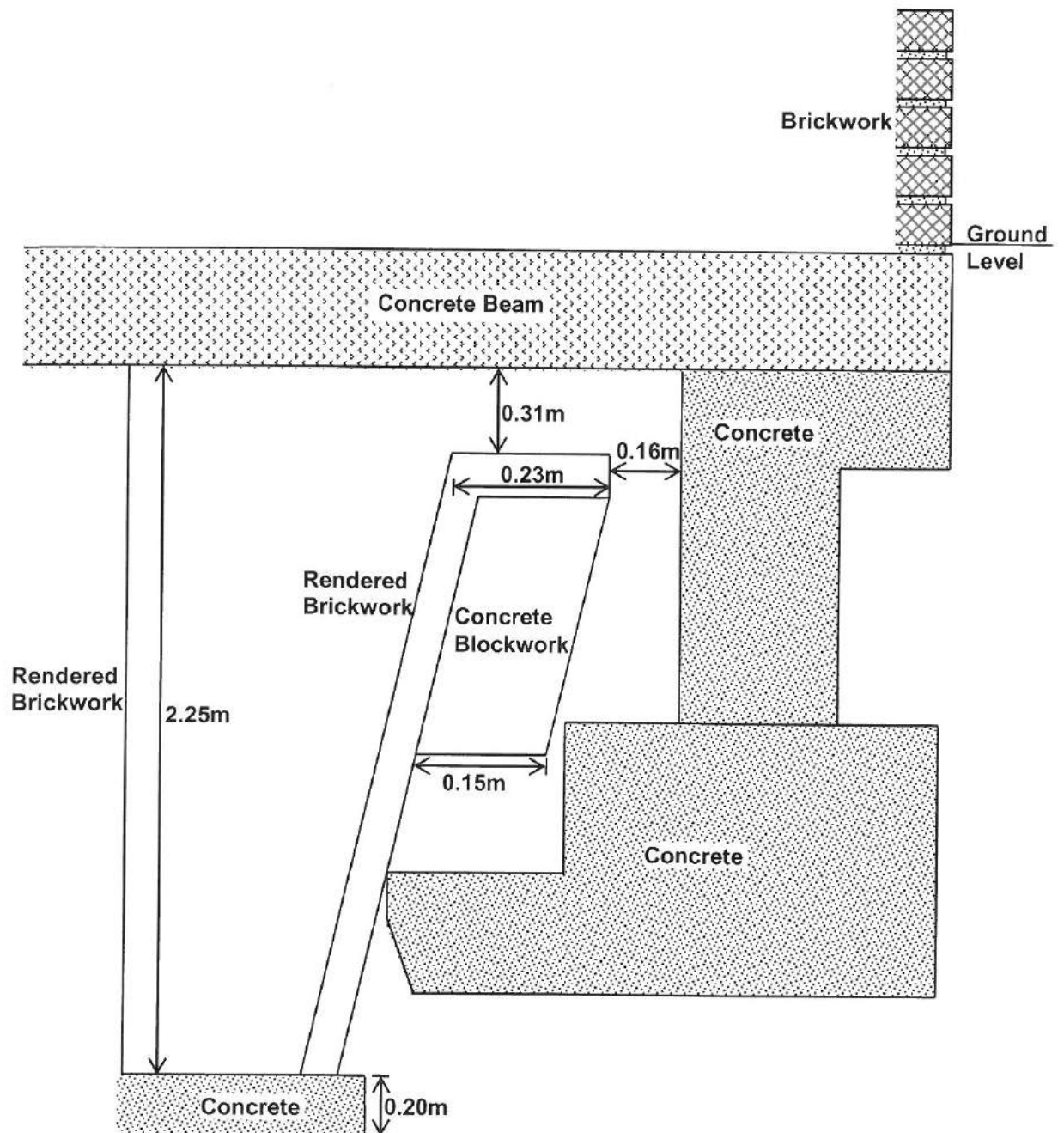
**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**

# Trial Pit TP 4 Cross Section D-D



Not To Scale

**Project** : Land by 1 Ellerdale Road, London NW3

**Client** : Mr Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**



## Trial Pit TP 4 Photographs



Not To Scale

**Project** : Land by 1 Ellerdale Road, London NW3

**Client** : Mr Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**



## Trial Pit TP 4 Photographs



Not To Scale

**Project** : Land by 1 Ellerdale Road, London NW3

**Client** : Mr Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C13183**

**Groundwater/Gas Monitoring Record****GROUND ENGINEERING LIMITED****Site: Land by 1 Ellerdale Road, London NW3****Report Ref: C13183**

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
06/02/14	BH 1	<0.1	<0.1	2.4	2.4	12.9	20.5	<0.1	971	10.00	6.29
13/02/14	BH 1	<0.1	<0.1	1.2	1.2	17.3	17.3	<0.1	977	10.00	6.22
25/02/14	BH 1	<0.1	<0.1	1.7	1.7	16.6	16.6	<0.1	988	10.00	6.15
04/03/14	BH 1	<0.1	<0.1	1.9	1.9	16.7	16.7	<0.1	991	10.00	6.33

Equipment: GasLog GFM 430, 50m tape dipmeter.

## LABORATORY TEST RESULTS

CONTRACT LAND BY 1 ELLERDALE ROAD, LONDON NW3

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO <sub>4</sub> )				Remarks	
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m <sup>3</sup>	Dry Mg/m <sup>3</sup>	Type	Principal Stress Difference kPa	Cell Pressure kPa	Shear Strength kPa	Angle of Shear Resistance degrees	Soil		Water	pH		
														Total % Dry Wt.	Aqueous Extract mg/l	mg/l			
BH1	B2	0.60 – 1.20				22													
	B3	1.20 – 1.70				21										33		7.3	
	B4	1.70 – 2.00				18													
	B5	2.00 – 2.50				17										49		7.6	
	B6	2.80 – 3.30	41	16	25	17													SOIL CLASSIFICATION = CI 18% retained on 425µm sieve
	U1	4.00 – 4.45				27	2.08	1.63	QM	133 167 181	50 50 100	80	0			61		7.3	
	B7	5.00 – 5.50	49	18	31	26										166		5.5	SOIL CLASSIFICATION = CI 0% retained on 425µm sieve
	U2	6.00 – 6.20				26	1.95	1.54	Q	140	100	70	0						
	D4	7.00				26													

U - UNDISTURBED SAMPLE  
D - DISTURBED SAMPLE  
B - BULK SAMPLE  
W - WATER SAMPLE

C.U. - CONSOLIDATED UNDRAINED  
C.D. - CONSOLIDATED DRAINED  
Q. - IMMEDIATE UNDRAINED  
Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

13183

**GROUND ENGINEERING**  
L I M I T E D

Tel: 01733-566566  
www.groundengineering.co.uk

## LABORATORY TEST RESULTS

CONTRACT LAND BY 1 ELLERDALE ROAD, LONDON NW3

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO <sub>4</sub> )				Remarks
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m <sup>3</sup>	Dry Mg/m <sup>3</sup>	Type	Principal Stress Difference kPa	Cell Pressure kPa	Shear Strength kPa	Angle of Shear Resistance degrees	Soil		Water	pH	
														Total % Dry Wt.	Aqueous Extract mg/l	mg/l		
BH1	B8	7.50 – 8.00	66	22	44	27									904		7.1	SOIL CLASSIFICATION = CH 0% retained on 425µm sieve
	U3	9.00 – 9.45				26	2.04	1.61	QM	159 179 199	100 200 400	90	0					
	B9	10.50 – 11.00	45	19	26	30												SOIL CLASSIFICATION = CI 0% retained on 425µm sieve
	U4	12.00 – 12.30				37												Unsuitable for triaxial testing
	B10	13.00 – 13.50	47	19	28	31									523		6.7	SOIL CLASSIFICATION = CI 2% retained on 425µm sieve
	W1	13.50														354	7.8	
	D14	14.50	51	20	31	22												SOIL CLASSIFICATION = CH 0% retained on 425µm sieve

U - UNDISTURBED SAMPLE  
D - DISTURBED SAMPLE  
B - BULK SAMPLE  
W - WATER SAMPLE

C.U. - CONSOLIDATED UNDRAINED  
C.D. - CONSOLIDATED DRAINED  
Q. - IMMEDIATE UNDRAINED  
Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

13183

**GROUND ENGINEERING**  
L I M I T E D

Tel: 01733-566566  
www.groundengineering.co.uk



8180

**GROUND ENGINEERING**  
LIMITEDNewark Road Peterborough  
t: 01733 566566 f: 01733 315280  
e: admin@groundengineering.co.uk**TEST CERTIFICATE****Determination of Particle Size Distribution**Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4  
Sieved Grading and Sedimentation by PipetteClient: Ground Engineering Ltd  
Client Address: Newark Road  
Peterborough  
PE1 5UACertificate Number: PL4474-1/5/710-2  
Client Reference: C13183  
Lab Job Number: PL4474-1  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 28.02.2014

Contact: Steve Fleming

Site Name: Land By 1 Ellerdale Road  
Site Address: London NW3Certificate of Sampling: N/A  
Sampling Certificate No.: N/A  
Sampled By: Client**TEST RESULTS**

Laboratory Reference: PL4474-1/5

Pre-treatment for  
organic material:

No

Client Reference: B6

Sample Description: Brown orange brown grey clayey SILT/SAND

Material Specification: Not Required

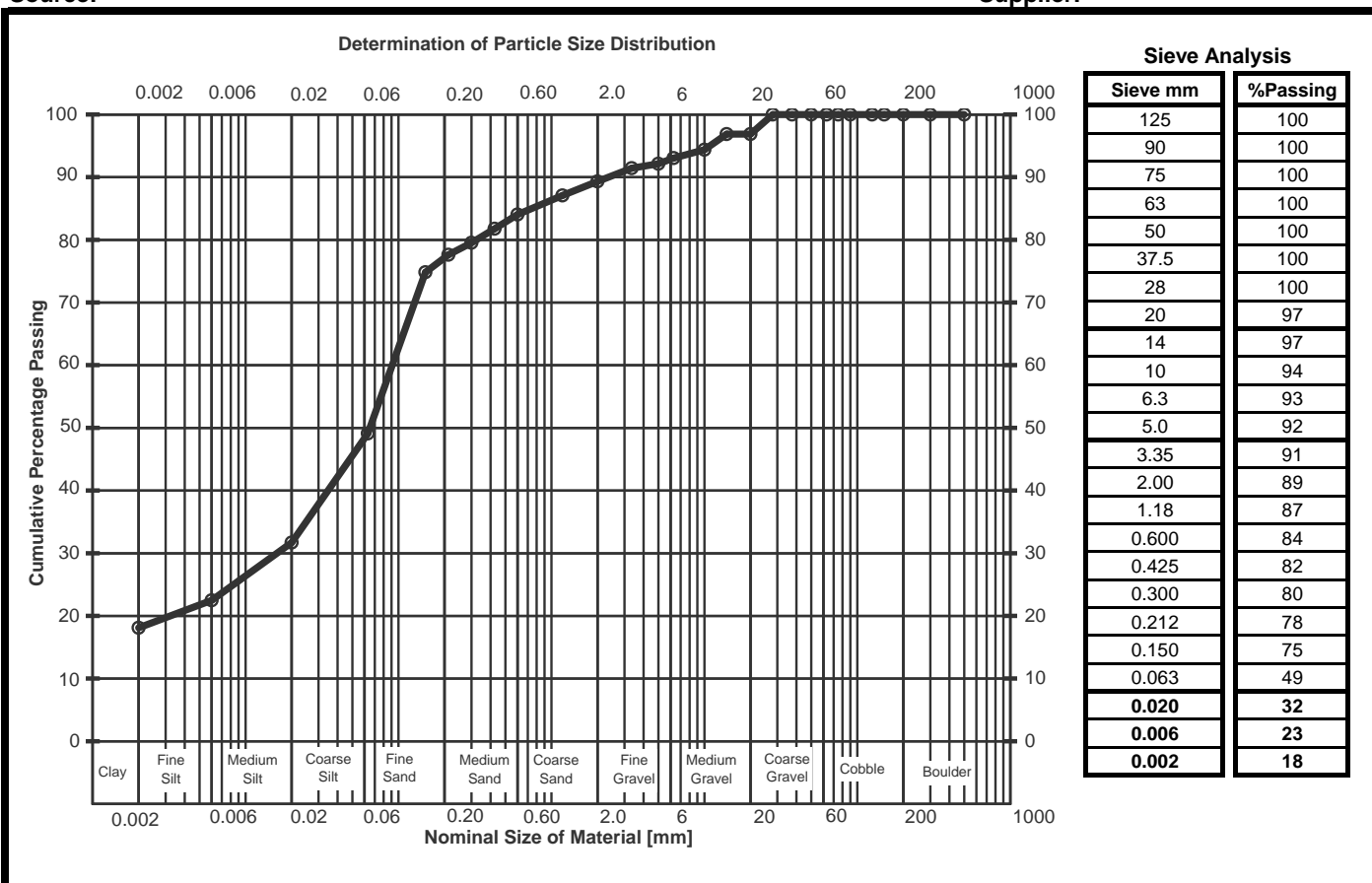
Depth Top: 2.80m

Location: BH1

Depth Base: 3.30m

Source:

Supplier:



Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

for and on behalf of Ground Engineering Ltd

Date Reported: 06.03.2014 Page 1 of 1  
Form Number: GELab/C/709-2 Version 37Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratoryRegistered in England & Wales  
Registration Number: 6929574  
Reg Office: Ground Engineering Ltd  
Newark Rd, Peterborough PE1 5UA



8180

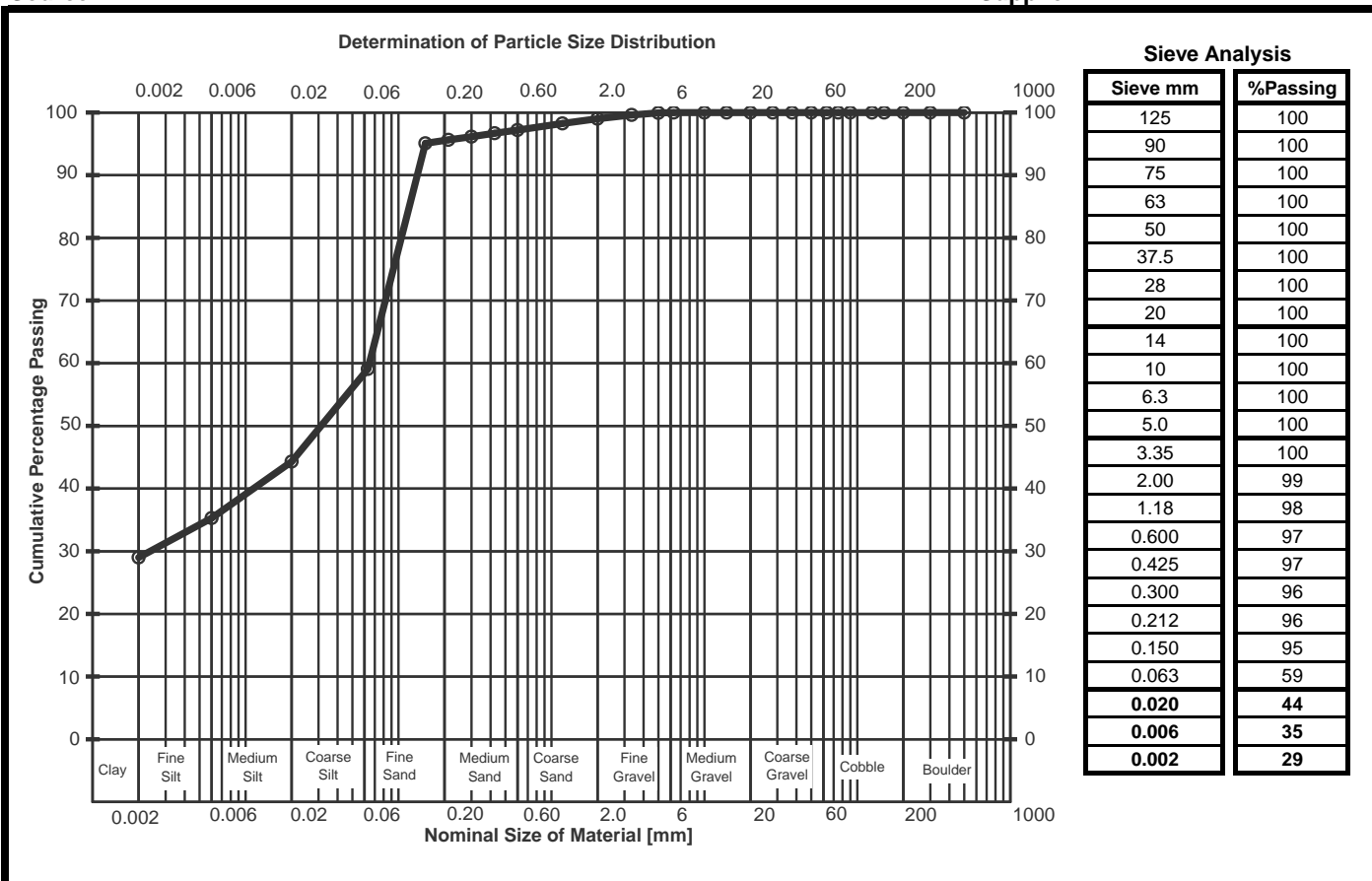
**GROUND ENGINEERING**  
LIMITEDNewark Road Peterborough  
t: 01733 566566 f: 01733 315280  
e: admin@groundengineering.co.uk**TEST CERTIFICATE****Determination of Particle Size Distribution**Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4  
Sieved Grading and Sedimentation by PipetteClient: Ground Engineering Ltd  
Client Address: Newark Road  
Peterborough  
PE1 5UACertificate Number: PL4474-1/7/710-2  
Client Reference: C13183  
Lab Job Number: PL4474-1  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 28.02.2014

Contact: Steve Fleming

Site Name: Land By 1 Ellerdale Road  
Site Address: London NW3Certificate of Sampling: N/A  
Sampling Certificate No.: N/A  
Sampled By: Client**TEST RESULTS**Laboratory Reference: PL4474-1/7  
Client Reference: B7

Pre-treatment for organic material: No

Sample Description: Brown orange brown grey clayey SILT/SAND

Material Specification: Not Required  
Location: BH1  
Source:Depth Top: 5.00m  
Depth Base: 5.50m  
Supplier:

Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

for and on behalf of Ground Engineering Ltd

Date Reported: 06.03.2014 Page 1 of 1  
Form Number: GELab/C/709-2 Version 37Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratoryRegistered in England & Wales  
Registration Number: 6929574  
Reg Office: Ground Engineering Ltd  
Newark Rd, Peterborough PE1 5UA





8180

**GROUND ENGINEERING**  
LIMITEDNewark Road Peterborough  
t: 01733 566566 f: 01733 315280  
e: admin@groundengineering.co.uk**TEST CERTIFICATE****Determination of Particle Size Distribution**Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4  
Sieved Grading and Sedimentation by PipetteClient: Ground Engineering Ltd  
Client Address: Newark Road  
Peterborough  
PE1 5UACertificate Number: PL4474-1/10/710-2  
Client Reference: C13183  
Lab Job Number: PL4474-1  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 28.02.2014

Contact: Steve Fleming

Site Name: Land By 1 Ellerdale Road  
Site Address: London NW3Certificate of Sampling: N/A  
Sampling Certificate No.: N/A  
Sampled By: Client**TEST RESULTS**

Laboratory Reference: PL4474-1/10

Pre-treatment for  
organic material:

No

Client Reference: B8

Sample Description: Grey brown slightly sandy clayey SILT

Material Specification: Not Required

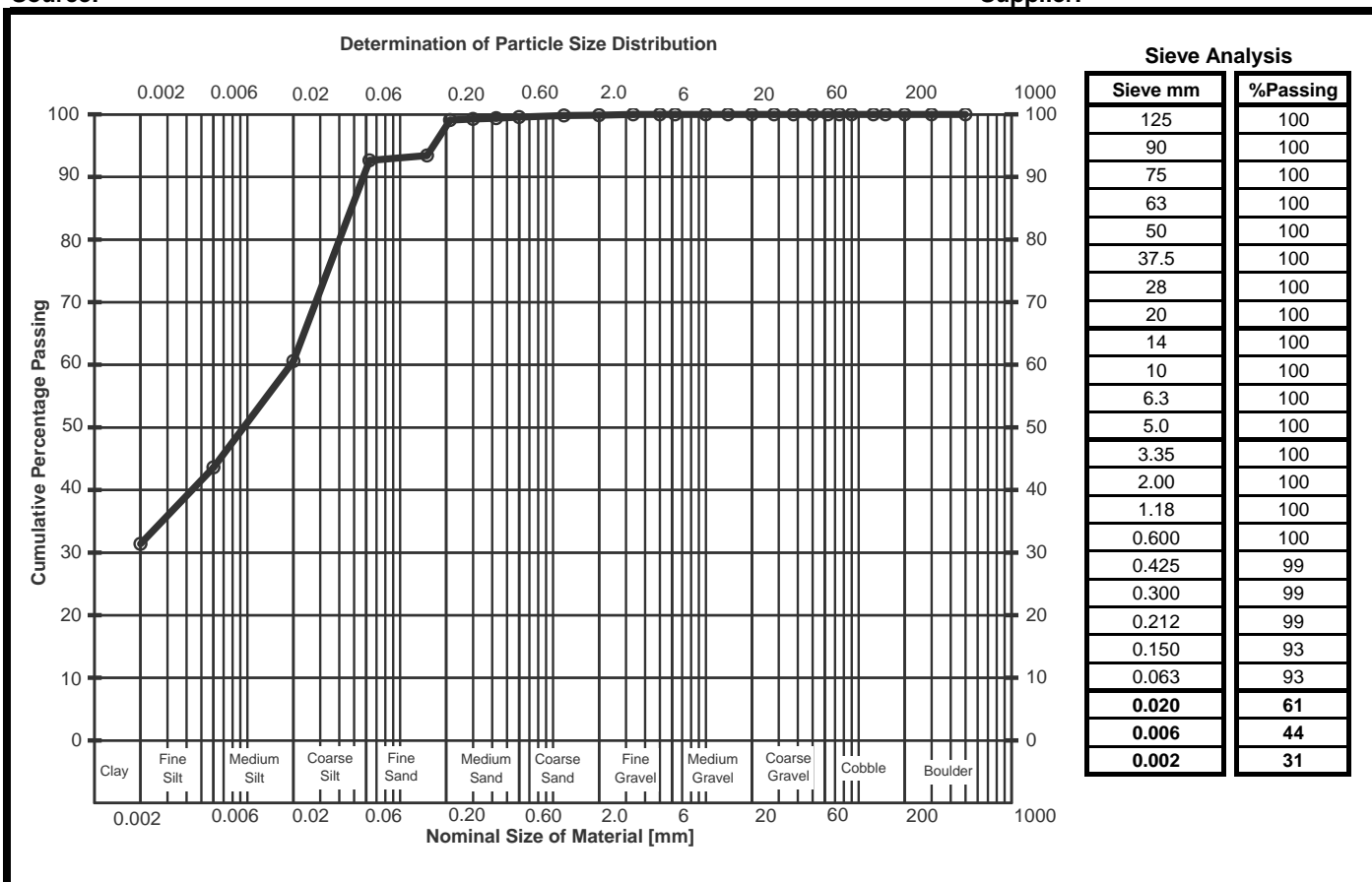
Depth Top: 7.50m

Location: BH1

Depth Base: 8.00m

Source:

Supplier:



Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

for and on behalf of Ground Engineering Ltd

Date Reported: 06.03.2014 Page 1 of 1

Form Number: GELab/C/709-2 Version 37

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratoryRegistered in England & Wales  
Registration Number: 6929574  
Reg Office: Ground Engineering Ltd  
Newark Rd, Peterborough PE1 5UA



8180

**GROUND ENGINEERING**  
LIMITEDNewark Road Peterborough  
t: 01733 566566 f: 01733 315280  
e: admin@groundengineering.co.uk**TEST CERTIFICATE****Determination of Particle Size Distribution**Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4  
Sieved Grading and Sedimentation by PipetteClient: Ground Engineering Ltd  
Client Address: Newark Road  
Peterborough  
PE1 5UACertificate Number: PL4474-1/14/710-2  
Client Reference: C13183  
Lab Job Number: PL4474-1  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 28.02.2014

Contact: Steve Fleming

Site Name: Land By 1 Ellerdale Road  
Site Address: London NW3Certificate of Sampling: N/A  
Sampling Certificate No.: N/A  
Sampled By: Client**TEST RESULTS**

Laboratory Reference: PL4474-1/14

Pre-treatment for  
organic material:

No

Client Reference: B10

Sample Description: Grey brown clayey SILT/SAND

Material Specification: Not Required

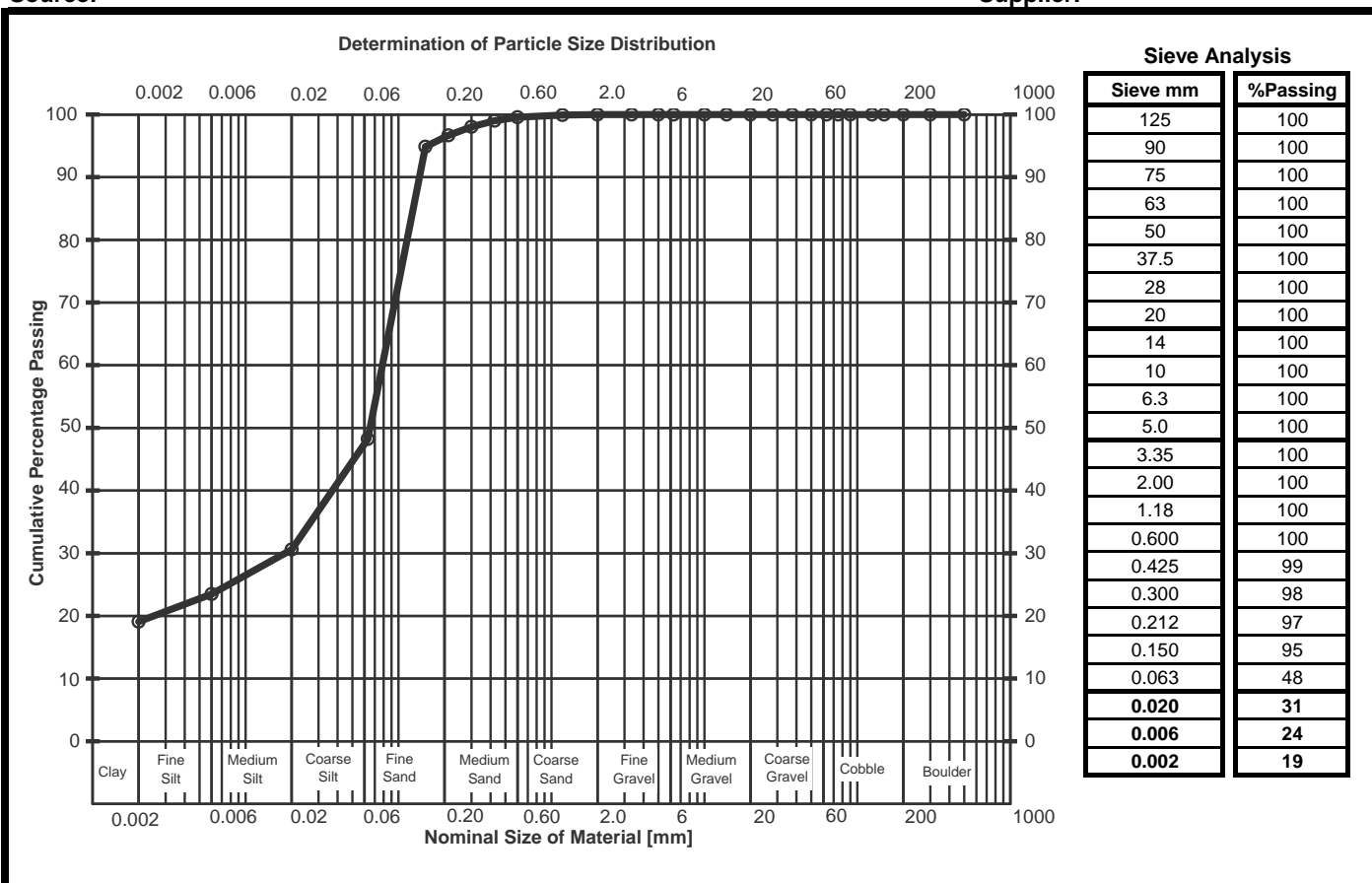
Depth Top: 13.00m

Location: BH1

Depth Base: 13.50m

Source:

Supplier:



Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

for and on behalf of Ground Engineering Ltd

Date Reported: 06.03.2014 Page 1 of 1  
Form Number: GELab/C/709-2 Version 37Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratoryRegistered in England & Wales  
Registration Number: 6929574  
Reg Office: Ground Engineering Ltd  
Newark Rd, Peterborough PE1 5UA



8180

**GROUND ENGINEERING**  
LIMITEDNewark Road Peterborough  
t: 01733 566566 f: 01733 315280  
e: admin@groundengineering.co.uk**TEST CERTIFICATE****Determination of Particle Size Distribution**Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4  
Sieved Grading and Sedimentation by PipetteClient: Ground Engineering Ltd  
Client Address: Newark Road  
Peterborough  
PE1 5UACertificate Number: PL4474-1/16/710-2  
Client Reference: C13183  
Lab Job Number: PL4474-1  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 28.02.2014

Contact: Steve Fleming

Site Name: Land By 1 Ellerdale Road  
Site Address: London NW3Certificate of Sampling: N/A  
Sampling Certificate No.: N/A  
Sampled By: Client**TEST RESULTS**

Laboratory Reference: PL4474-1/16

Pre-treatment for organic material: No

Client Reference: D14

Sample Description: Grey orange brown clayey SILT

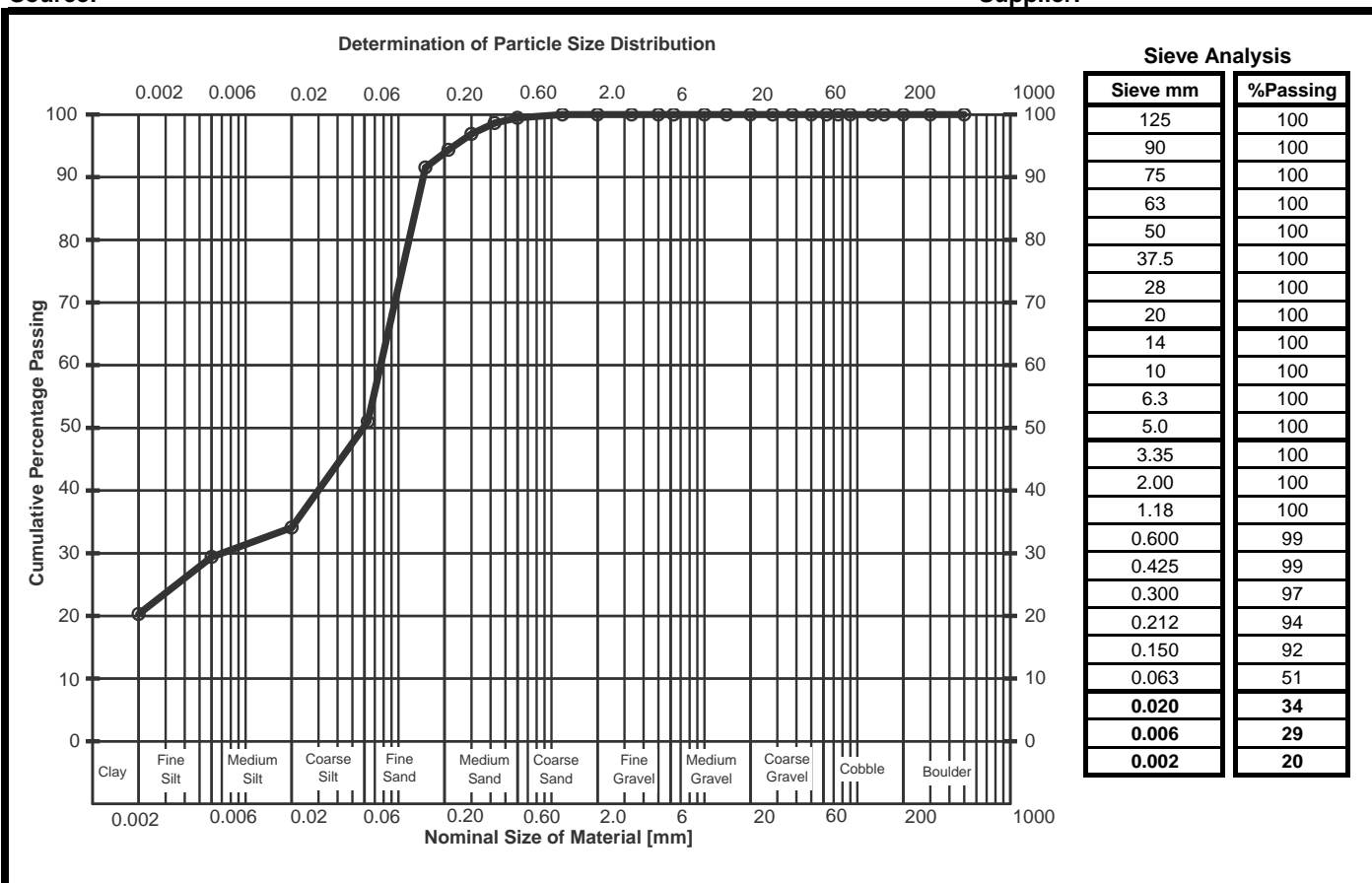
Material Specification: Not Required

Depth: 14.50m

Location: BH1

Source:

Supplier:



Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

for and on behalf of Ground Engineering Ltd

Date Reported: 06.03.2014 Page 1 of 1  
Form Number: GELab/C/709-2 Version 37Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratoryRegistered in England & Wales  
Registration Number: 6929574  
Reg Office: Ground Engineering Ltd  
Newark Rd, Peterborough PE1 5UA

**TEST CERTIFICATE**  
**One-Dimensional Consolidation**  
**Properties**

(Tested in accordance with BS1377 : Part 5 1990)

Newark Road Peterborough

t:01733 566566 f:01733 315280

e: admin@groundengineering.co.uk

Client: Ground Engineering

Client Address: Newark Road

Peterborough

Cambridgeshire

Postcode: PE1 5UA

Contact: Steve Fleming

Site Name: Ellerdale Road

Site Address: London NW3

Certificate Number: PL4474-1-6/731

Client Reference Number: C13183

Date Sampled: Unknown

Date Received: 05.02.2014

Date Tested: 20.02.2014

Sampling Certificate No: N/A

Certificate of Sampling: N/A

Sampled By: Client

**Test Details**

Location: BH1  
 Sample Ref: U1  
 Sample Description: Firm brown orange brown grey slightly  
 gravely very sandy CLAY

Particle Density (Mg/m<sup>3</sup>): 2.71 Assumed

Mean Lab Temp. (°C): 22

Variations from Standard: None

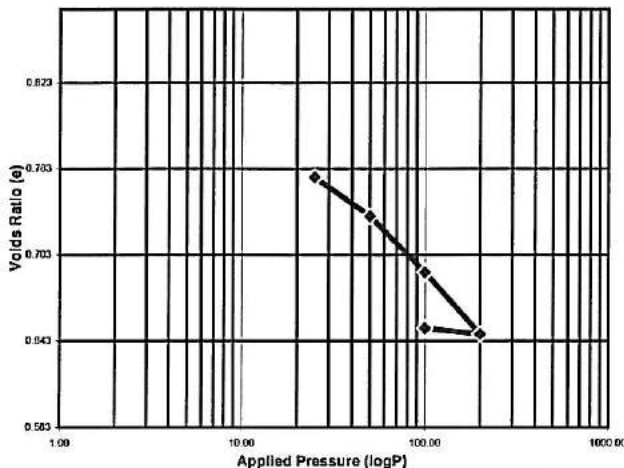
Lab Reference: PL4474-1-6

Depth (m): 4.00 m

**Specimen Details**

	INITIAL	FINAL
Height (mm):	18.67	17.18
Bulk Density (Mg/m <sup>3</sup> ):	1.87	2.02
Moisture Content (%):	24	23
Dry Density (Mg/m <sup>3</sup> ):	1.51	1.64
Voids Ratio:	0.795	0.652
Degree of Saturation (%):	80.6	95.3
Diameter (mm):	74.98	N/A
Swelling Pressure (kPa):	0	N/A
Method of time fitting used:	Log Time	N/A

Voids Ratio against logarithm of Applied Pressure



Applied Pressure (kPa)	Coefficient of Compressibility $m_v$ (m <sup>2</sup> /MN)	Coefficient of Consolidation $c_v$ (m <sup>2</sup> /year)
0		
25	0.87	13.00
50	0.60	5.92
100	0.45	6.84
200	0.26	9.20
100	0.03	---

Comments:

Approved [x] M.Hartnup - Laboratory Manager  
 Signatory: [ ] G.Meadows - Team Leader

Signed:

for and on behalf of  
 Ground Engineering Ltd

Date Reported: 06/03/2014

Opinions and interpretations expressed herein are outside the scope of the UKAS Accreditation.  
 This report may not be reproduced other than in full without the prior written approval of the issuing laboratory.

Registered in England Wales  
 Reg Number 6929574  
 Reg Office: Diasma  
 Willie Snaith Rd  
 Newmarket CB8 7SQ

**TEST CERTIFICATE**  
**One-Dimensional Consolidation**  
**Properties**

(Tested in accordance with BS1377 : Part 5 1990)

Client: Ground Engineering  
Client Address: Newark Road  
Peterborough  
Cambridgeshire  
Postcode: PE1 5UA  
Contact: Steve Fleming  
Site Name: Ellerdale Road  
Site Address: London NW3

Newark Road Peterborough  
t:01733 566566 f:01733 315280  
e: admin@groundengineering.co.uk  
Certificate Number: PL4474-1-11/731  
Client Reference Number: C13183  
Date Sampled: Unknown  
Date Received: 05.02.2014  
Date Tested: 20.02.2014  
Sampling Certificate No: N/A  
Certificate of Sampling: N/A  
Sampled By: Client

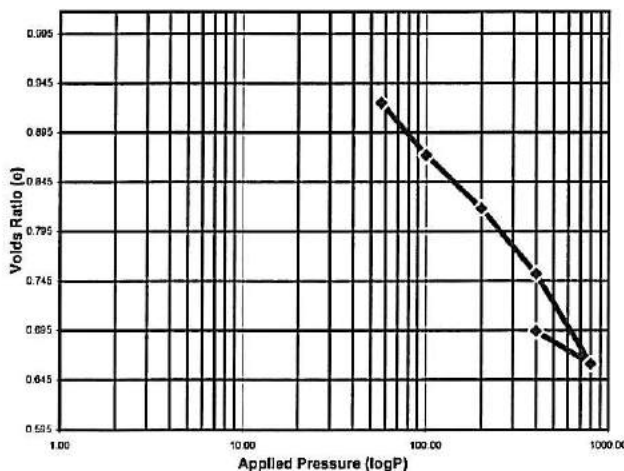
**Test Details**

Location: BH1  
Sample Ref: U3  
Sample Description: Very Stiff dark brown dark grey slightly silty CLAY  
Particle Density ( $\text{Mg/m}^3$ ): 2.74 Assumed  
Mean Lab Temp. ( $^{\circ}\text{C}$ ): 22  
Variations from Standard: None  
Lab Reference: PL4474-1-11  
Depth (m): 9.00 m

**Specimen Details**

	INITIAL	FINAL
Height (mm):	18.94	16.67
Bulk Density ( $\text{Mg/m}^3$ ):	1.83	2.07
Moisture Content (%):	28	28
Dry Density ( $\text{Mg/m}^3$ ):	1.42	1.62
Voids Ratio:	0.925	0.694
Degree of Saturation (%):	84.3	109.9
Diameter (mm):	74.96	N/A
Swelling Pressure (kPa):	57	N/A
Method of time fitting used:	Log Time	N/A

Voids Ratio against logarithm of Applied Pressure



Applied Pressure (kPa)	Coefficient of Compressibility $m_v$ ( $\text{m}^2/\text{MN}$ )	Coefficient of Consolidation $c_v$ ( $\text{m}^2/\text{year}$ )
57		
100	0.63	0.94
200	0.29	0.74
400	0.18	0.76
800	0.13	0.42
400	0.05	---

**Comments:**

Approved [x] M.Hartnup - Laboratory Manager  
Signatory: [ ] G.Meadows - Team Leader

Signed:

for and on behalf of  
Ground Engineering Ltd

Date Reported: 06/03/2014

Opinions and interpretations expressed herein are outside the scope of the UKAS Accreditation.  
This report may not be reproduced other than in full without the prior written approval of the issuing laboratory.

Registered in England Wales  
Reg Number 6929574  
Reg Office: Diasma  
Willie Snaith Rd  
Newmarket CB8 7SQ

**TEST CERTIFICATE**  
**One-Dimensional Consolidation**  
**Properties**

(Tested in accordance with BS1377 : Part 5 1990)

Newark Road Peterborough

t:01733 566566 f:01733 315280

e: admin@groundengineering.co.uk

Client: Ground Engineering  
 Client Address: Newark Road  
 Peterborough  
 Cambridgeshire  
 Postcode: PE1 5UA  
 Contact: Steve Fleming  
 Site Name: Ellerdale Road  
 Site Address: London NW3

Certificate Number: PL4474-1-13/731  
 Client Reference Number: C13183  
 Date Sampled: Unknown  
 Date Received: 05.02.2014  
 Date Tested: 20.02.2014  
 Sampling Certificate No: N/A  
 Certificate of Sampling: N/A  
 Sampled By: Client

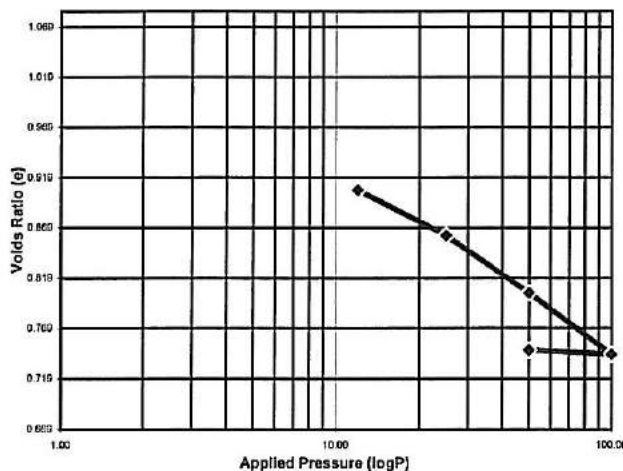
**Test Details**

Location: BH1  
 Sample Ref: U4  
 Sample Description: Soft grey silty CLAY  
 Particle Density ( $\text{Mg/m}^3$ ): 2.73 Assumed  
 Mean Lab Temp. ( $^{\circ}\text{C}$ ): 22  
 Variations from Standard: None  
 Lab Reference: PL4474-1-13  
 Depth (m): 12.00 m

**Specimen Details**

	INITIAL	FINAL
Height (mm):	18.59	16.35
Bulk Density ( $\text{Mg/m}^3$ ):	1.89	2.02
Moisture Content (%):	37	29
Dry Density ( $\text{Mg/m}^3$ ):	1.37	1.56
Voids Ratio:	0.986	0.747
Degree of Saturation (%):	103.1	107.6
Diameter (mm):	75.06	N/A
Swelling Pressure (kPa):	0	N/A
Method of time fitting used:	Log Time	N/A

**Voids Ratio against logarithm of Applied Pressure**



Applied Pressure (kPa)	Coefficient of Compressibility $m_v$ ( $\text{m}^2/\text{MN}$ )	Coefficient of Consolidation $c_v$ ( $\text{m}^2/\text{year}$ )
0		
12	3.37	0.59
25	1.81	0.51
50	1.24	0.70
100	0.67	1.05
50	0.05	---

**Comments:**

Approved [x] M.Hartnup - Laboratory Manager  
 Signatory: [ ] G.Meadows - Team Leader

Signed:

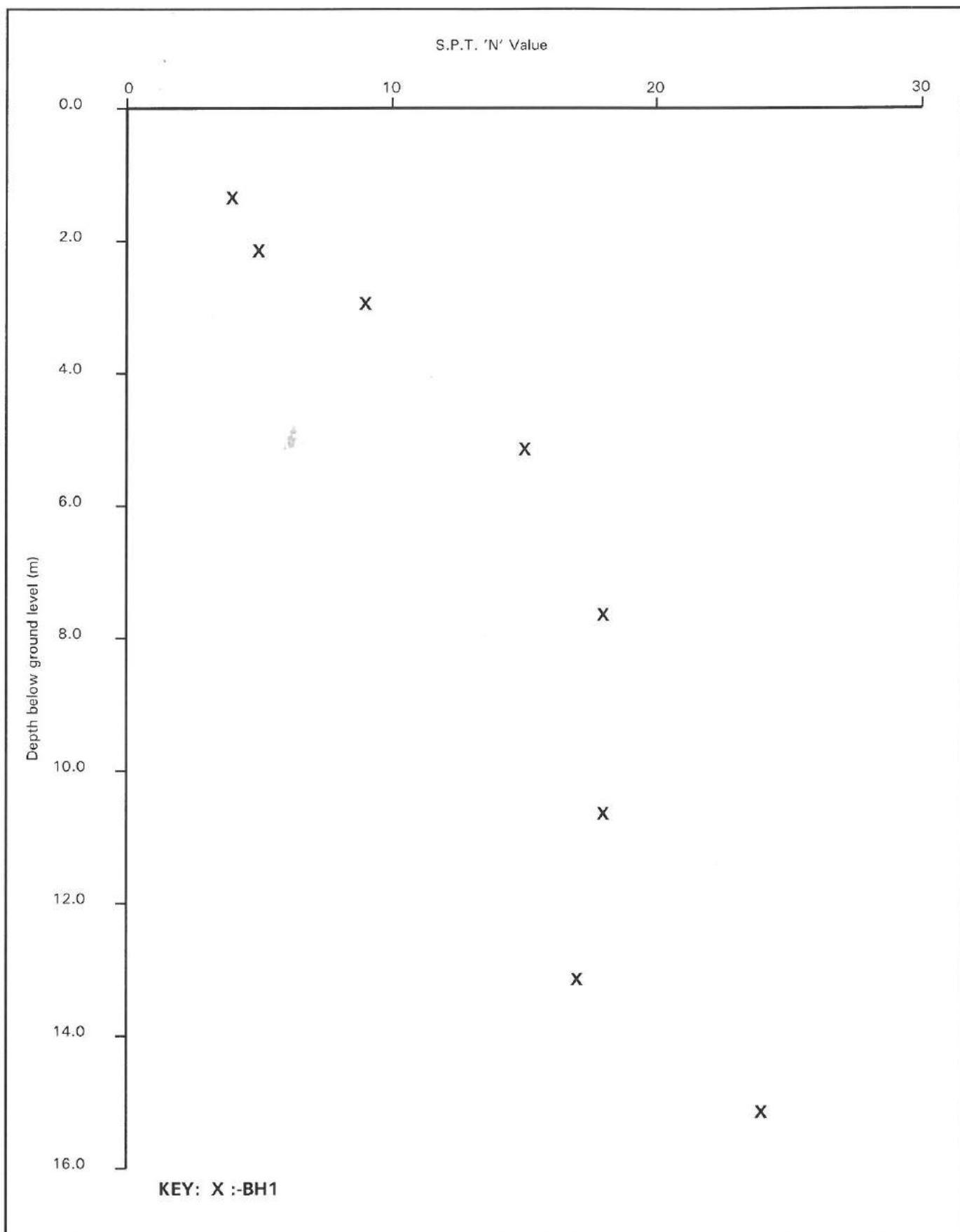
for and on behalf of  
 Ground Engineering Ltd

Date Reported: 06/03/2014

Opinions and interpretations expressed herein are outside the scope of the UKAS Accreditation.  
 This report may not be reproduced other than in full without the prior written approval of the issuing laboratory.

Registered in England Wales  
 Reg Number 6929574  
 Reg Office: Diasma  
 Willie Snaith Rd  
 Newmarket CB8 7SQ





S.P.T. 'N' Value vs Depth below ground level (m).

SITE

LAND BY 1 ELLERDALE ROAD, LONDON NW3

CLIENT

MR. GEORG GALBERG

Contract  
Number 13183

**GROUND ENGINEERING**

L I M I T E D

Tel: 01733-566566

www.groundengineering.co.uk

Date

17/03/14

Figure

1

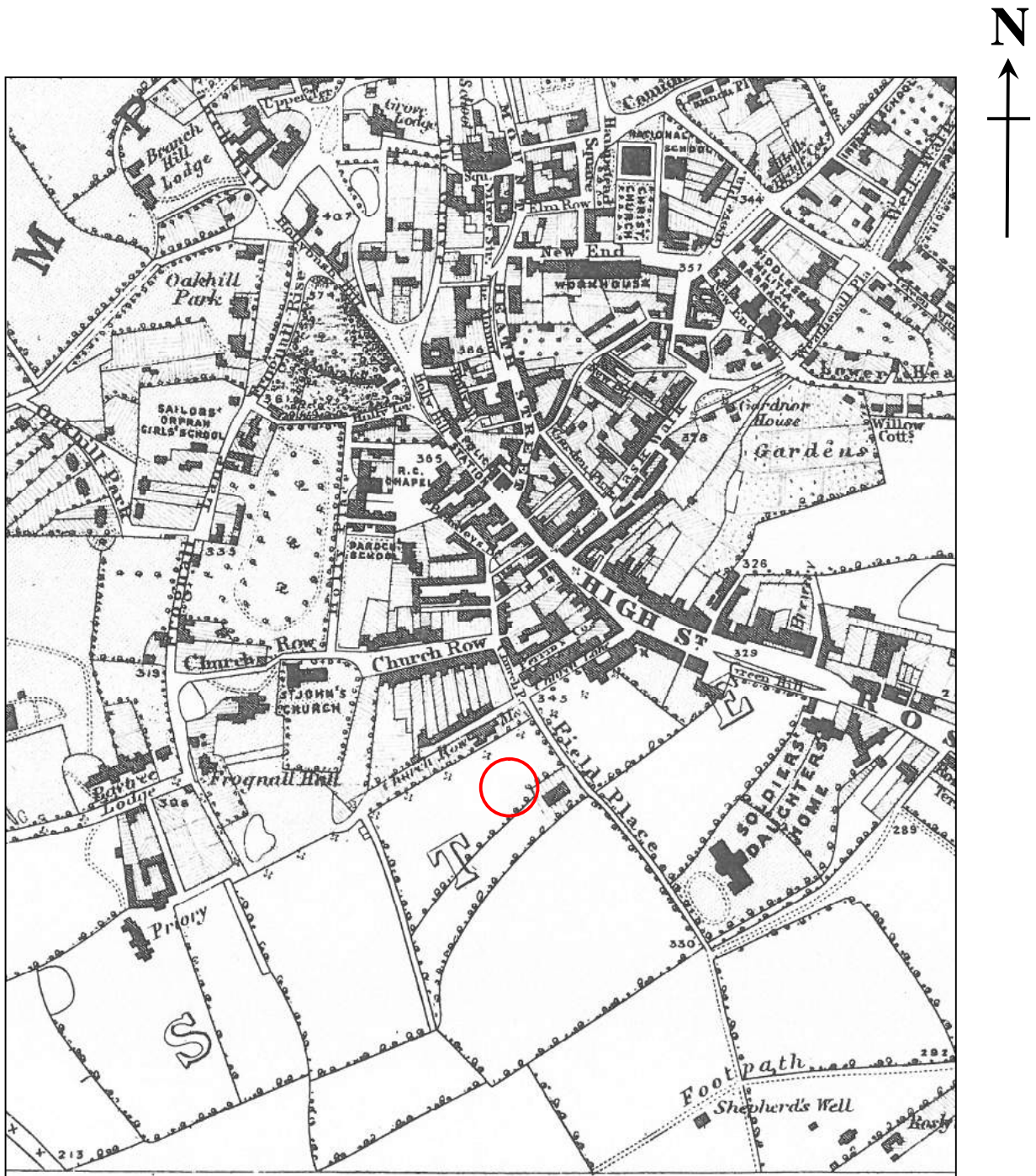
**APPENDIX 1**

**HISTORICAL MAPS**

# Site History

Figure A

Reproduced from the 1862 edition Stanford's Library Map of London and its Suburbs, Not to scale.



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

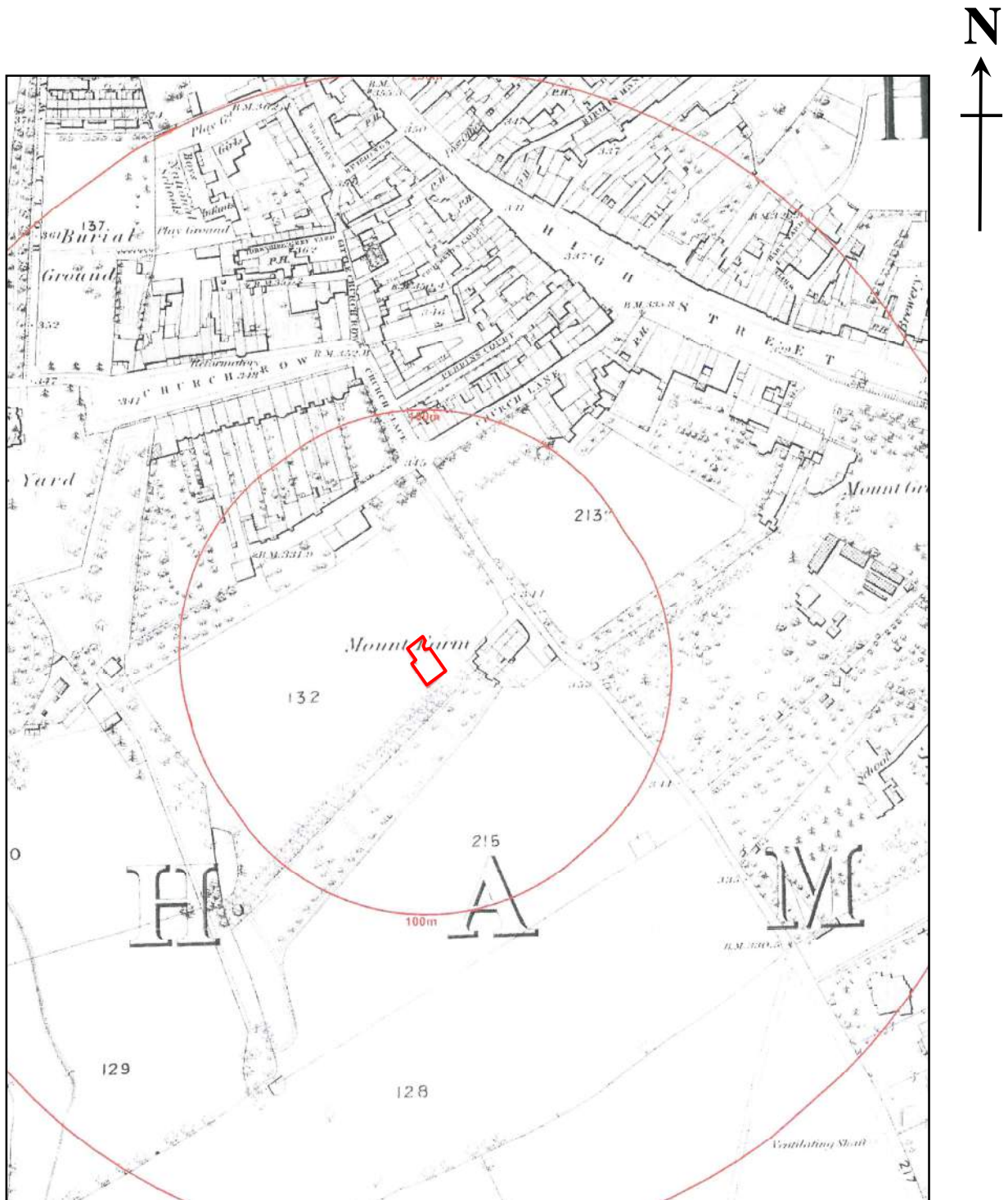
Project No.

**C13183**

# Site History

Figure B

Reproduced from the **1866** edition Ordnance Survey sheet **London VII** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

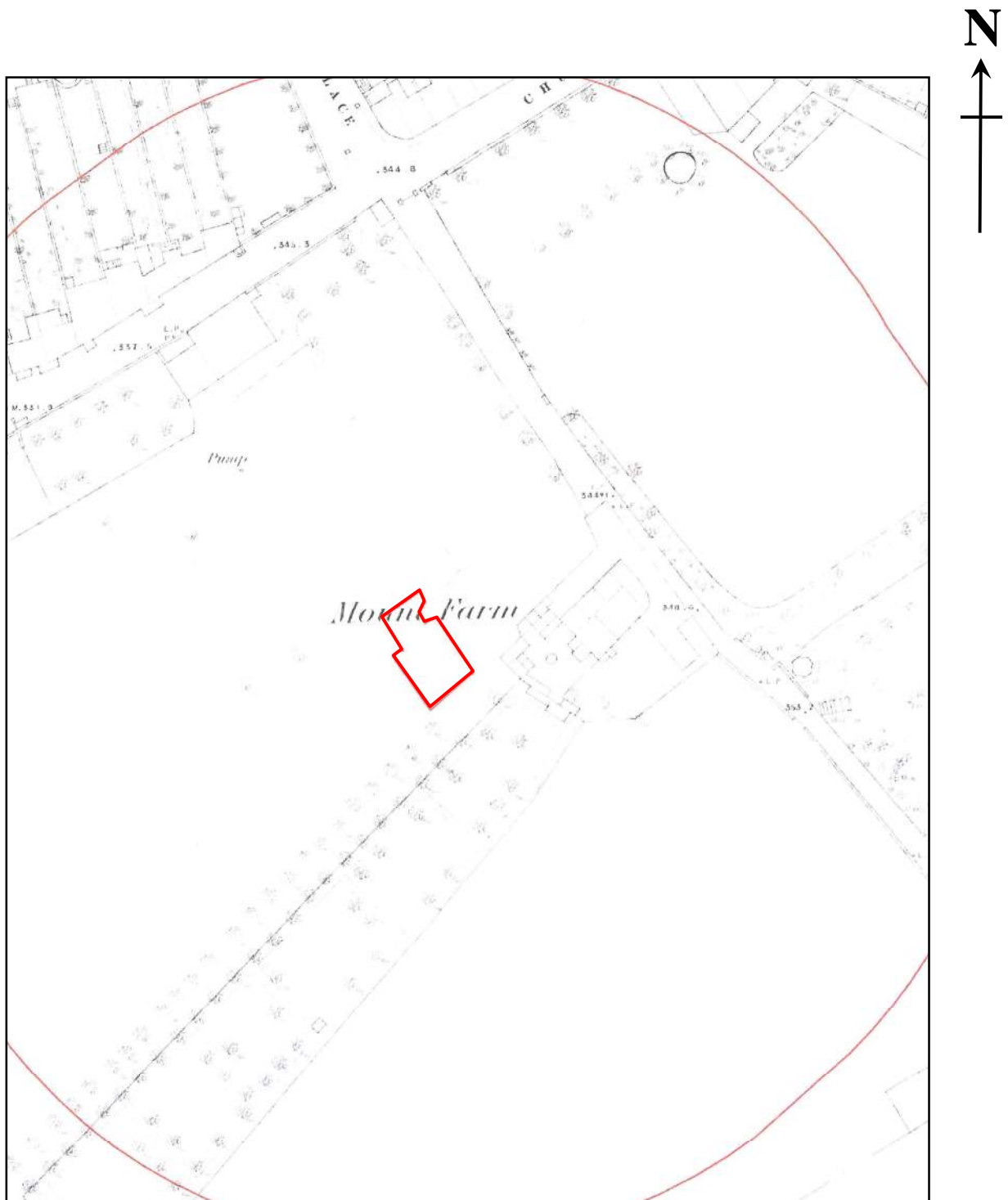
**C13183**



# Site History

Figure C

Reproduced from the **1871** edition Ordnance Survey sheet **Town Plan** at **1:1056** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



**Project : Land by 1 Ellerdale Road, London NW3**

**Client : Mr. Georg Galberg**

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

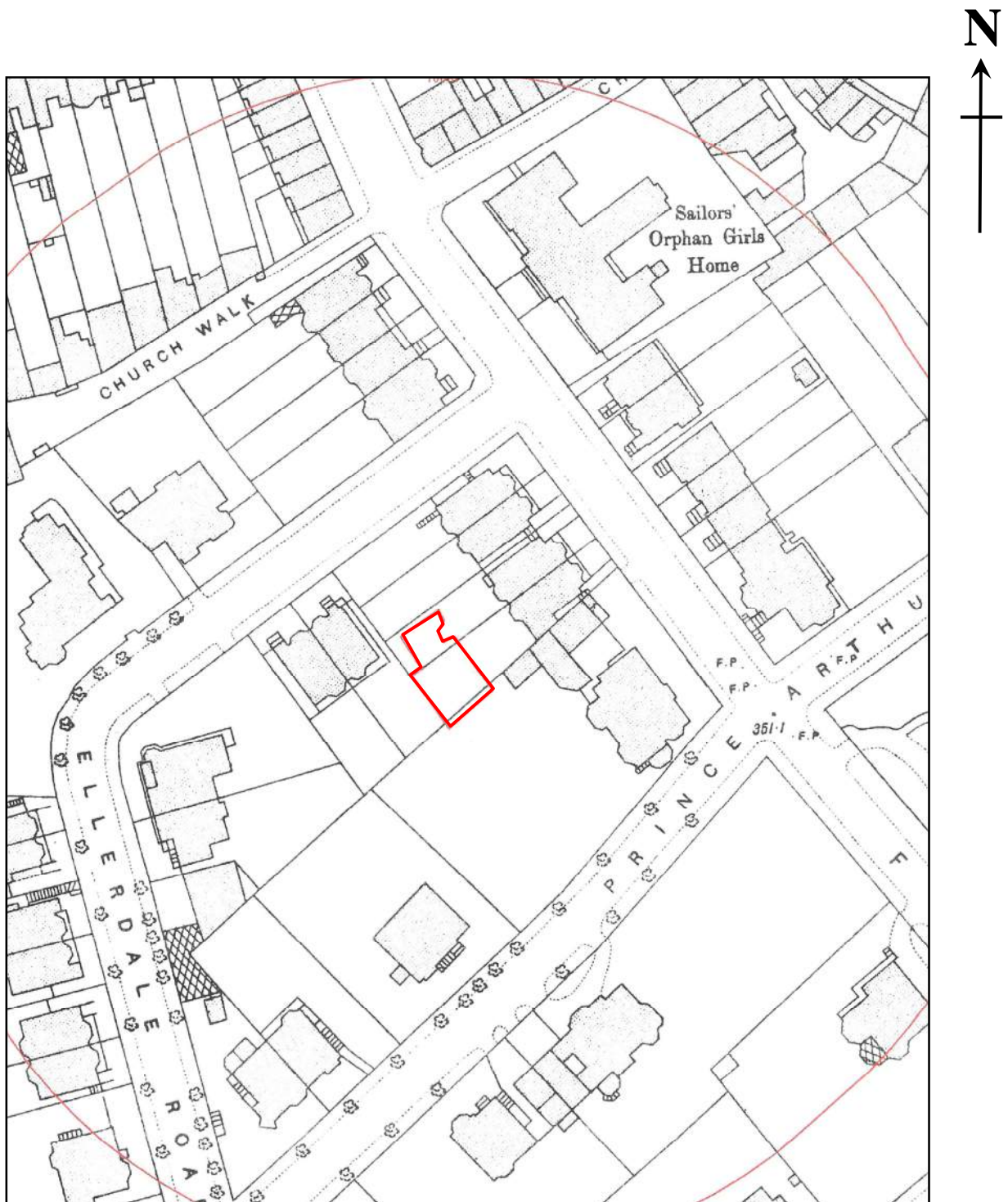
**Project No.**

**C13183**

# Site History

Figure D

Reproduced from the **1893** edition Ordnance Survey sheet **Town Plan** at **1:1056** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

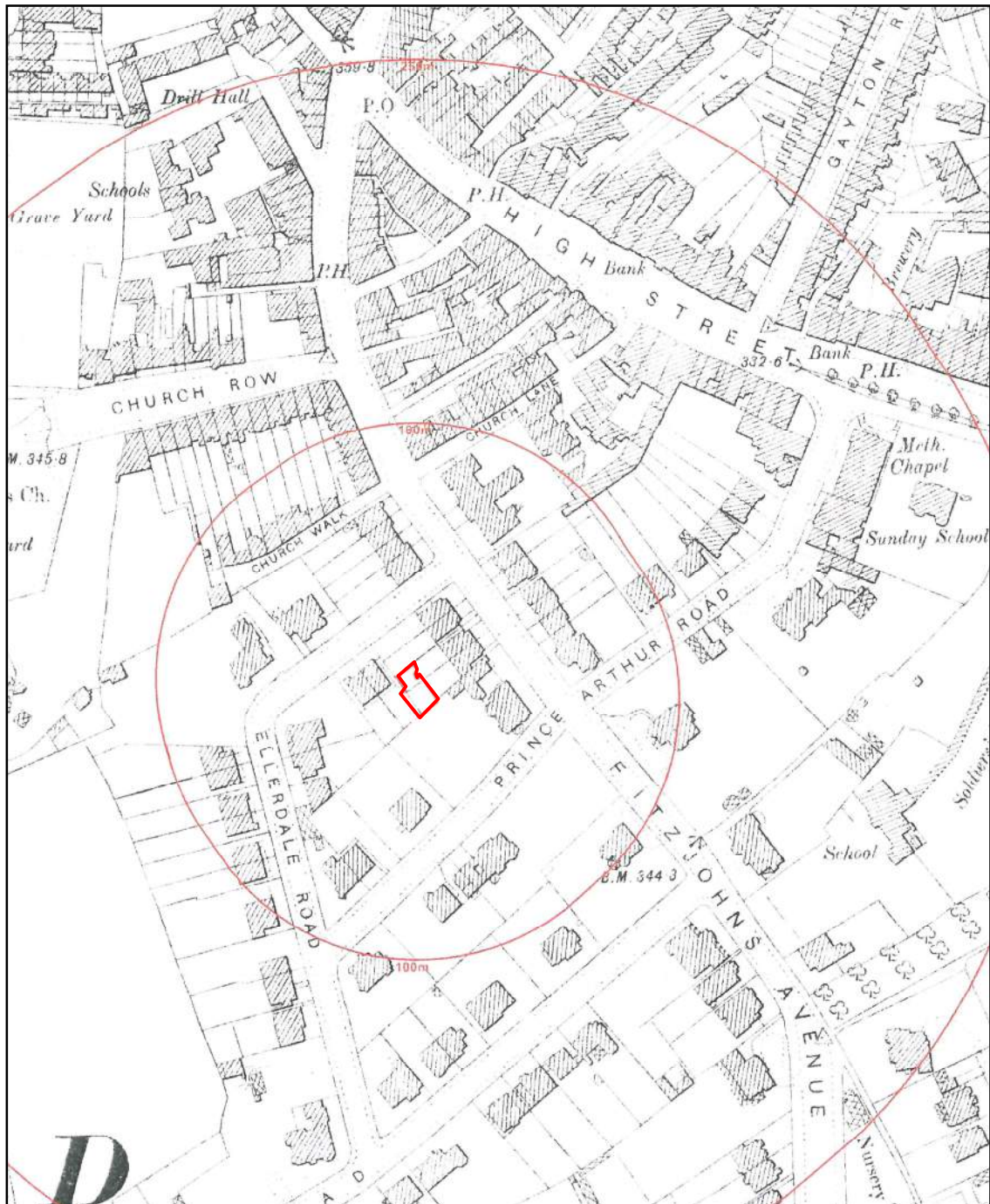
**C13183**



# Site History

Figure E

Reproduced from the 1896 edition Ordnance Survey sheet London XXVII at 1:2500 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

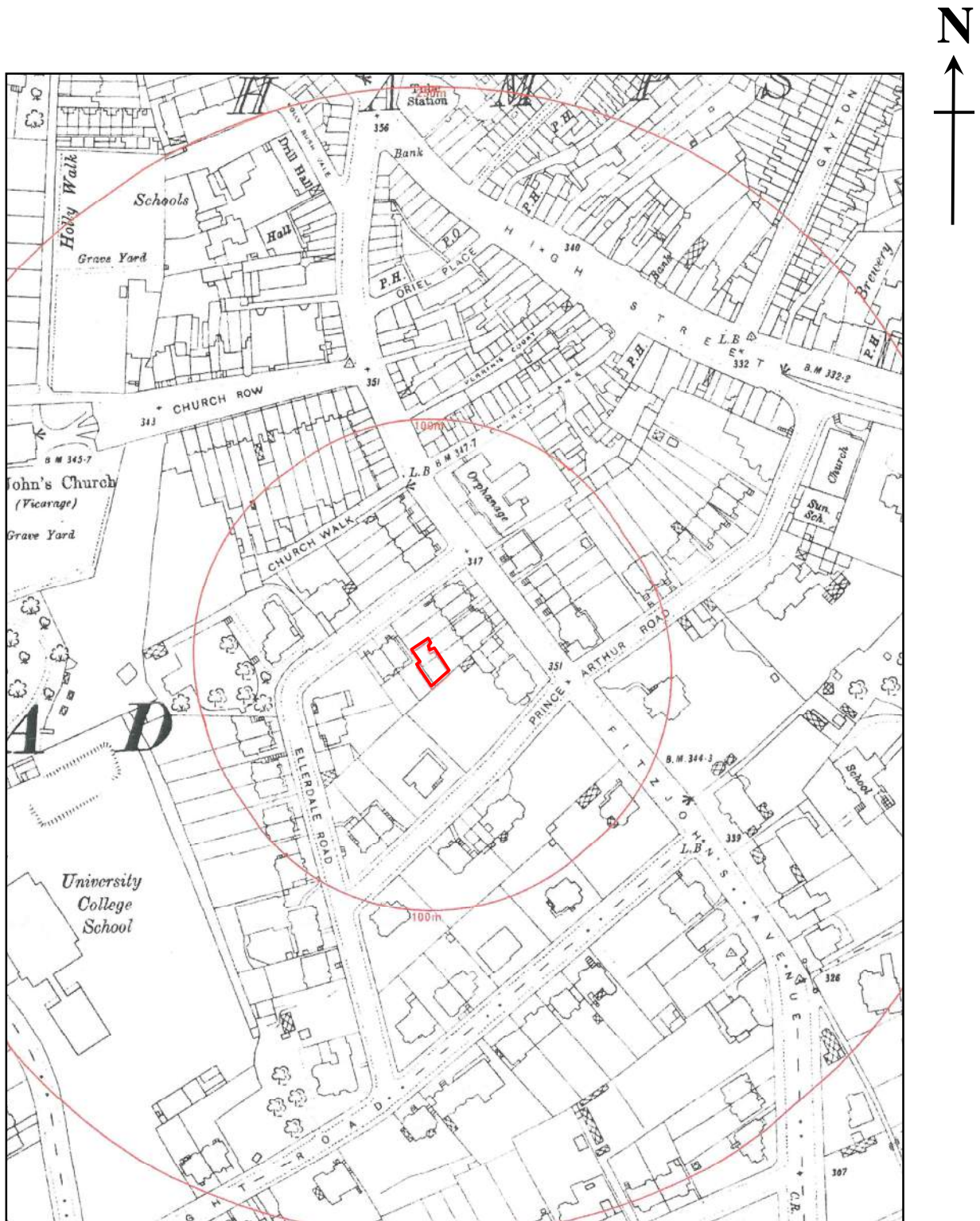
Project No.

**C13183**

# Site History

Figure F

Reproduced from the 1915 edition Ordnance Survey sheet London I.16 at 1:2500 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

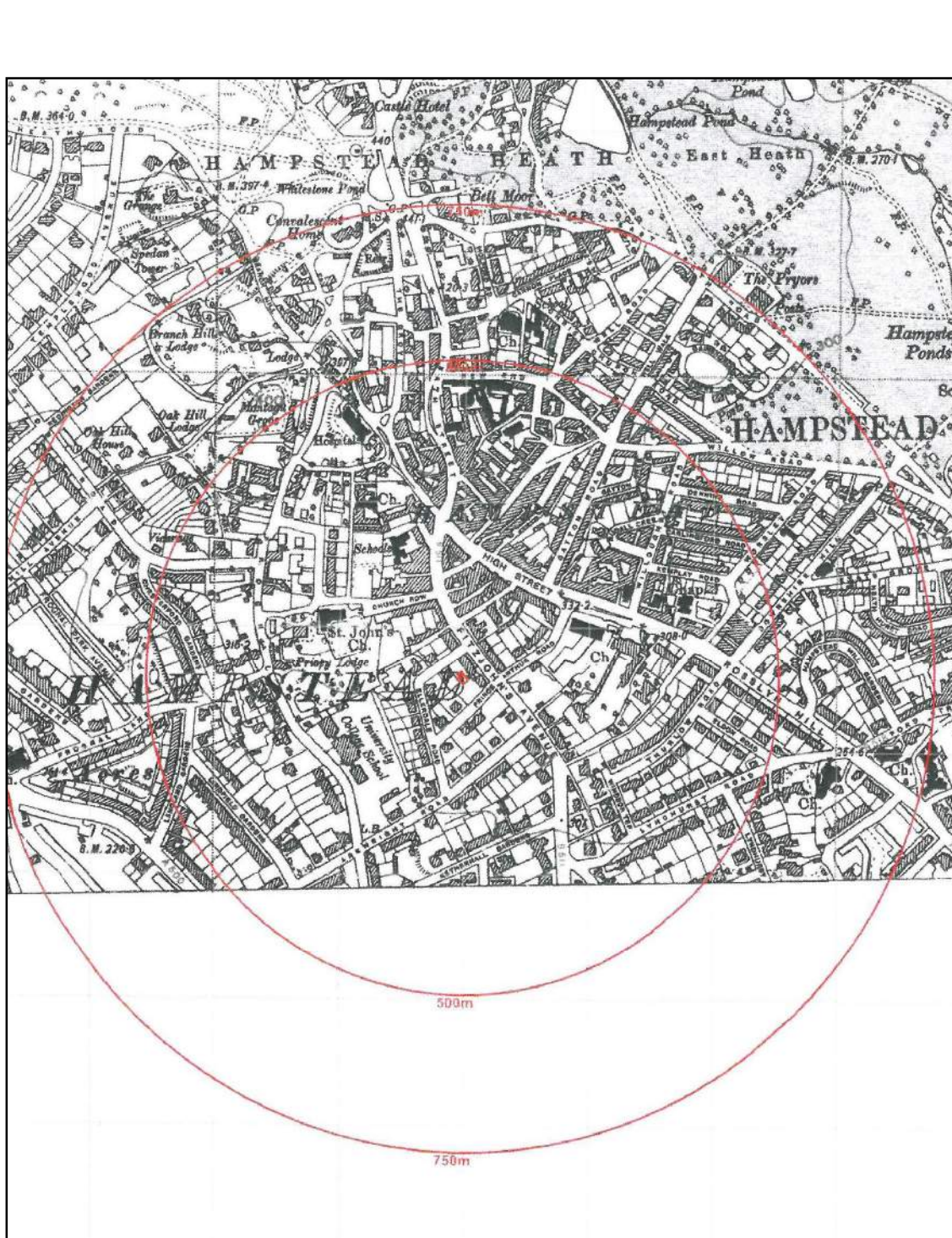
**C13183**



# Site History

Figure G

Reproduced from the 1938 edition Ordnance Survey sheet London I.SE at 1:10,560 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

**C13183**



# Site History

Figure H

Reproduced from the 1948-49 edition Ordnance Survey sheets TQ28SW & NW at 1:10,560 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

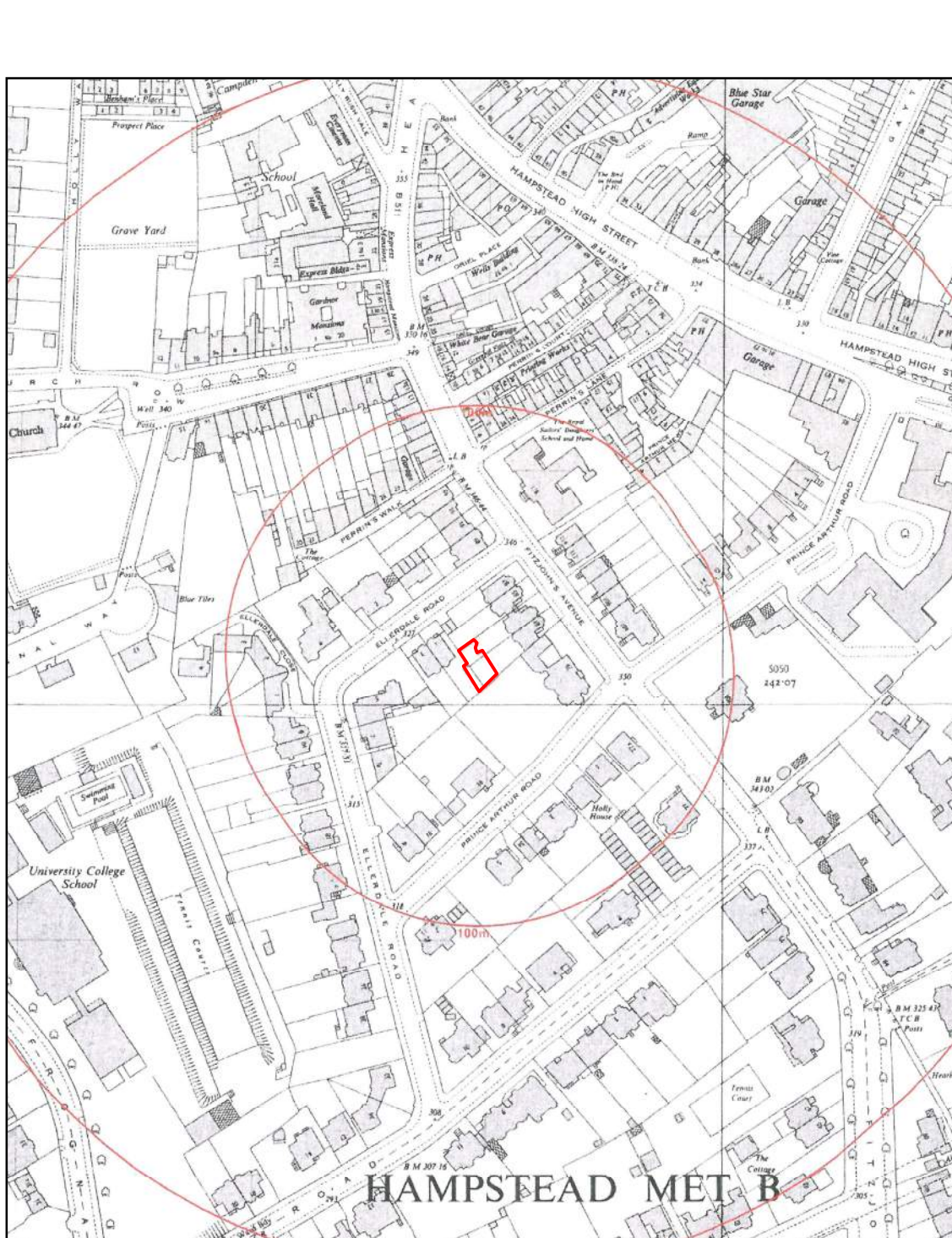
**C13183**



# Site History

Figure I

Reproduced from the 1953 edition Ordnance Survey sheet **TQ2685** at **1:2500** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Elldale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

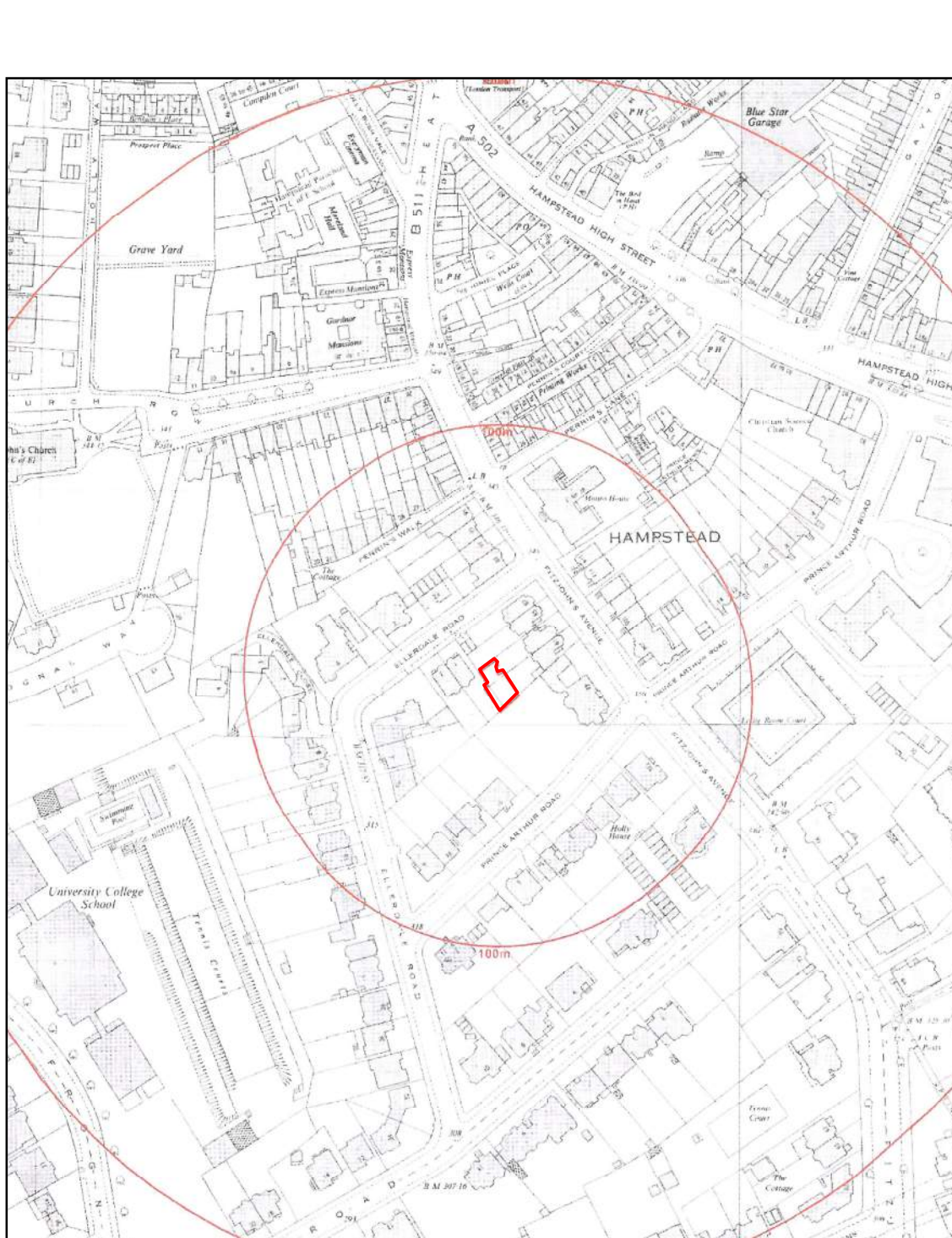
Project No.

**C13183**

# Site History

Figure J

Reproduced from the 1965 edition Ordnance Survey sheet TQ2685 at 1:2500 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

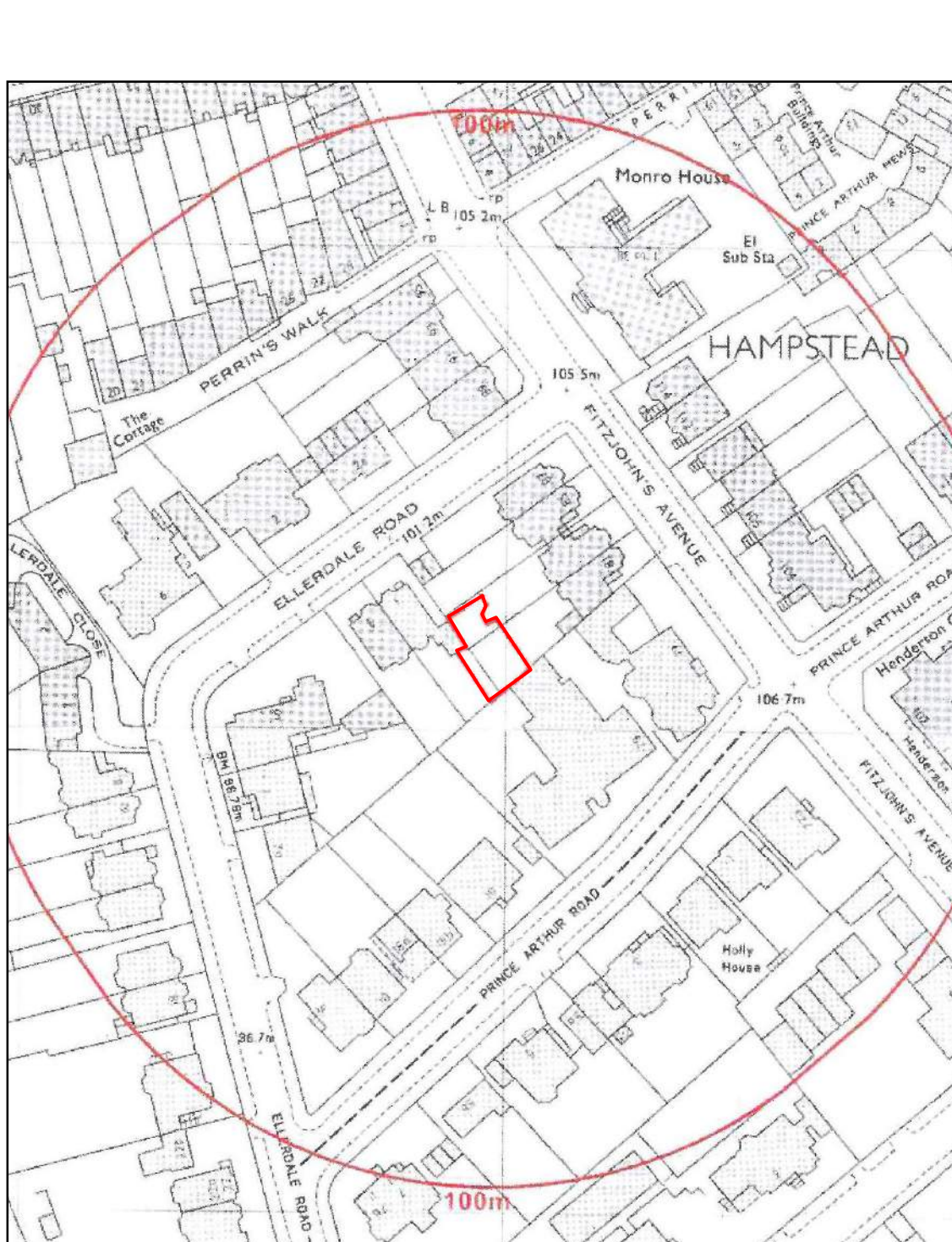
**C13183**



# Site History

Figure K

Reproduced from the 1973-78 edition Ordnance Survey sheets TQ2685SW, NW, SE & NW at 1:1250 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

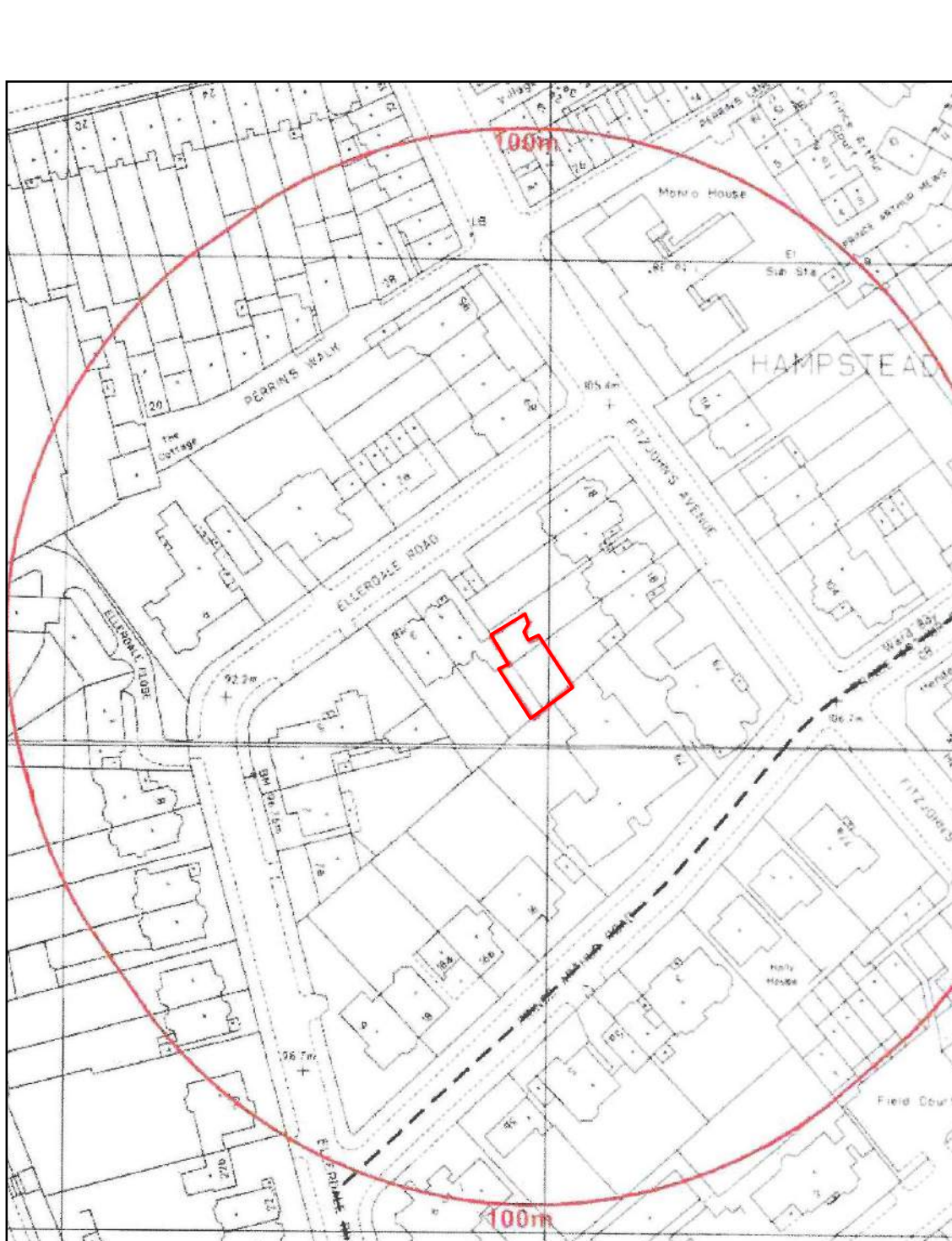
Project No.

**C13183**

# Site History

Figure L

Reproduced from the 1991 edition Ordnance Survey sheets TQ2685SW, NW, SE & NW at 1:1250 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

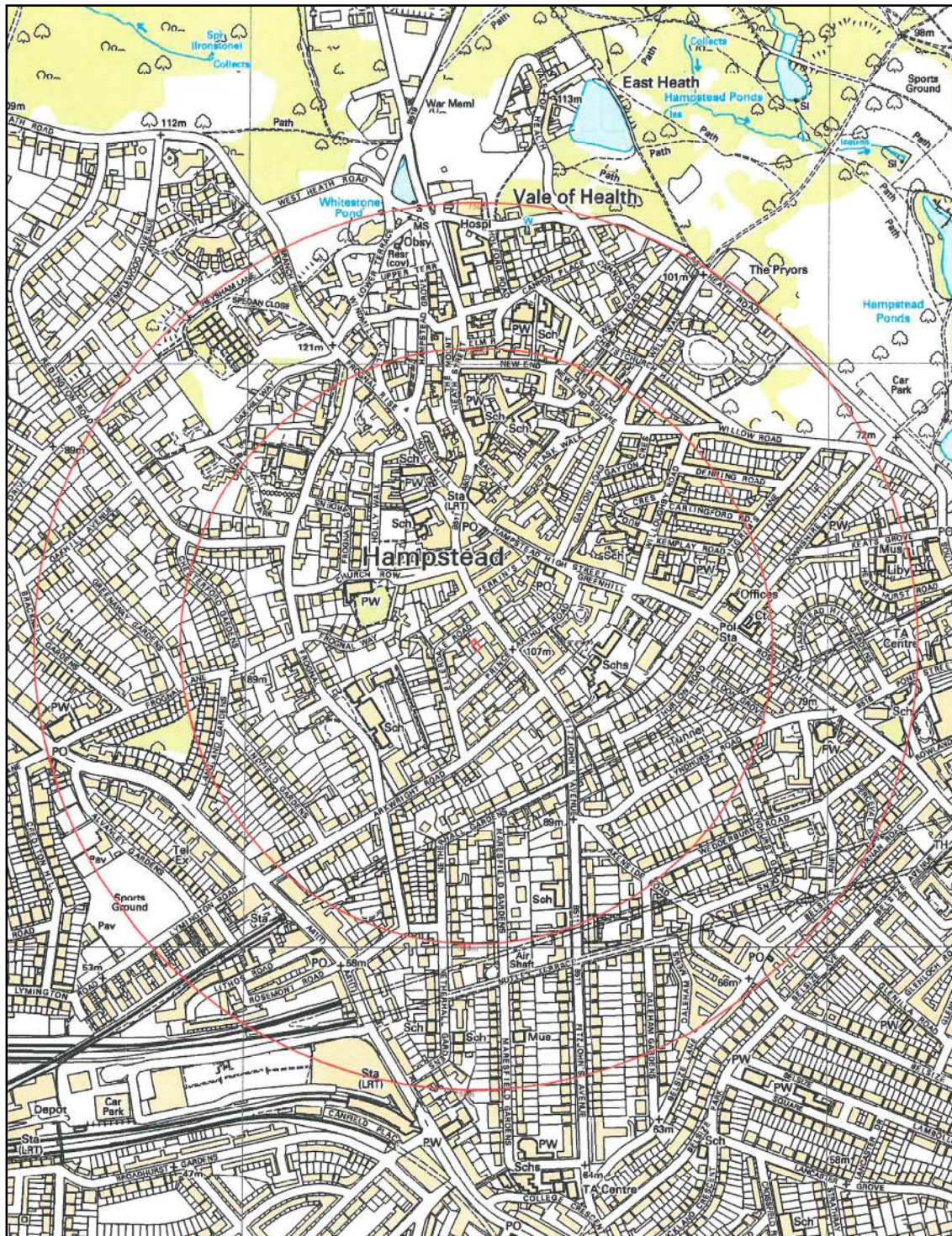
**C13183**



# Site History

Figure M

Reproduced from the **2002** edition Ordnance Survey sheet **Raster Map** at **1:10,000** scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



Project : Land by 1 Ellerdale Road, London NW3

Client : Mr. Georg Galberg

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

Project No.

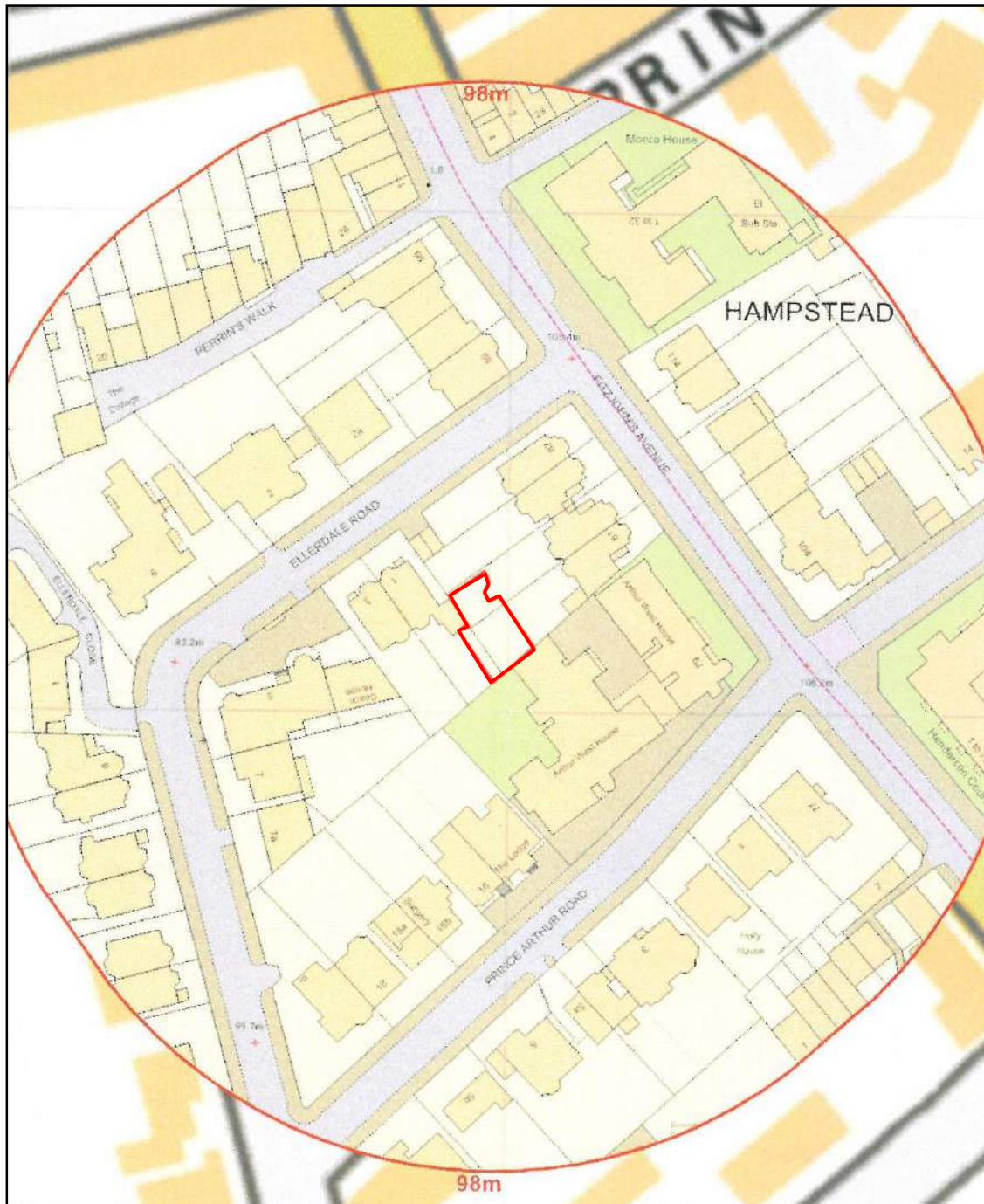
**C13183**



# Site History

Figure N

Reproduced from the 2012 edition Ordnance Survey sheet **Master Map** at 1:1250 scale with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. All rights reserved. Licence number AL100005523



**Project : Land by 1 Ellerdale Road, London NW3**

**Client : Mr. Georg Galberg**

**GROUND  
ENGINEERING  
LIMITED**

Peterborough Tel : 01733 566566

**Project No.**

**C13183**