



BEACON FEN ENERGY PARK

Planning Inspectorate Reference: EN010151

Appendix 11.4 Borehole Logs

Document Reference: 6.3 ES Volume 2, 6.3.84

April 2025



Quality information

Prepared by	Checked by	Verified by	Approved by
BO	RG	SR	AS

Disclaimer

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1. Borehole Logs

1.1 Introduction

1.1.1 Appendix 11.4 Borehole Logs has been prepared by Wardell Armstrong LLP (part of SLR) ('WA') on behalf of Beacon Fen Energy Park Ltd (the 'Applicant') in support of an application for a Development Consent Order (DCO) for Beacon Fen Energy Park (the 'Proposed Development').

1.1.2 This appendix provides the British Geological Survey (BGS) borehole logs for the following boreholes:

- BGS ID: 471776 – BGS Reference: TF13NE10
- BGS ID: 471777 – BGS Reference: TF13NE11
- BGS ID: 471932 – BGS Reference: TF14NE8
- BGS ID: 471933 – BGS Reference: TF14NE9
- BGS ID: 471934 – BGS Reference: TF14NE10
- BGS ID: 471948 – BGS Reference: TF14NW4
- BGS ID: 471953 – BGS Reference: TF14NW9
- BGS ID: 471994 – BGS Reference: TF14SE5
- BGS ID: 472034 – BGS Reference: TF14SE45
- BGS ID: 18111273 – BGS Reference: TF13NE21

1.1.3 All boreholes were obtained from the BGS GeoIndex Onshore website.¹

¹ British Geological Survey (2025) Geoindex (onshore) [online]. Accessed February 2025. Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.171559075.2049754889.1739961354-1088278661.1739961354

ROATION ENGINEERING

BOREHOLE LOG

19813839

TF13 NE/10

LOCATION : WESTBURTON - WALTHAM
CROSS - NORTHERN SEC.

BOREHOLE No. : 441. 2162 3600

BOREHOLE DIA. : 6".

GROUND LEVEL : 447 1" 128

DATE (Start) : 15/6/68.

WATER LEVEL : 8'0" below g.l.

Description	Thickness	Depth	Sample	Remarks
TOPSOIL: clay.	0.45 1' 6"	0'-0" 0.45 1' 6"		
Soft grey & brown silty CLAY.	2.29 7' 6"	2.74 8' 0" 10' 0" 3' 0"	1	14 Blows to drive 1' d F = 270 lb/cu ft. W = 40%
Soft PEAT.	0.30 1' 0"	10' 0" 10' 0" 3' 0"	2	
Very stiff light grey CLAY with traces of chalk.	1.52 5' 0"	11' 5" 15' 0"	3	60 Blows to drive 1' d F = 420 lb/cu ft. W = 15%
			4	
Hard dark grey BOULDER CLAY.	7.62 25' 0"	12' 19" 40' 0"	5	65 Blows to drive 1' d F = 500 lb/cu ft. W = 15%
			6	
			7	
			8	76 Blows to drive 1' d F = 670 lb/cu ft. W = 15%
				Borehole Completed

1" = 5' : : DISTURBED SAMPLE : : UNDISTURBED SAMPLE + STANDARD PENETRATION TEST



LOCATION ENGINEERING
Ltd.

19-513870
BOREHOLE LOG

TF13NE/11

LOCATION : WESTBURTON - WALTHAM
CROSS - NORTHERN SEC.
BOREHOLE DIA. : 6"

BOREHOLE No. : 442.
+ 6 1" 128

DATE (Start) : 18/6/03

GROUND LEVEL : 448
WATER LEVEL : 2' 0" below g.l.

Description	Thickness	Depth	Sample	Remarks
TOPSOIL: silty clay.	0.46 1' 6"	0'-0" 0.46 1' 6"		
Soft grey & brown silty CLAY.	2.24 7' 6"	1' 6" 3' 8"	1	10 Blows to drive 1' 0" F = 250 lbs/cu. ft. W = 43%
Soft PEAT.	0.30 1' 0"	2' 4" 3' 0" 3' 0.5"	2	
Stiff grey CLAY with pieces of chalk.	2.44 3' 0"	3' 0.5" 5' 4.4" 10' 0"	3 4	50 Blows to drive 1' 0" F = 250 lbs/cu. ft. W = 17%
Stiff dark grey BOULDER CLAY	6.71 22' 0"	10' 0" 12' 19" 40' 0"	5 6 7 8	60 Blows to drive 1' 0" F = 250 lbs/cu. ft. W = 13%
				Borehole Completed.

BOREHOLE SCALE: 1" = 5' • : DISTURBED SAMPLE I : UNDISTURBED SAMPLE + STANDARD PENETRATION TEST

TRANSMISSION PROJECT GROUP

SHEET TF 13 NE

ORDNANCE SURVEY

Scale 1:10,560 or 6 Inches to 1 Mile

Provisional Edition

SHEET TF 13 NE



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[illegible]

TP 14 SW	TP 14 SE	TP 24 SW
TP 12 NW	TP 12 NE	TP 22 NW
TP 12 SW	TP 12 SE	TP 22 SW

THE NATIONAL GRID

TO GIVE A GRID REFERENCE, CORRECT TO 100 METRES

EXAMPLE

North

The Grid Letters on this sheet are TF

EAST

Take two digits of longitude square
number, starting from the large
figure's printed column (the west or
east) and add them together.

Estimated result: Eastwards

North

Take sixth digit of longitude square
number, plus the letter of the
figure's printed column (the west or
east) and add them together.

Estimated result: Northwards

12	2	35
12	2	35

Full 100 Metres Reference TF 12352

The above full reference is accurate. For many purposes the first grid letter can be omitted, giving a reference, for instance, T12352. However, if both grid letters are omitted, the resulting reference (12352) serves as intervals of 1000. Estimated values are therefore not so accurate. The above reference is therefore given in full, with the note on scales of one inch to the mile and larger, that the grid letters are normally omitted.

At the Eastern edge of this sheet, True North is 1° 23' West of Grid North and at the Western edge of 22° West of Grid North.

Magnetic North was 10° 19' West of Grid North in 1950, decreasing by about 1" in four years.

Heights are in feet above Mean Sea Level.

REVISION DIAGRAM

Revised before 1930

Revised 1930-1945

The whole sheet was revised
major changes only in 1950.

Boundaries revised to 1-6-55.

Printed and Published by the Director General of the ORDNANCE SURVEY, CHESSINGTON, SURREY, 1956

Aquatics: (See 1/2)
 Span: Height
 Boundaries: Country
 - Coast or Borough
 - Continuity
 - Rural District
 - Parish
 - Wood, Conifers
 - Wood, Deciduous
 - Wood, Mixed
 - Underwood
 - Orchard
 - Flower
 - Shrub & Minor
 - Pasture
 - Marsh
 - Water
 - Open Soil
 - Quarry
 - Grassy Pk
 - Wood Pk
 - Solonch. Pk
 - Common relation area
 - In Jct.

SHEET TF 13 NE

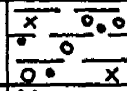
SHEET TF 13 NE

Sheet No 11 of 29



TF1506 4553

TF14NE 8

 HARRISON & COMPANY		Location HECKINGTON.		Report No. 3674/0		Borehole No. 7																													
				Dates From: 27.10.89 to:																															
Client ANGLIAN WATER.			Plant LIGHT PERCUSSIVE.			Diameter 150mm.																													
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks																													
				type	depth																														
		G.L.																																	
Light brown sandy TOPSOIL and fine to medium GRAVEL.				B1	0.0																														
		0.80		D1	0.50	N = 22																													
				SPT	0.50																														
				B2	0.50																														
				D2	1.00	N = 16																													
				SPT	1.00																														
				B3	1.00																														
				D3	2.00	N = 22																													
				SPT	2.00																														
				B4	2.00																														
				D4	3.00	N = 21																													
				SPT	3.00																														
				B5	3.00																														
		3.40																																	
Stiff blue-grey silty CLAY with some (chalk) gravel.				U1	4.00																														
		4.20		B6	4.00																														
				U2	5.00																														
				D5	5.50																														
				U3	6.00																														
				D6	6.50																														
				U4	7.50																														
				D7	8.00																														
				U5	9.00																														
				D8	9.50																														
		10.00																																	
Borehole continued																																			
<table border="1"> <tr> <td colspan="7">Water Level Observations</td> </tr> <tr> <td></td> <td>Date</td> <td>Time</td> <td>Depth of Hole (m)</td> <td>Depth of Casing (m)</td> <td>Water Strike (m)</td> <td>Standing Level (m)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="7">Remarks</td> </tr> </table>								Water Level Observations								Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)								Remarks						
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Remarks																																			
<table border="0"> <tr> <td>D</td> <td>Disturbed Sample</td> </tr> <tr> <td>B</td> <td>Bulk Sample</td> </tr> <tr> <td>U</td> <td>Undisturbed Sample (100 mm Ø)</td> </tr> <tr> <td>P</td> <td>Piston Sample</td> </tr> <tr> <td>W</td> <td>Water Sample</td> </tr> <tr> <td>SPT</td> <td>Standard Penetration Test</td> </tr> <tr> <td>N</td> <td>No. of blows per 300 mm penetration in SPT</td> </tr> <tr> <td>V</td> <td>Vane Test</td> </tr> <tr> <td>C</td> <td>Undrained Shear Strength</td> </tr> </table>								D	Disturbed Sample	B	Bulk Sample	U	Undisturbed Sample (100 mm Ø)	P	Piston Sample	W	Water Sample	SPT	Standard Penetration Test	N	No. of blows per 300 mm penetration in SPT	V	Vane Test	C	Undrained Shear Strength										
D	Disturbed Sample																																		
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SPT	Standard Penetration Test																																		
N	No. of blows per 300 mm penetration in SPT																																		
V	Vane Test																																		
C	Undrained Shear Strength																																		



TF14NE 8

 HARRISON & COMPANY		Location		Report No.		Borehole No.	
		HECKINGTON.		3674/0		7	
Client		Plant		Dates		to:	
ANGLIAN WATER.		LIGHT PERCUSSIVE.		From: 27.10.89			
Diameter						150mm.	
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks	
				type	depth		
		10.00					
	X			SPT	10.50	N = 47	
	X			B7	10.50		
	X			D9	11.00		
	X			U6	12.00		
	X			D10	12.50		
	X			SPT	13.50	N = 60	
	X			B8	13.50		
	X			D11	14.00		
	X			U7	15.00		
	X			B12	15.50		
	X			SPT	16.50	N = 68	
	X			B9	16.50		
	X			D13	17.00		
	X			U8	18.00		
	X			D14	18.50		
	X			SPT	19.50	N = 76	
	X			B10	19.50		
Borehole continued.		20.00					
D Disturbed Sample B Bulk Sample U Undisturbed Sample (100 mm Ø) P Piston Sample W Water Sample SPT Standard Penetration Test N No. of blows per 300 mm penetration in SPT V Vane Test C Undrained Shear Strength		Water Level Observations					
		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)
		Remarks					

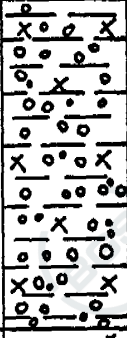
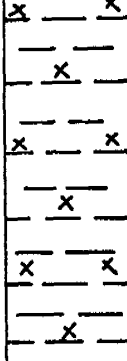


TF14NE 8

HARRISON & COMPANY		Location		Report No.		Borehole No.	
		HECKINGTON.		3674/0		7	
				Dates			
				From: 27.10.89 to:			
Client		Plant			Diameter		
ANGLIAN WATER.		LIGHT PERCUSSIVE.			150mm.		
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks	
				type	depth		
Oxford Clay Stiff becoming very stiff to hard blue-grey laminated silty CLAY.	x	20.00		D15	20.00	N = 89	
	x			U9	21.00		
	x			D16	21.50		
	x			SPT	22.50		
	x			B11	22.50		
	x			D17	23.00		
	x						
	x			U10	24.50		
	x	25.00		D18	25.00		
	Borehole complete.						
Water Level Observations							
D Disturbed Sample		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)
B Bulk Sample						None	
U Undisturbed Sample (100 mm Ø)							
P Piston Sample							
W Water Sample							
SPT Standard Penetration Test							
N No. of blows per 300 mm penetration in SPT		Remarks					
V Vane Test							
C Undrained Shear Strength							

TF1508 4547

TF14NE 9

		Location		Report No.		Borehole No.		
		HECKINGTON.		3674/0		8		
				Dates				
				From: 26.10.89		to:		
Client			Plant			Diameter		
ANGLIAN WATER.			LIGHT PERCUSSIVE.			150mm.		
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks		
				type	depth			
TOPSOIL with some gravel.		G.L.						
<i>Fan Gravel</i> Loose to medium brown SAND and fine to medium GRAVEL with pockets of sandy silt.		0.50		D1	0.50	N = 8		
				SPT	0.50			
				B1	1.00	N = 8		
				SPT	1.00			
Medium dense orange coarse SAND and fine to medium GRAVEL.		2.30		B2	1.50	N = 12		
				SPT	2.00			
				D2	2.30			
				B3	2.50			
<i>Till</i> Very stiff blue-grey silty CLAY with much fine to medium subrounded to rounded fine to medium (chalk) gravel.		2.80		D3	2.80			
				U1	3.00			
				D4	3.50			
				U2	4.00			
				B4	4.00			
				U3	5.00			
				U4	6.00			
				D6	6.20			
				D7	6.50			
		<i>Hard Clay</i> Very stiff to hard blue-grey laminated silty CLAY.		6.20		U5	7.50	
				D8	8.00			
				U6	9.00			
				D9	9.50			
Borehole continued		10.00						
D Disturbed Sample B Bulk Sample U Undisturbed Sample (100 mm Ø) P Piston Sample W Water Sample SPT Standard Penetration Test N No. of blows per 300 mm penetration in SPT V Vane Test C Undrained Shear Strength		Water Level Observations						
		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)	
		Remarks						



TF14NE 9

HARRISON & COMPANY		Location		Report No.		Borehole No.	
		HECKINGTON.		3674/0		8	
				Dates		From: 26.10.89 to:	
Client		Plant		Diameter			
ANGLIAN WATER.		LIGHT PERCUSSIVE		150mm.			
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks	
				type	depth		
Oxford Clay Very stiff to hard blue-grey laminated silty CLAY.		10.00					
	X X			U7	10.50		
	X			D10	11.00		
	X X			U8	12.00		
	X			D11	12.30		
	X X			U9	13.50		
	X			D12	13.80		
	X X			SPT	15.00	N = 52	
	X			D13	15.50		
	X X			B5	15.50		
	X			U10	16.50		
	X			D14	16.80		
	X X			SPT	18.00	N = 74	
	X			D15	18.50		
	X X			B6	18.50		
	X			U11	19.50		
X		20.00	D16	19.80			
Borehole continued							
D Disturbed Sample B Bulk Sample U Undisturbed Sample (100 mm Ø) P Piston Sample W Water Sample SPT Standard Penetration Test N No. of blows per 300 mm penetration in SPT V Vane Test C Undrained Shear Strength		Water Level Observations					
		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)
		Remarks					



TF14NE 9

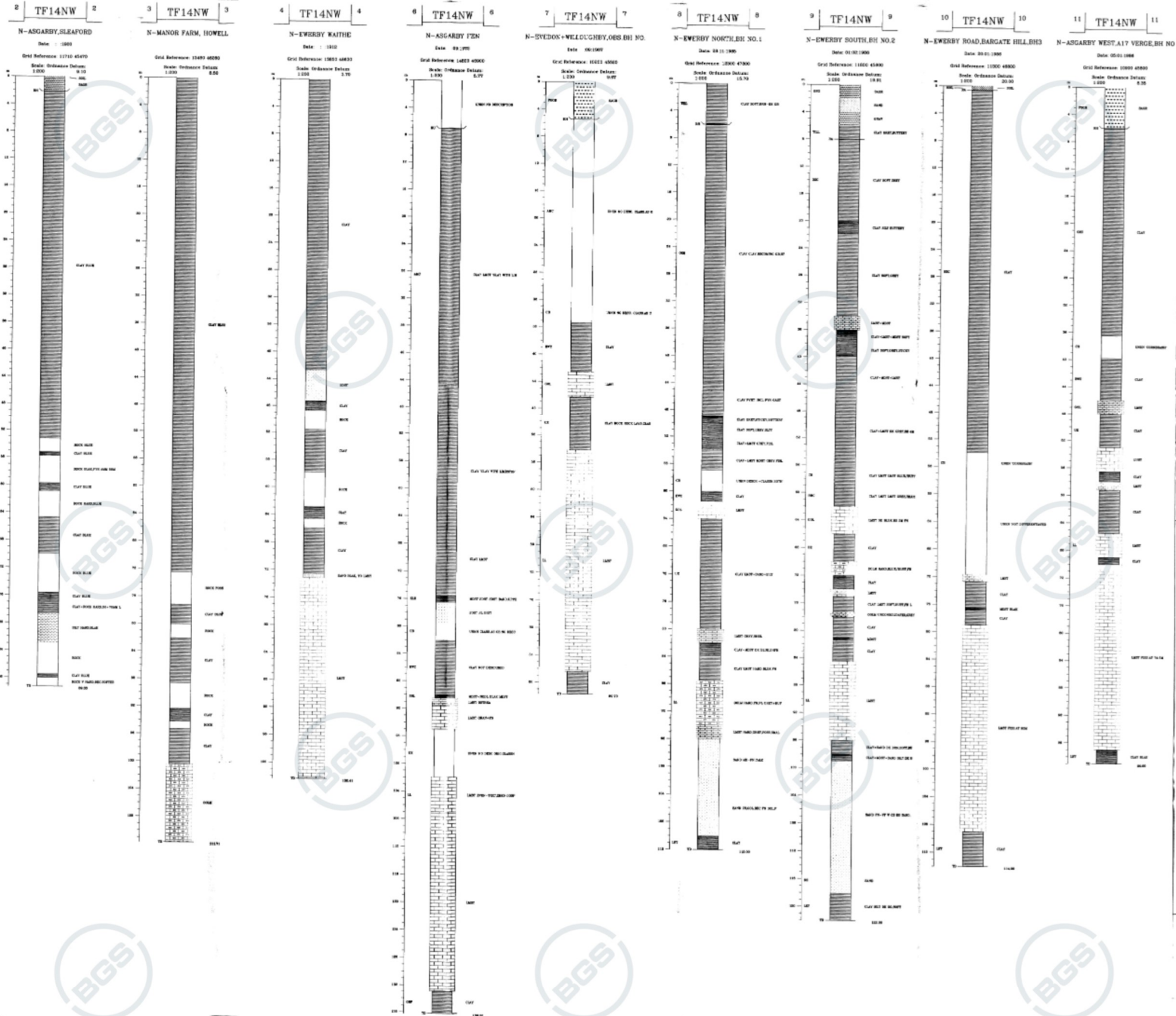
		Location HECKINGTON.		Report No. 3674/0		Borehole No. 8	
				Dates From: 26.10.89 to:			
Client ANGLIAN WATER.		Plant LIGHT PERCUSSIVE.				Diameter 150mm.	
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks	
				type	depth		
<i>Oxford clay</i> Very stiff to hard blue-grey laminated silty CLAY.	X	20.00				N = 75 N = 91	
	X			SPT	21.00		
	X			D17	21.50		
	X			B7	21.50		
	X			U12	22.50		
	X			D18	22.70		
	X			SPT	24.00		
	X			D19	24.50		
	X			B8	24.50		
	X	25.00					
Borehole continued							
D Disturbed Sample B Bulk Sample U Undisturbed Sample (100 mm Ø) P Piston Sample W Water Sample SPT Standard Penetration Test N No. of blows per 300 mm penetration in SPT V Vane Test C Undrained Shear Strength		Water Level Observations					
		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)
						None	
		Remarks					

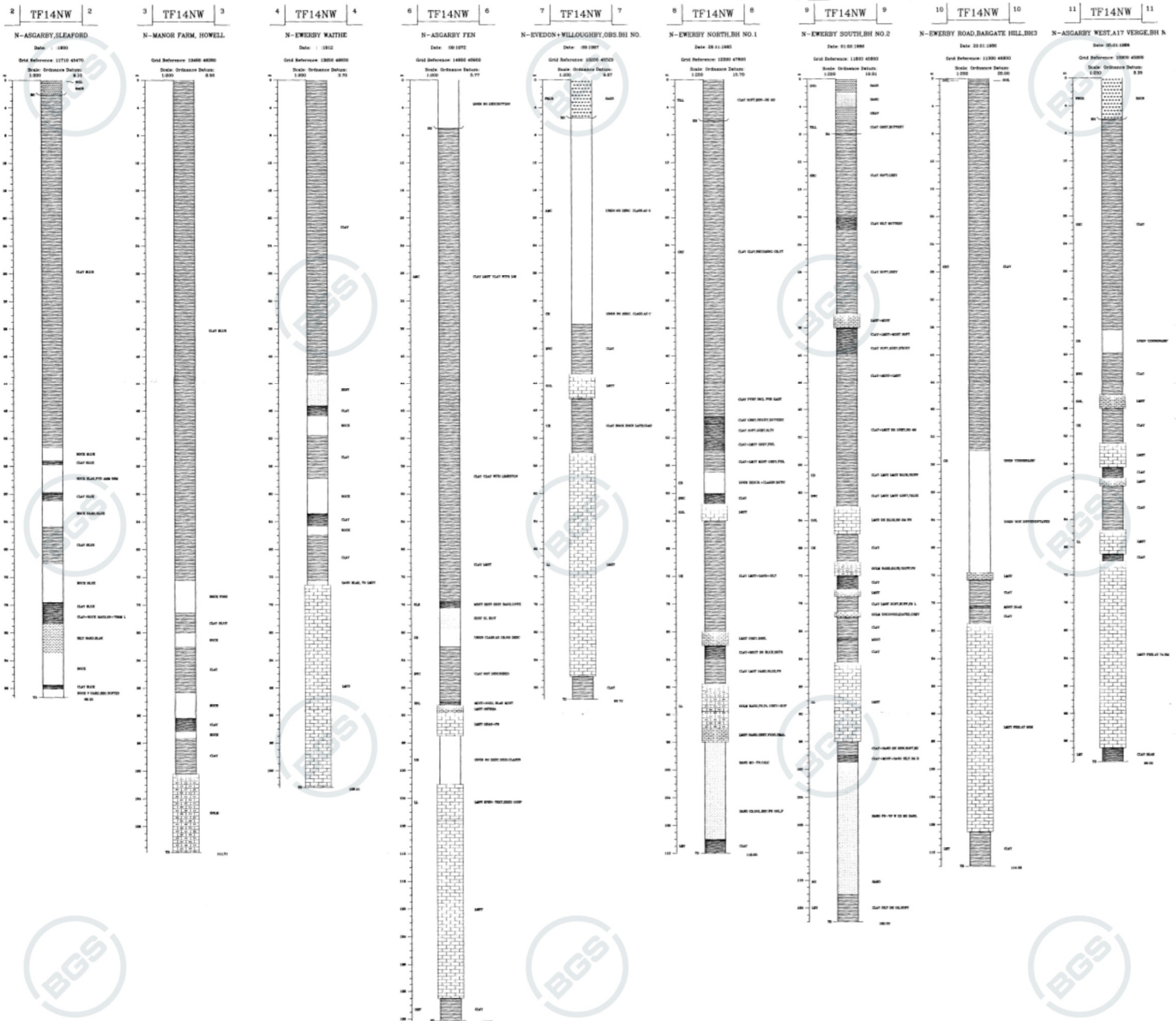


TF1507 4562

TF14NE 10

HARRISON & COMPANY		Location		Report No.		Borehole No.	
		HECKINGTON.		3674/0		9	
				Dates			
				From: 27.10.89		to:	
Client		Plant		Diameter			
ANGLIAN WATER.		LIGHT PERCUSSIVE.		150mm.			
Description	Legend	Depth (m)	O.D. Level (m)	Sample Test		Remarks	
				type	depth		
		G.L.					
Brown sandy TOPSOIL with much subrounded to rounded gravel.		0.40		D1	0.40	N = 8	
Fen Gravel Loose to medium dense orange-brown medium to coarse SAND and fine to medium GRAVEL.				SPT	0.50		
				B1	0.50	N = 10	
				SPT	1.00		
				B2	1.50		
				SPT	2.00	N = 12	
Till Stiff dark blue-grey silty CLAY with some (chalk) gravel.		4.20		D2	4.20		
				B5	4.50		
		4.80		D3	4.80		
x Sand Clay Very stiff dark blue-grey laminated silty CLAY.				U1	5.00		
				D4	5.50		
				U2	6.00		
				D5	6.50		
				U3	7.50		
				D6	8.00		
				U4	9.00		
				D7	9.50		
Borehole complete		10.50					
D Disturbed Sample B Bulk Sample U Undisturbed Sample (100 mm Ø) P Piston Sample W Water Sample SPT Standard Penetration Test N No. of blows per 300 mm penetration in SPT V Vane Test C Undrained Shear Strength		Water Level Observations					
		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Water Strike (m)	Standing Level (m)
		27.10.89	13.20	2.4	2.4	2.4	1.9
		30.10.89		10.5			2.4
		Remarks					
Borehole abandoned at 10.5m depth after claycutter stuck down hole.							





WELL BORING at Ewerby TF14NW4 13854863 Ref. No. 35

Geol. map 40 (Old Series) 1 in. map New Series 128 6 in. map 98 S.W.

Made by J.T. Barnes of Sleaford Date 1912

Sunk feet. Bored 336 feet. TF14NW4

Communicated by Mt. J.T. Barnes, 1 Eastgate, Sleaford

Height above Ordnance Datum 12 feet Rest level of water Water rises 25 feet.

Yield

Quality (with copy of analysis on separate sheet)

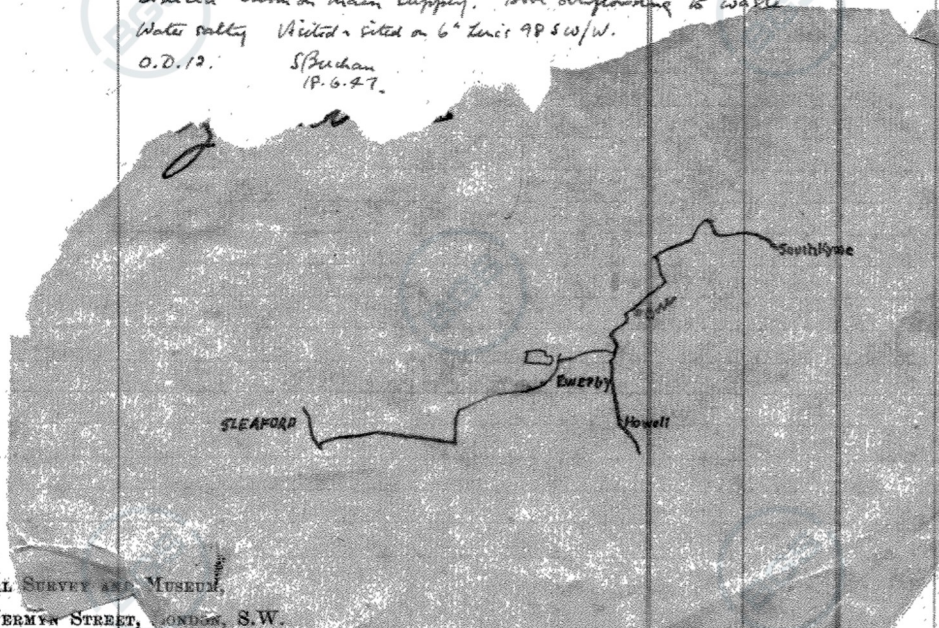
GEOLOGICAL FORMATION.	NATURE OF STRATA.		THICKNESS		DEPTH.	
			Feet.	Inches.	Feet.	Inches.
Surface clays and Ox. red clay	clay	42.67	140	-	140	42.67
Kellaways 20'	sand stone	4.57	15	-	155	47.24
Coralline q'	clay	1.52	5	-	160	48.77
Blisworth (C.O.) clay	rock	2.74	9	-	169	51.51
Gr. (Ox.) Lst.	clay	6.40	21	-	190	57.91
	rock	4.88	16	-	206	62.79
	clay	1.83	6	-	212	64.62
Up. Estimation Series 34'	rock	1.22	4	-	216	65.84
	clay	6.71	22	-	238	72.54
	Black sand to limestone	0.61	2	-	240	73.15
W. Lincs. Lst.	limestone	(by cor. -228'00)	96	29.26	336	102.41

Mr. Strahan said

"This boring should start in few deposits
and ~~then~~ ^{then} Oxford clay. The section appears
to be unintelligible, as regards details. ~~But~~ ^{But} let
presumably went well into the Lincolnshire limestone.
cf. Heckington and Great Hale."

But it is quite intelligible when compared with Barnes' other bore in
the district, Barnes almost invariably records the Kellaways Rocks as Sands & Gr. C.H.D.

Drilled from on main supply. Bore overflowing to waste
Water salty. Rusted & sited on 6" line 98 S.W.
O.D. 12. S. Berham
19.6.27.



GEOLOGICAL SURVEY AND MUSEUM,
JERMYN STREET, LONDON, S.W.

W B & L (x)-62633-2000-747

Extract from analysis by 4.75.
MOTER & HACKMAN,
S.E. 11.

Fluorine - 3.33 p.p. million

Chlorides as chlorine - 112.5 p.p. 100,000

Carbonate of soda 31.3 p.p. 100,000

Hardness { temporary 8.0 p.p. 100,000
permanent none

TF14NW4

S.M.

TRANSMISSION PROJECT GROUP

SHEET TF 14 NW

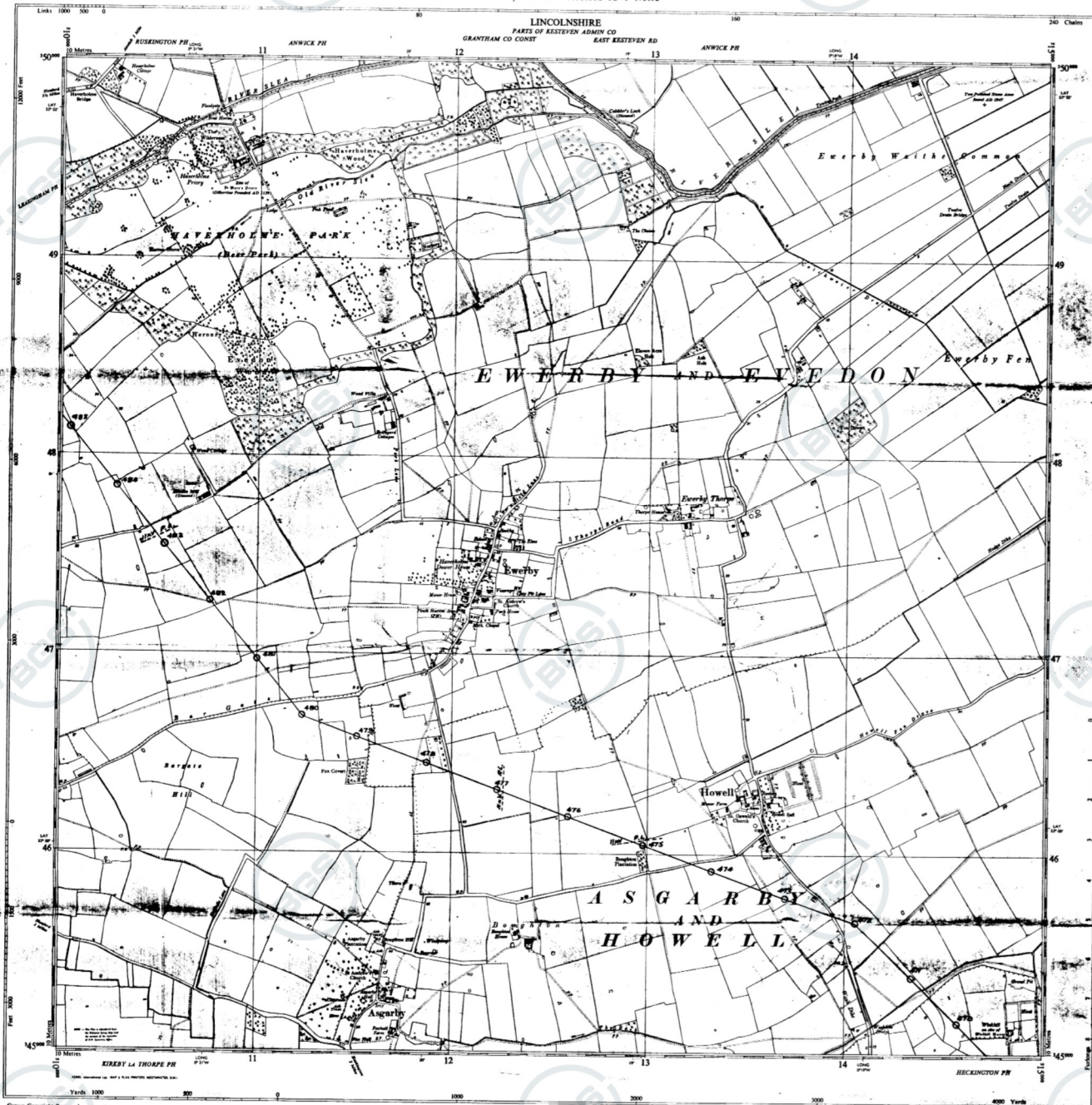
ORDNANCE SURVEY

Scale 1:10,560 or 6 Inches to 1 Mile

CENTRAL ELECTRICITY GENERATING BOARD.
MIDLANDS REGION.
CONTRACT: T(6)K.Q. - 1325
WEST BURTON - WALTHAM CROSS 400kV. LINE
(NORTHERN SECTION)

Provisional Edition

SHEET TF 14 NW



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[illegible]

INDEX TO ADJOINING SHEETS		
TP 04 00	TP 14 00W	TP 15 00
TP 04 00E	TP 14 00W	TP 14 00E
TP 04 00	TP 14 00W	TP 14 00

THE NATIONAL GRID

TO GIVE A GRID REFERENCE CORRECT TO 100 METRES

EXAMPLE *The Cliffs near the shore on VE*

EAST	NORTH
Take your value of <i>Uppercase</i> Letters in column 1 of the Table and add the Number of the Line of Southings (shown in this line of the Table) to give the Eastings value. 15	Take your value of <i>Uppercase</i> Letters in column 2 of the Table and add the Number of the Line of Northings (shown in this line of the Table) to give the Northings value. 48
15	48

Full 100 Metre Reference T15488

*The above Full Reference is correct to 100 metres. The value of 100 metres can be estimated giving a reference, **T152488**, which is correct to around 500 Metres. If both grid lines are used, the reference **T152488** will be correct to around 100 Metres.*

When the area concerned is sufficiently regular, it will usually be the case that both values are similar to the value of the grid line. In such cases, the values are normally assumed.

At the bottom edge of the above Table Northings 1° 12' West of Grid

and at the bottom of the Table Northings 1° 12' East of Grid

Margate North is about 130' West of Grid North, 15°N, decreasing to about 1° in line north of Margate. The value of 15°N is correct to 100 metres.

has been used on the ground as a check. Readers who wish to know how best to use the grid on the ground should refer to the notes on the back of the grid.

Printed and Published by the Director General of the ORDNANCE SURVEY, WESTMINSTER, SURREY, 1956.

SHEET TF 14 NW

SHEET TF 14 NW

Revised Price 7.2 net.

Sheet No 14 of 29



WELL BORING at Swerby Waide (Lincs. parish) County Lincolnshire
Geol. map 40 (Kilnsey) 1 in. map New Series 128 6 in. map 98 S.W.
Made by J.T. Barnes of Sheaford Date 1912
Sunk feet Bored 336 feet
Communicated by Mt. J.T. Barnes, 1 Eastgate, Sheaford
Height above Ordnance Datum 12 ft Rest level of water Wally Hall aspect
Yield TF14/6
Quality (with copy of analysis on separate sheet) TF 1388 4861

GEOLOGICAL FORMATION.	NATURE OF STRATA.	THICKNESS		DEPTH.	
		Feet.	Inches.	Feet.	Inches.
Surface clay and Ox. pink clay	clay	140	-	140	-
Kilnsey 20'	sand stone	15	-	155	-
Combs 9'	clay	5	-	160	-
Disint. (C.O.) clay	rock	9	-	169	-
H. red. l. str.	clay	21	-	190	-
	rock	16	-	206	-
Up. Whit. sh.	clay	6	-	212	-
24'	rock	4	-	216	-
	clay	22	-	238	-
V. Lincs. Lst.	Black sand to limestone	2	-	240	-
	limestone	96	-	336	-

(by w. - 238' 0")

Mr. Strahan said
This boring should start in few deposits
and end in Oxford clay. The section appears
to be unintelligible, as regards details, but
presumably went well into the Lincolnshire.
G. Hestington and Great Hale.

But it is quite intelligible when compared with Barnes' other bore in
the district. Barnes about 100 yards from the Kilnsey Rocks on Sandstone. C.O.D.

Disused farm on main supply. Bore on planning to water
Water supply. Visited - fitted on 6" zinc 98.5 w/w.
O.D. 12. S. Buchanan
19.6.27.

Visited 26/6/69. - Still flowing - sampled for trace analysis.

W B & L (S) 2222-2001-2







TF14NW9 EWERBY SOUTH 2 TF 11800 45800

Eastern

RECORD OF WELL

N

At *Ewerby South*
South of Ewerby, Skelton No. 2 b/h.
Town or Village
County

TF14/25B

127

EXACT SITE

OF WELL

Six-inch National Grid sheet and reference *TF 118 458*
For *Anglian Water Authority Lincoln Division*
State whether owner, tenant, builder, contractor, consultant, etc.: *owner*
Address (if different from above)

*DELETE

AS

NECESSARY

Level of ground surface above sea level (O.D.) ft (*19.91* m)
If well top is not at ground level state how far ^{above*} below: ft (*0.01* m)
SHAFT ft (..... m); diameter ft (..... m);

HEADINGS (please attach details—dimensions and directions)

BORE ft (*122.00* m); diameter: at top *16* in (*406* mm);
at bottom *5 3/8* in (*143* mm) *Schramm rig*

Full details of permanent lining tubes (position, length, inner and outer diameters, plain slotted etc.):
6.35 m x 406 mm plain steel from surface; 86.39 m x 152 mm
plain steel from 0.01 m down

Water struck at depths of ft (..... m) below well top

Rest level of water ft (*5.00* m) ^{above*} below well top. Suction at ft (..... m)

Yield on hours* test pumping at galls per (..... l/s) with

depression to ft (..... m) below well top. Recovery to rest level in mins* hours

Capacity of pump g.p.h. (..... l/s)

Date of measurements *1. 2. 86*

DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:

Make and/or type Motive power

Capacity galls (..... m³) per hour. Suction at ft (..... m)

below well top. Amount pumped galls (..... m³) per day. Estimated

consumption galls (..... m³) per week

Well made by *Wimpey* Date of sinking *1. 2. 86*

ADDITIONAL NOTES ANALYSIS (please attach copy if available)

Central Lincolnshire Groundwater Investigation ;
Evedon and Willoughby Scheme.

Driller: S. Collins.

LOG OF

STRATA

OVERLEAF

INSTITUTE OF GEOLOGICAL SCIENCES
HYDROGEOLOGY UNIT
EXHIBITION ROAD
LONDON SW7 2DE

IGS 2494 10/000 7/79

Received from *A. W. A.*
Lincoln Division
Date *3. 6. 86*
Observation well
Recorder
ER log
Site marked on
1" map
6" map—Grid Sheet
(use symbol)
Copy to
Date

TF 14 NW 14
TF14/25B

For Institute use only

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA If measurements start below ground surface, state how far.	THICKNESS			DEPTH		
		Feet	Inches	Metres	Feet	Inches	Metres
Superficial Glacial Sand and Gravel ? Till	Sand and gravel			2.00			2.00
	Coarse sand			2.00			4.00
	Gravel			2.00			6.00
	Grey buttery clay			2.00			8.00
	Soft grey clay			12.00			20.00
	Buttery/silty clay			2.00			22.00
	Soft grey clay			12.00			34.00
	Shale and limestone			2.00			36.00
	Shale and limestone and soft clay			2.00			38.00
	Soft grey sticky clay			2.00			40.00
Oxford Clay	Clay, shale and limestone			6.00			46.00
	Dark grey limestone and clay			6.00			52.00
	Dark grey hard limestone and clay			4.00			56.00
	Clay with blue/buff-coloured limestone			3.00			59.00
	Clay with grey-blue limestone			3.00			62.00
	Dark blue limestone			2.00			64.00
	Dark blue fine-grained limestone			2.00			66.00
	Clay			4.00			70.00
	Hard blue/buff fine-grained oolitic limestone			2.00			72.00
	Clay			2.00			74.00
Corbrash Blisworth Clay Great Oolite Limestone	Limestone			1.00			75.00
	Clay with soft buff fine-grained limestone			2.30			77.30
	Unconsolidated grey oolitic limestone			0.70			78.00
	Clay			3.00			81.00
	Shale			0.50			81.50
	Clay			3.00			84.50
	Limestone			11.50			96.00
	Oolitic sand and dark-brown soft buttery clay			2.00			98.00
	Oolitic sand, shale and dark-brown/black silty clay			1.00			99.00
	Fine oolitic sand			4.80			103.80
Upper Estuarine Beds	Very fine buff oolitic sand			8.20			112.00
	Coarser buff oolitic sand			2.50			114.50
	Sand			3.50			118.00
	Dark green-grey soft silty clay			4.00			122.00
	Classification by AWA						
Lincs Limestone							
? Nottingham Sand ? Lower estuarine beds							

15-8-88



CENTRAL L/ST GROUNDWATER INVESTIGATION.
SCHEME: EVEDON AND WILLOUGHBY.

BOREHOLE NAME: EWERBY SOUTH
LOCATION: south of Ewerby Sleoford TF118 458.

Date Completed: 1/2/86 Rig Schramm

Ground Level: 19.9 mAOB Flange Level:

G.L. to rig table m

Standing water level on completion: -5.0 mBGL

Water hit at: mBGL

Driller: S. Collins (Wimpey)
19.909 mAOB

Surface Exposure:

Depth Below G.L.	Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
2	16" STEEL CASING			sand & gravel	TOP SOIL
4				coarse sand	TOP SOIL
6				gravel	
8				grey buttery clay	
10	6" ID Steel Casing			A/A	
12				A/A	
14		CLAY		A/A	OXFORD
16				A/A	
18				soft grey clay	CLAY
20				A/A	
22				buttery/silty clay	
24				soft grey clay	
26				A/A	
28				A/A	
30				A/A	
32				A/A	
34				A/A	
36				shale/limestone	
38				A/A + soft clay	
40				soft grey clay	
42				A/A + shale & hot	



ANGLIAN WATER AUTHORITY - LINCOLNSHIRE RIVER DIVISION

TF 14 NW 1

SCHEME:

BOREHOLE NAME:

LOCATION:

Date Completed:

Ground Level: mAOB

G.L. to rig table m

Standing water level on completion: mBGL

Water hit at: mBGL

Rig

Flange Level:

Driller:

mAOB

Surface Exposure:

TF14/25B

Depth m	Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
44				A/A	
46				clay with shales bed	
48				dark grey bed & clay	OXFORD
50				A/A	CLAY
52				A/A	
54		CLAY		dark grey hard bed	
56				A/A	
58				blue/buff coloured bed	CORNBRUSH
60				A/A	
62				grey/blue limestone	GT OOLITE CLAY
64		GT Oolite Lst		dark blue limestone	GT OOLITE
66				dark blue fine grained bed	LIMESTONE
68		CLAY		A/A	
70				A/A	UPPER
72				hard blue/buff limestone fine grained oolitic bed	ESTUARINE
74		74m 75m		A/A	
76		CLAY		soft buff fine grained limestone	
78		77.3 78m		unconsolidated grey oolitic limestone	
80				A/A	
82		81 81.5		A/A	
84				A/A	



ANGLIAN WATER AUTHORITY - LINCOLNSHIRE RIVER DIVISION

TF 14 NW 19

SCHEME:
BOREHOLE NAME:
LOCATION:
Date Completed:
Ground Level: mAOD
G.L. to rig table m
Standing water level on completion: mBGL
Water hit at: mBGL

Rig
Flange Level:

Driller:

mAOD

TF14/25B

Surface Exposure:

Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
86.4	CLAY LINCS L/ST	84.5	A/A	
88			A/A	
			A/A	
92			A/A	LINCS
94			A/A	LIMESTONE
96			colitic sand & dark brown soft bluish clay	
98	CLAY		colitic sand shale & dark brown - bluish silty clay	
100			fine colitic sand	
102			A/A	
104	LINCS		A/A	
106	Limestone		very fine buff dolite sand	
108			A/A	
110			A/A	
112			A/A	
114		114.5	A/A but green	
116	SAND.		A/A	
118		118	Dark green-grey soft silty clay	
120	CLAY			
122			A/A	

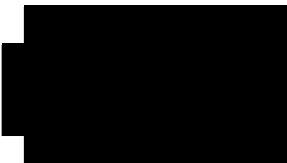
TF 14NW/9

TF14NW/9

ENERGY SOUTH

Interpretation from gamma ray log

	(M)	(M)
TILL	4.6	4.6
OXFORD CLAY	47.1	51.7
KELLWAYS SAND	5.6	57.3
CLAY	1.2	58.5
CORNBRASH	2.9	61.4
ALLSORTH CLAY	5.2	66.6
LIMESTONE	4.5	71.1
RUTLAND FAN MDST	2.3	73.4
(UPPER ESTUARINE) LMST	1.5	74.9
MDST	5.6	80.5
LINCOLNSHIRE LMST		



1/11/90



		For Institute use only Licence No.	
		N	
		TF14/25B.	
		127 TF14NW9	
RECORD OF WELL			
At <u>Everley, South</u>			
<u>South of Everley, Shropshire</u> <u>Nr. 2.6/4</u>			
Town or Village			
County			
EXACT SITE	Six-inch National Grid sheet and reference	<u>TF 118 458</u>	
OF WELL	For	<u>Anglian Water Authority: Lincoln Division</u>	
	State whether owner, tenant, builder, contractor, consultant, etc.:	<u>owner</u>	
	Address (if different from above)		
	Level of ground surface above sea level (O.D.)	ft (<u>19.91</u>) m)	
DELETE	If well top is not at ground level state how far ^{above} below:	ft (<u>0.01</u>) m)	
AS	SHAFT	ft (.....) m); diameter.....ft (.....) m);	
NECESSARY	HEADINGS (please attach details—dimensions and directions)		
	BORE	ft (<u>122.00</u>) m); diameter: at top..... <u>16</u> in (<u>406</u>) mm);	
	at bottom..... <u>5 3/8</u> in (<u>143</u>) mm) <u>Schramm rig</u>		
	Full details of permanent lining tubes (position, length, inner and outer diameters, plain slotted etc.):	<u>6.35 m. x 406 mm. plain steel from surface; 86.39 m. x 152 mm</u>	
	<u>plain steel from 0.01 m down</u>		
	Water struck at depths of	ft (.....) m) below well top	
TEST	Rest level of water	ft (<u>5.00</u>) m) ^{above*} below well top. Suction at.....ft (.....) m)	
	Yield on	hours* test pumping at.....galls per (.....) l/s) with	
	depression to	ft (.....) m) below well top. Recovery to rest level in mins*	
	CONDITIONS	Capacity of pump	g.p.h. (.....) l/s)
	Date of measurements	<u>1. 2. 86</u>	
	DESCRIPTION OF PERMANENT PUMPING EQUIPMENT:		
NORMAL	Make and/or type	Motive power.....	
	Capacity	galls (.....) m ³) per hour. Suction at.....ft (.....) m)	
	below well top. Amount pumped	galls (.....) m ³) per day. Estimated	
	consumption	galls (.....) m ³) per week	
	Well made by	<u>Lumpsey</u> Date of sinking..... <u>1. 2. 86</u>	
	ADDITIONAL NOTES ANALYSIS (please attach copy if available)		
LOG OF	<u>Central Lincolnshire Groundwater Investigation:</u>		
STRATA	<u>Everton and Willoughby Scheme</u>		
OVERLEAF			

INSTITUTE OF GEOLOGICAL SCIENCES
HYDROGEOLOGY UNIT
EXHIBITION ROAD
LONDON SW7 2DE

BGS 2494 10 000 7/79

Received from A. W. A.
Lincoln Division

Date.....3. 6. 86

Observation well.....

Recorder.....

ER log.....

Site marked on

1" map.....

6" map—Grid Sheet.....

(use symbol)

Copy to.....

Date.....



ANGLIAN WATER AUTHORITY - LINCOLNSHIRE RIVER DIVISION

CENTRAL 4th GROUNDWATER INVESTIGATION.

SCHEME: EVEDON AND WILLOUGHBY.

BOREHOLE NAME: EWERBY SOUTH

LOCATION: South of Ewerby Sleaford TF118 458.

Date Completed: 1/2/86

Rig Schramm

Ground Level: 19.9 mAOB

Flange Level:

G.L. to rig table m

Standing water level on completion: -5.0 mBGL

Water hit at: mBGL

Driller: S. Collins (Winpey)
19.909 mAOB

Surface Exposure:

Depth below I.L.	Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
2	16" STEEL CASING 6.35			sand & gravel	TOP SOIL
4				coarse sand	TOP SOIL
6				gravel	
8				grey bluish clay	
10	6" ID Steel Casing			A/A.	
12				A/A.	
14		CLAY		A/A.	OXFORD
16				A/A.	
18				soft grey clay	CLAY
20				A/A.	
22				bluish/silty clay	
24				soft grey clay	
26				A/A.	
28				A/A.	
30				A/A.	
32				A/A.	
34				A/A.	
36				shale / limestone	
38				A/A + soft clay	
40				soft grey sticky clay	
42				A/A + shale & hot.	



ANGLIAN WATER AUTHORITY - LINCOLNSHIRE RIVER DIVISION

SCHEME:

BOREHOLE NAME:

LOCATION:

Date Completed:

Rig

Driller:

Ground Level: mAOD

Flange Level:

mAOD

G.L. to rig table m

Standing water level on completion:

mBGL

Water hit at: mBGL

Surface Exposure:

TF14/25B

Depth m	Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
44				A/A	
46				clay with shales bed	
48				dark grey bed & clay	OXFORD
50				A/A	CLAY
52				A/A	
54		CLAY		dark grey hard bed	
56				A/A	
58				blue buff coloured bed	CORNBRASH
60				A/A	
62				grey/blue limestone	GT OOLITE CLAY
64		GT Oolite 4ft		dark blue limestone	GT OOLITE
66				dark blue fine grained bed	LIMESTONE
68		CLAY		A/A	
70				A/A	UPPER
72				hard blue buff limestone fine grained oolitic bed	ESTUARINE
74		CLAY 74m		A/A	
76		CLAY 75m		soft buff fine grained limestone	
78		CLAY 77.3m		uncemented dark grey oolitic limestone	
80				A/A	
82		SHALE 81m		A/A	
84				A/A	



ANGLIAN WATER AUTHORITY - LINCOLNSHIRE RIVER DIVISION

SCHEME:

BOREHOLE NAME:

LOCATION:

Date Completed:

Ground Level: m AOD

G.L. to rig table m

Standing water level on completion:

Water hit at: m BGL

Rig

Flange Level:

Driller:

m AOD

TF14/25B

Surface Exposure:

Construction Details	Drillers Log	Samples Cores	Sample Analysis	Stratigraphy
86.4	CLAY	84.5	A/A	
88	LINGS		A/A	
	4/ST		A/A	
92			A/A	LINGS
96			A/A	LIMESTONE
96			oolitic sand & dark brown soft shaly clay	
98	CLAY		oolitic sand shales dark brown - silty clay	
100			fine oolitic sand	
102			A/A	
104	LINGS		A/A	
106	Limestone		very fine buff oolitic sand	
108			A/A	
110			A/A	
112			A/A	
114		114.5	A/A but coarse	
116	SAND.		A/A	
118		118	Dark green-grey soft silty clay	
120	CLAY		A/A	
122			A/A	



BGS ID: 471994 : BGS Reference: TF14SE5
British National Grid (27700) : 518069.340647

1063 Wt. 22438/0384 10M 7/45 (51) F.&S.

RECORD OF WELL (SHAFT OR BORE)

TF14SE/5

(For Survey use only) **N.380.**

1-inch Map Registered No.

18074065

At The Popples Farm,

Town or Village Little Hale Fen, nr Heckington Sleaford

County Lincolnshire Six-inch quarter sheet

For Mr. Reed, the Popples Farm, Little Hale Fen, nr. Beckington.

Exact site of well see tracing from LINGS SHEET CXVI NE.

Sited on land 116 NE 16.9.46

Attach a tracing
a map, or a sketch-
map, if possible.

Level of ground surface above sea level (O.D.) 210 ft. If well-top is not at ground level, state how far

If well-top is not at ground level, state how far ...

{ above;
{ below: _____ ft.

SHAFT 1 ft.; diameter 1 ft. Details of headings

BORE 310 ft.; diameter of bore: at top 5 ins.; at bottom 2½ ins. Lengths,

diameters, perforations, etc., of lining tubes 35'-0" of 5" standing 1'-6" B.G.L. : 263'-0" of 4" F.J. tubes

2' C' B.G.L. : 52'-0" of 2 1/2" socketed tubes perforated with 280 1/2" holes resting on bottom of hole

Water struck at depths, below well top, of (feet) _____ (Cement grout outside 5' tubes).

Rest-level of water 30 ft. above well-top. Suction at _____ ft. OVERFLOW APPROX 7,000 gal.

per hour with depression to ft. below sill top Capacity of pump cph Recovery to

rock level in ~~2000~~ Date of measurements V. 1916 Date of well M. 1916

1981-1982	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039	2039-2040	2040-2041	2041-2042	2042-2043	2043-2044	2044-2045	2045-2046	2046-2047	2047-2048	2048-2049	2049-2050	2050-2051	2051-2052	2052-2053	2053-2054	2054-2055	2055-2056	2056-2057	2057-2058	2058-2059	2059-2060	2060-2061	2061-2062	2062-2063	2063-2064	2064-2065	2065-2066	2066-2067	2067-2068	2068-2069	2069-2070	2070-2071	2071-2072	2072-2073	2073-2074	2074-2075	2075-2076	2076-2077	2077-2078	2078-2079	2079-2080	2080-2081	2081-2082	2082-2083	2083-2084	2084-2085	2085-2086	2086-2087	2087-2088	2088-2089	2089-2090	2090-2091	2091-2092	2092-2093	2093-2094	2094-2095	2095-2096	2096-2097	2097-2098	2098-2099	2099-2100	2100-2101	2101-2102	2102-2103	2103-2104	2104-2105	2105-2106	2106-2107	2107-2108	2108-2109	2109-2110	2110-2111	2111-2112	2112-2113	2113-2114	2114-2115	2115-2116	2116-2117	2117-2118	2118-2119	2119-2120	2120-2121	2121-2122	2122-2123	2123-2124	2124-2125	2125-2126	2126-2127	2127-2128	2128-2129	2129-2130	2130-2131	2131-2132	2132-2133	2133-2134	2134-2135	2135-2136	2136-2137	2137-2138	2138-2139	2139-2140	2140-2141	2141-2142	2142-2143	2143-2144	2144-2145	2145-2146	2146-2147	2147-2148	2148-2149	2149-2150	2150-2151	2151-2152	2152-2153	2153-2154	2154-2155	2155-2156	2156-2157	2157-2158	2158-2159	2159-2160	2160-2161	2161-2162	2162-2163	2163-2164	2164-2165	2165-2166	2166-2167	2167-2168	2168-2169	2169-2170	2170-2171	2171-2172	2172-2173	2173-2174	2174-2175	2175-2176	2176-2177	2177-2178	2178-2179	2179-2180	2180-2181	2181-2182	2182-2183	2183-2184	2184-2185	2185-2186	2186-2187	2187-2188	2188-2189	2189-2190	2190-2191	2191-2192	2192-2193	2193-2194	2194-2195	2195-2196	2196-2197	2197-2198	2198-2199	2199-2200	2200-2201	2201-2202	2202-2203	2203-2204	2204-2205	2205-2206	2206-2207	2207-2208	2208-2209	2209-2210	2210-2211	2211-2212	2212-2213	2213-2214	2214-2215	2215-2216	2216-2217	2217-2218	2218-2219	2219-2220	2220-2221	2221-2222	2222-2223	2223-2224	2224-2225	2225-2226	2226-2227	2227-2228	2228-2229	2229-2230	2230-2231	2231-2232	2232-2233	2233-2234	2234-2235	2235-2236	2236-2237	2237-2238	2238-2239	2239-2240	2240-2241	2241-2242	2242-2243	2243-2244	2244-2245	2245-2246	2246-2247	2247-2248	2248-2249	2249-2250	2250-2251	2251-2252	2252-2253	22
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Quality of water (*attach copy of analysis if available*)

Well made by F. Smith and Son (Grimsby) Ltd. 3, Osborne St. Grimsby, Lincs.

Information from do do do

Additional notes in space overleaf.

[illegible]

Continued over leaf

GEOLOGICAL SURVEY AND MUSEUM,
 SOUTH KENSINGTON,
 LONDON, S.W.7.

Date
received

Correspondence File No.

1" N.S. Map
No.

1" O.S. Map
No.

Site marked (use symbol)	
on 1" Map	on 6" Map

14-9-46.

128.

6

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2.

(For Survey use only)
GEOLOGICAL
CLASSIFICATION

NATURE OF STRATA (Continued)

THICKNESS

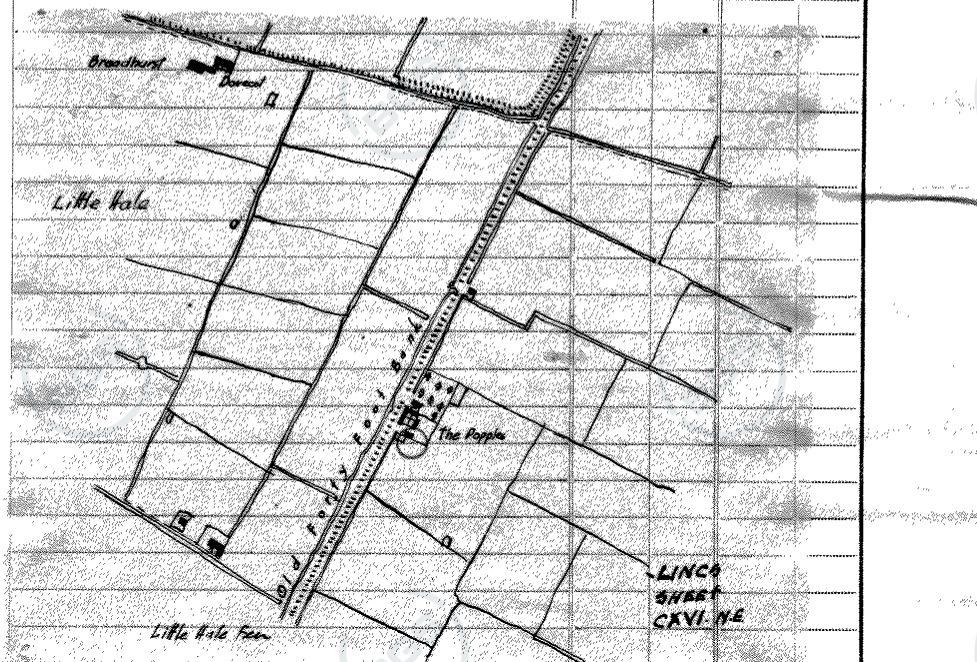
DEPTH

Feet

Ins.

Feet

Ins.



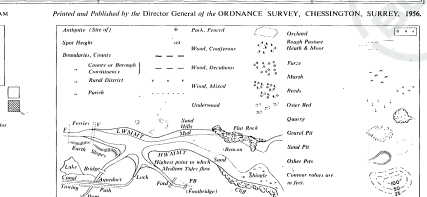
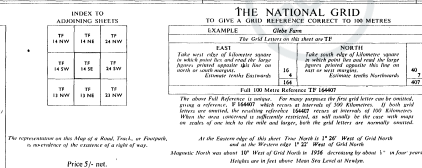
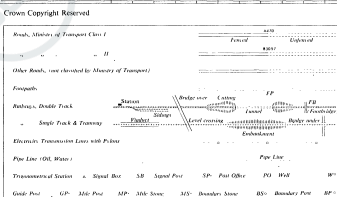
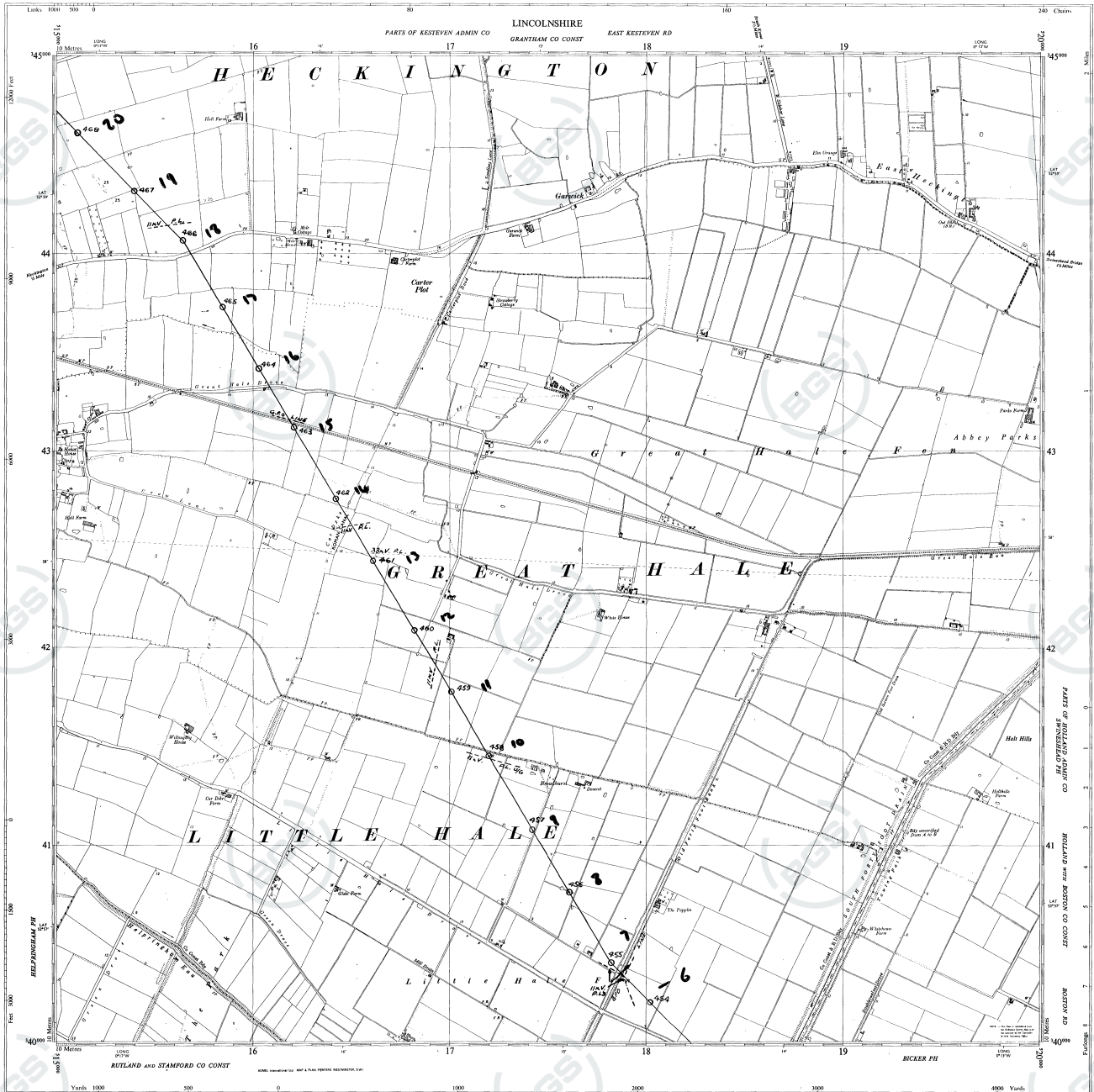
ADDITIONAL NOTES

TRANSMISSION PROJECT GROUP.

ORDNANCE SURVEY
Scale 1:10,560 or 6 Inches to 1 Mile

Provisional Edition

SHEET TF 14 SE



SHEET TF 14 SE

SHEET TF 14 SE

TF 14 SE / 6 - 20

Sheet No 12 of 2



BGS ID: 471994 : BGS Reference: TF14SE5
British National Grid (27700) : 518069,340647

(For Survey use only)

1955

1-inch Map Registered No.

TF 14.5E/5

TF 1806 4064

Six-inch quarter sheet

He Male Pen or Mockingto

CS SUBJECT CXLVINE

Sited on line 116 NE 16-9-46

Attach a trace
a map, or a sketch-
map, if possible.

Level of ground surface
above sea level (O.D.) 610. ft.

If well-top is not at ground level, state how far

{ above;
{ below: _____ ft.

SHAFT _____ ft.; diameter _____ ft. Details of headings _____

BORE 310 ft.; diameter of bore: at top 5 ins.; at bottom 2½ ins. Lengths

diameters, perforations, etc., of lining tubes 25'-0" & 5' standing 1'-6" a.g.l. + 265'-0" & 4' (a.g.l.) tubes - 2'-6" a.g.l. + 32'-0" & 3 1/2' (encased tubes) perforated with 280-K holes resting on bottom of hole

Water struck at depths, below well top, of (feet) 12 (Cement grout outside 5' tube)

Rest-level of water 30 ft. above well-top. Station at 44. OVERFLOW 2 1/2 ft. APPROX 7,000 gal.

per hour with depression to _____ feet below well top. Capacity of pump _____ g.p.h. Recovery to _____

rest level in _____ Date of measurements May 1946 Date of well May 1946

Quality of water (attach copy of analysis if available)

Well made by F. Smith and Son (Grimsby) Ltd. 3, Osborne St. Grimsby, Linco.

Information from de de de

Additional notes in space overleaf.

[illegible]

Continued over leaf

GEOLOGICAL SURVEY AND MUSEUM,
SOUTH KENSINGTON,
LONDON, S.W.7.

Date
received
4-9-46.

Correspondence File No.

1" N.S. Map
No.
128.

1" O.S. Map
No.

File marked (use symbol)	
on 1" Map	on 6" Map
	



TF 14SE /45

BOREHOLE LOG

Client Kesteven County Council

Location Heckington By- Pass

B.H. No. 129

Type of boring Hand Auger

Date(s) 11.4.73

Dia. of boring 100mm

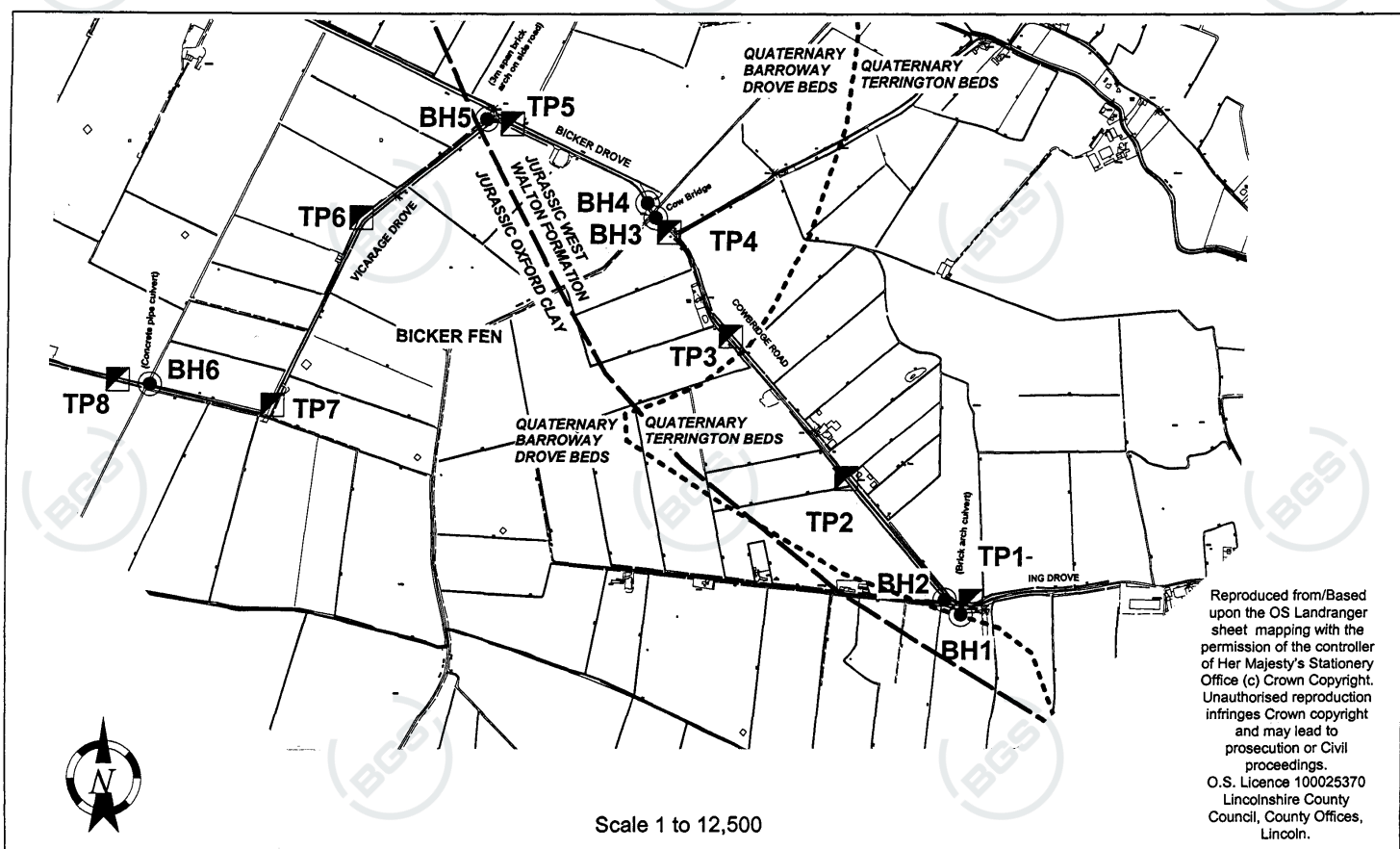
Ground Level 2.30 m

Scale 1:50m

Description of Strata	Reduced Level	Legend	Thickness	Depth	SAMPLES		NOTES
					Type	Depth	
Loose to medium dense grey sandy SILT.	7.00		0.30	0.30			
Loose to medium dense grey sandy SILT with traces of medium and fine gravel.			1.70				
	5.30			2.00			
Borehole terminated at 2.00m							
							Groundwater not encountered
PROJECT:- Lincoln Roads Scheme - Soil Survey					S () Standard Penetration Test U Undisturbed Sample B Bulk Sample D Disturbed Sample W.S. Water Sample		



Job Number: 27248				Site: Bicker Fen				Borehole.: BH6				Sheet 1 of 2										
Remarks : Surface : Grassed road verge - 1.80m from road. Hand dug pit to 1.20m. Groundwater strike at 2.5m - no rise. Sample too sandy at 1.60m and too gravelly at 4.85m for shear vane test.				Location: 519417E - 338337N				Diameter of Hole: 175mm				Instrumentation: 50mm dia.slotted standpipe installed down to 3.75m with gas tap and flush cover.										
				Client: National Grid Company plc				Casing Diameter: 175mm														
				Drilling Method: Dando 175 LCP Rig				Logged By: JMY				Log Scale: 10 m/page				Ground Level: 2.28 m AOD						
Date (2004)	Depth of Casing (m)	Depth of Water (m)	Sample/Test		Change of Strata			Description of Strata	SPT/CPT Test Results and Other Tests	NMC %	Atterberg Limits				Density		Shear Strength		Chemical			
			No	Type	Depth (m)	Legend	Depth below GL (m)				Reduced Level m AOD (m)	Thickness of Stratum (m)	LL %	PL %	PI %	CBR %	Bulk Mg/m ³	Dry Mg/m ³	Cu kPa	Ø _u °	Type of Shear Test	SO ₄ g/l
26/11	1.2	2.50	1	T	0.00-0.30			0.30	Brown sandy clayey TOPSOIL with rare grass rootlets with traces of medium angular flint gravel.													
2			T	0.50			0.30	1.98		0.50		28	49	25	24						0.090	7.70
3			T	1.00			0.80	1.48		0.90												
26/11	1.20min	2.50	4	U100	1.50-1.95			1.70	Firm orange brown with grey brown fine sandy CLAY. (BD)	(14)												
5			T	1.95-2.10			0.80															
26/11			6	S	2.50-2.95			2.50		-0.22												
			7	T					Light orange brown and dark grey silty fine to medium SAND with rare fine gravel. (BD)	N=21												
26/11	3.5	8	S	3.50-3.95			1.50															
		9	T																			
		10	T	4.00-4.50		4.00	-1.72															
26/11	4.5		11	U100	4.50-4.95				Very stiff becoming hard with depth grey fine sandy CLAY with traces of fine subrounded white chalk gravel and coarse chalk sand. (GT)	(40)	OT	17	33	15	18			130.0		V	0.090	8.10
		12	T	4.95-5.10																		
		13	S	5.50-5.95																		
			14	T					Medium dense orange brown fine to coarse sandy fine to medium subrounded and angular siliceous GRAVEL including flints. (GT)	N=20												
			15	U100	6.50-6.95														130.0		V	
			16	T	6.95-7.10														130.0		V	
			17	S	7.50-7.95				Very stiff becoming hard with depth grey fine sandy CLAY with traces of fine subrounded white chalk gravel and coarse chalk sand. (GT)	(53)	T	17	32	15	17							
			18	T																		
			19	U100	8.50-8.95																	
			20	T	8.95-9.10				- rare fine siliceous gravel at 9m.	(57)												
			21	S	9.50-9.95																	
			22	T																		
Continued next sheet																						
Scale as Shown	Disturbed Samples W Water Sample D Small Bag B Large Bag T Tub J Jar RW River/Drain Water		Undisturbed Samples U100 105mm Dia Core U38 U100 C75 75mm Dia Core Groundwater: ☒ Struck ☒ Rose to		Penetration Test S Standard Penetration Test CP Cone Penetration Test Blows N = N Value 28/150 blows for 150mm after seating 28* blows for part or whole of seating drive only (26) Undisturbed Sample Blows				Type of Shear Test V Shear Vane SB Shear Box TX Triaxial (Undrained) Cu Undrained Cohesive Strength Øu° Internal Friction Angle				Notes		LINCS LABORATORY Telephone (01522) 530355 Fax (01522) 510573							

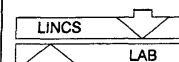


February 2005

Dwg No.2

Bicker Fen Access Road Improvement, Lincolnshire

Exploratory Hole Location Plan



Tel 01522 530355