

Appendix C – Historical Borehole Records

RECORD OF WELL (SHAFT OR BORE)

use only) N 388 Registered No.

FAZIN 810

189

At Inningham Dock
 Town or Village Inningham.
 County Lincolnshire Six-inch quarter sheet XIII. S.E.
 For Mr. L.N.E. Railway Co.

Exact site of well L.N.E.R. Baltgate Inningham Dock. (Attach a tracing from a map, or a sketch-map, if possible.)

Level of ground surface 3.05 ft. If well-top is not at ground level, state how far ... (above; below; ... ft.)

SHAFT ft.; diameter ft. Details of headings

TR 54 / 20611522

BORE 10.2 ft.; diameter of bore: at top 2 1/2 ins.; at bottom 2 1/2 ins. Lengths, diameters, perforations, etc., of lining tubes 86'-0" x 2 1/2" Galv. tubes.

Water struck at depths, below well top, of (feet)

Rest-level of water 1 ft. ^{above}/_{below} well-top. Suction at 15 ft. Yield on 4 hours' pumping, 500 gal. per hour with depression to ft. below well-top, Capacity of pump 500 g.p.h. Recovery to rest level in mins. Date of measurements April 1946 Date of well 13.4.46

Quality of water (attach copy of analysis if available)

Well made by St. Smith and Son (Grimsby) Ltd

Information from 5 Osborne St Grimsby
Additional notes in space overleaf.

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		Feet	Ins.	Feet	Ins.
	If measurements start below ground surface, e.g., from bottom of an existing shaft, state how far				
	Made up gravel	1	0.30	1	0.30
	Soft brown sand	11	3.35	12	3.66
	Soft blue sand		5.49		9.14
	Peat	18	0	30	0
	Marl clay	2	0.61	32	9.75
	Black gravel	18	5.49	50	15.24
	Black		7.62		22.96
	Black	25	9.23	75	31.09
		27	0	102	0

Continued over leaf

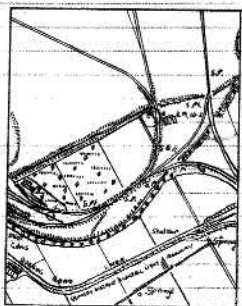
GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.

Date received 4/6/46 Correspondence File No. 1" N.S. Map No. 81. 1" O.S. Map No. Site marked on 1" Map ○ on 6" Map ●

(For Survey use only)
2
 GEOLOGICAL
 CLASSIFICATION

NATURE OF STRATA (Continued)

THICKNESS		DEPTH	
Feet	Ins.	Feet	Ins.



IMMINGHAM DOCK
LINCOLNSHIRE SHEET X OF SX.

ADDITIONAL NOTES

RECORD OF WELL (SHAFT OR BORE)

81
 1-inch Map Registered No. TA 21 NW 10
 TA 21 NW 10
 189
 TA 21 NW 10

At Jarrowham Dock
 Town or Village Jarrowham
 County Lincolnshire Six-inch quarter sheet XIII. S.E.
 For Mr. L. N.E. Railway Co.
 Exact site of well L.N.E.R. Cottages
2040
Ch. 1522 TA 21 NW Jarrowham Dock.
 Level of ground surface ft. If well-top is not at ground level, state how far ... 'above; (below) ft.
 SHAFT ft.; diameter ft. Details of headings

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

BORE 10 1/2 ft.; diameter of bore: at top 2 1/2 ins.; at bottom 2 1/2 ins. Lengths, diameters perforations, etc., of lining tubes 8 1/2" x 2 1/2" Galv. tubes.

Water struck at depths, below well top, of (feet)
 Rest-level of water 1 ft. ^{above} well-top. Suction at 15 ft. Yield on 11 hours' pumping, 500 gal. per hour with depression to ft. below well-top, Capacity of pump 500 g.p.h. Recovery to rest level in mins. Date of measurements April 1946 Date of well 13.4.46

Quality of water (attach copy of analysis if available)
 Well made by W. Smith and son (Gimbleby) Ltd
 Information from 5 Debarre St Gimbleby Lincs
Additional notes in space overleaf.

(For Survey use only)
 GEOLOGICAL CLASSIFICATION

NATURE OF STRATA

THICKNESS DEPTH
 Feet Ins. Feet Ins.

If measurements start below ground surface, e.g., from bottom of an existing shaft, state how far

Made up ground	1	0	1	0
Soft brown soap	11	0	12	0
Soft blue soap	18	0	30	0
Peat	2	0	32	0
mail clay	18	0	50	0
Black gravel	25	0	75	0
Black	27	0	102	0

Continued over leaf

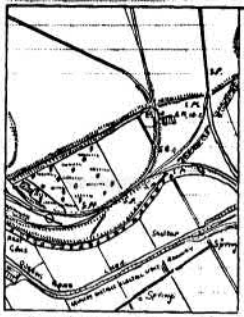
GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.	Date received	Correspondence File No.	1" N.S. Map No.	1" O.S. Map No.	Site marked (use symbol): on 1" Map	on 6" Map
	<u>6/2/46</u>		<u>81.</u>		<u>0</u>	<u>0</u>

(For Survey use only)
2
GEOLOGICAL
CLASSIFICATION

NATURE OF STRATA (Continued)

THICKNESS		DEPTH	
Feet	Ins.	Feet	Ins.
TA		21	51

81/189



IMMINGHAM DOCK
LINCOLNSHIRE SHEET X III SE.



ADDITIONAL NOTES



NGRC
BOREHOLE RECORDS
ADJUSTMENT FORM

QUARTER SHEET

TA2150

BH REGISTRATION NUMBER

242-341

RECORDS ENTERED AND HELD BY WALLINGFORD

BH REGISTRATION NUMBER(S)

RECORD OF WELL (SHAFT OR BORE)

(attach copy of analysis if available)

For Survey use only

N. _____

81 TA 21/54 D
/ 217 F

EXACT SITE
OF WELL

At IMMINGHAM LOCO SHEDS. NO. 3 BORE.

TA 21 NW/18 TA 2032 1492

Town or Village IMMINGHAM DOCK.

LINCOLNSHIRE (PARTS OF LINDSAY)

County LINCOLNSHIRE.

Six-inch quarter sheet X111 S.E. 203149

For Mr. B.T.C.

State whether owner, tenant, builder,
contractor, consultant, etc. — OWNER

Address (if different from above) _____

Level of ground surface _____
above sea-level (O.D.) 9.00 ft. approx.

concrete chamber
If ~~water~~ is not at ground level, state how far above; 4'-6"
level, state how far below; approx. ft.

Depth of concrete
chamber MARK 10'-6"; diameter 5 ft.
square

Details of headings _____

BORE 202 ft.; diameter of bore: at top 8 ins.; at bottom 8 ins.
below bottom of concrete chamber.

Details of permanent lining tubes Steel Tube 8" diam. about 10 ft.
below bottom of well.

Water struck at depths of _____ ft. below well-top.

Rest-level of water 10.4 ft. Top of concrete chamber below well-top. Section at 29 ft. Yield on ONE hours' test
pumping at 10,500 galls. per hour with depression to _____ ft. below well-top.

Recovery to rest-level in 90 mins. Capacity of pump 210,000 g.p.h. Date of measurements 6/3/49

Description of permanent pumping equipment:

Make and/or type REES ROTURBO 3 No. Motive power ELECTRICITY

Capacity 10,000 each gallon per hour. Suction at 30 ft.

Amount pumped 216,000 approx. galls. per day. Estimated consumption 1,512,000 galls. per week.

Well made by _____ Date of well 1918

Information from _____

ADDITIONAL NOTES

*This is explained to Nos 4 & 5 which are all pumped together
for abstraction see no 4 (217 B) W.L. July 51*

TEST
CONDITIONS

NORMAL
CONDITIONS

FORM 10-4472/0000 12/00 214 A.R.E.W.L.L. C.P. 485

LOG OF STRATA OVERLEAF.

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

Date
Received

1" O.S. Map
No.

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

81

Chalk 00-70'

12

(For Survey use only)
GEOLOGICAL
CLASSIFICATION

NATURE OF STRATA

If measurements start below
ground surface, state how far ...

TA 2150
THICKNESS DEPTH

Feet Inches Feet Inches

Dimensions start about 6'-0" below
G.L.

	Feet	Inches	Feet	Inches
Red Warp.	5	0	11	0
Black Warp.	25	0	36	0
Peat	1	0	37	0
Marl Clay.	31	0	68	0
Sand & gravel (very watery)	11	0	79	0
Soft loose chalk.	23	0	102	0
Firm chalk.	10	0	112	0
Hard chalk.	96	0	208	0

(Termination of bore)

TA



NGRC
BOREHOLE RECORDS
ADJUSTMENT FORM

QUARTER SHEET TA2150

BH REGISTRATION NUMBER 242-341

RECORDS ENTERED AND HELD BY WALLINGFORD

BH REGISTRATION NUMBER(S)

RECORD OF WELL (SHAFT OR BORE)

(attach copy of analysis if available)

For Survey use only

3

At **IMMINGHAM LOCO SHEDS. No. 4 BORE.**

GR: 2017 1489 TA 215W

81 TA 21/54
217B

Town or Village **IMMINGHAM DOCK**

Lincolnshire (Parts of Lindsey)

County **LINCOLNSHIRE.**

Six-inch quarter sheet **X. 111 S. E. GRID**

For Mr. **B. T. C.**

202149
State whether owner, tenant, builder, contractor, consultant, etc. :- **OWNER.**

Address (if different from above)

Level of ground surface **approx**
above sea-level (O.D.) **8.00** ft.

If well-top is not at ground (above;
level, state how far ... **6** approx. ft.

Depth of well ~~XXXX~~ **24 1/2** ft.; diameter **7** ft.;

Details of headings

BORE **138** ft.; diameter of bore: at top **6** ins.; at bottom **6** ins.
below bottom of well.

Details of permanent lining tubes **Steel tube 6" diam. approx. 68 ft.**
below bottom of well.

Water struck at depths of _____ ft. below well-top.

Rest-level of water **11** ft. ~~above~~ below well-top. Suction at _____ ft. Yield on _____ hours' test
pumping at _____ galls. per _____ with depression to _____ ft. below well-top.
days'

Recovery to rest-level in **3** ~~min.~~ hours Capacity of pump _____ g.p.h. Date of measurements

Description of permanent pumping equipment:

Make and/or type _____ Motive power _____

Capacity _____ gallons per hour. Suction at _____ ft.

Amount pumped _____ galls. per day. Estimated consumption _____ galls. per week.

Well made by _____ Date of well **1911**

Information from _____

ADDITIONAL NOTES

For pump details see record of Immingham Loco Sheds No. 3 Bore. There are three pumps in all which can be operated on Nos. 3, 4 & 5 bores together or No. 3 bore alone or Nos. 4 & 5 bores alone. Nos. 4 & 5 bores discharge into a common well, the level of which is kept fairly constant at about 15'-6" below top of well. The combined yield at this level is about 500 gallons per hour. (9.3.49).

Abstraction of nos 3, 4 & 5 together in 1950 was 99M galls. Varying from 1.6 to 2M galls. Mainly for loco supply - also some drinking water.

Conductivity of B and C together (Nos 4 & 5) 490 at 10°C Chloride 30ppm *PH. 1.4.50*
Conductivity of B, C and F together (Nos 4, 5 & 3) 500 at 10°C. *3/3/53 R.E.A.*
(Water from B, C & F together thought to have been saline after flooding but pumping since has now cleared the salinity.)

LOG OF STRATA OVERLEAF.

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

Date Received

1" O.S. Map No.

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

81

○

○

EXACT SITE OF WELL

TEST CONDITIONS

NORMAL CONDITIONS

FORMED BY LECTURERS 11.000 2148 A.B.E.W.L.L. OP.488

(4)

(For Survey use only)
GEOLOGICAL
CLASSIFICATION

NATURE OF STRATA

If measurements start below
ground surface, state how far ...

THICKNESS

TA 21
DEPTH

1,548

Feet Inches

Feet Inches

81/217

Red Warp.

6 0

6 0

Blue warp.

17 0

23 0

Feat.

2 0

25 0

Marl clay.

45 0

70 0

Sand & gravel.

5 0

75 0

Chalk rock

81 0

156 0

(Termination of bore)

RECORD of WELL or BORING (continued)

TAIINE 264
Survey No. 23
N.S. map 21

at Irvington Park

County Lincoln

map 21

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		Feet	Inches	Feet	Inches
<p>① No. 11</p> <p>2/11/27 K</p> <p>K</p> <p>TA 34 19851516</p>	<p>6" Bore at Level. <u>Disused</u> [see later in report]. Approx O.D. +17'</p> <p>Wet Pest Mud Hard mud Clay without mud Red clay Chalk with</p> <p>TAIINE-264</p>	<p>7.16 6 1 32 10 23 20 192</p>	<p>Feet 6 0.46 4.75 2.03 7.01 6.10 4.023</p>	<p>1911</p> <p>23 25 57 67 90 110 242</p>	<p>7.16 7.62 14.37 20.42 27.43 33.53 37.56</p>

uncovered,
Shall 20 to 25 ft; rest, loose. Lower 100 ft. from 25 to 122 ft.
Yield (48 hrs test) 2,000 g. p. hr.
Exact site lat. in N side of water softening plant near loco shed. Now
concreted over.

In a letter (W81/3000) of 10.25.26 Mr. Tuley adds (in reply to my enquiry) :-

Rest-level for all the tests is approx +7 ft O.D. as shown [see] Nos 6-7 and
Bore 1, 2 & 11 are disused for reasons mentioned with the water level :-
Bore No 1 was abandoned soon after being put down owing to the presence of sand in the water
Bore No 2 gave only a small yield when used. At that time first, but not second, the yield, & in fact later in the
sand, was called out to be closed up, & was abandoned
Bore No 11 also had too small a yield, & Bore No 3 was put down instead.

Figure for Yield & Test on the yield at the date of construction (see for actual yield of Nos 6-7, 1911
see Note on put down in 1926)

G.S.M. Ref. No 81/217 J
Government Chemist Lab. Nos. 892, 912, 1007
Date 17/7/56 Original data filed W/M Govt. Chemist.

Total Alkalinity as CaCO₃ 240 p.p.m
Total Hardness as CaCO₃ 247.6 (240) p.p.t.
Chloride as Cl. 68
Conductivity 650
Ca as CaCO₃ 230
Mg " 17

81/217 A-L

IMMINGHAM DOCK

TA11/93

A	1858	1656
B	2017	1489
C	2017	1488
D	1822	1598
E	1860	1660
F	2032	1492
G	1945	1661
H	1909	1671
I	2047	1485
J	1851	1697
K	1990	1516
L	1755	1612

TA21/54 B
TA21/54 C

TA21/54 D

TA 21/54 A

RECORD of WELL or BORING (continued)

TA 11/93
Survey No. 81
1" N.S. map #1

at Inningham Dock

County Lines

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		Feet	Inches	Feet	Inches
⑨ No. 11	6" Brk. at base. <u>Discol.</u> (faded text... after...), Approx. 0.0.	17'		February 1911.	
2/17/11 GK	Wash	23	6	23	6
	Peat	1	6	25	-
	Mud	32	-	57	-
	Hard mud	10	-	67	-
	Clay with mud	23	-	90	-
	Red clay	20	-	110	-
	Chalk rock	132	-	242	-

GR: 1990 1516
TA 11 NE

Sample 20 to 25 ft from base. Heavy blue 97 ft. from 25 to 122 ft.
Yield (98 lb. water) 2,000 g. p. hr.
Exact site lat. on N side of water adjoining plant near loss shed. Now covered over.

I: ~~NO SITE~~

TA 21/54
GR: 2047
1485

In a letter (W81/Jan) of 10.12.1911 Mr. Tuley asks (in reply to my enquiry) :-
"Rat-holed for all the time is approx 17 ft 0.0 in shown [?] No 6-7" and
Bore 1, 2 & 3 are drilled for reasons mentioned in the note here :-
On No 1 was abandoned soon after being put down owing to the presence of sand in the water
On No 2 was only a small yield when water. It had no yield, but still showed the yield, or is first bit in the
sand; but could not be cleared out, or was abandoned
On No 3 also had no yield - yield, or On No 3 was put down instead

Figs for Yield & Test on the yield at the date of construction (see for actual yield of hole 6-7, drilled
on 10.12.1911 in 1911)

G.S.M. Ref. No ... 81/217.5
Government Chemist Lab. Nos. ... 893-912 ... 1007
Date ... 17/7/56 ... Original data filed W/M Govt. Chemist.

Total Alkalinity as CaCO₃ ... 249 ... p.p.m
Total Hardness as CaCO₃ ... 247. (1. 240. P. 7.)
Chloride as Cl. ... 18 ...
Conductivity ... 650 ...
Ca as CaCO₃ ... 230
mg " ... 17

TA 11/93

W 81

Oct 24, 1921

217

(20)

Dear Mr. Benham.

Emmingsham Rock Bores

I am now returning your copy of bores and sheets from Mr. Lulips drawing and have traced a 6" to a mile tracing with his points enlarged onto it for you.

I make out that the Engineer's Drawings as published in Engineering were figured from a datum line 100 feet below T.D. Thus coping at the outer lock gate was figured at +107 at middle gates +107. Formation level +115. H.W.O.S.T +111 L.W.O.S.T +105.0 and the average fill on the section 5'-0" making original marsh level +10.0.0.

No. 1. 4'-0" made ground + surface +15, makes the original marsh +11

My list from Messrs. F. Smith & Son gave 77 feet of 12" tube (this would be the outer tube of your memo) and 167 feet of 10" tube. This position by the old bank was further from the power house than I got on my section. but as it did not reach chalk it would not alter the line of chalk dotted

No. 2. The surface O.D. +15 would include the made ground + should be noted. (The Slumber bank was raised as well as the various drains involved and a dredge in the Slumber pumped up the muds into barges which laid to a jelly carrying a pipe to various moorings; points + when settled the water was returned through sluices into the Slumber so in later bores there was little disturbance of material)

TA 11/93 81

(2)

- There is a fraction towards Nuis Creek which is unprofitable
- No. 2. 4 + 5 start on the old level.
- No. 3. When pumping 12,000/15,000 gph water level in bar hole 11 feet below surface.
- No. 4 + 7. 6" bore hole in yard + 182 O.D. approx. Part of the 40' hole to be made of ground. These are new to me and will put the chalk level compared with the Gale-keeper Lodge with a steeper slope.
- No. 8. 6" bore. + 17 f. O.D.

My list from Mess J Smith & Son gives the upper portion of the bore as follows.

Ashes	2'-6" (ballnet)
Made ground	6-0
Red clay	3-0
Blue clay	6-0
Gravel	2-6
Boulder clay	3-0
Silt	4-0
Boulder clay	20-0

Then the 2'-0" sand follows as your list

- No. 9. 2 1/2" bore. Johnson's field. approx + 11.6.

I have measured this today & put the pits on the 6" having

overflaming } There is a 2 1/2" pipe to ~~run~~ ~~run~~ ~~run~~ drinking place 4.0 x 3.0
at ground } in brickwork connected to bottom. 25-0 from the drain
level. } + 314 feet from Manby Road fence. (This would be compensation
min. } walk at the road cut off the watered portion of the field)

- No. 10. Mess J Smith & Son. water level 2'-6" below surface. 114'-6" - 2" tubes.

- No. 11. 6" Bore at 200 + 17 Water level. 6" below surface inserted 122 feet 6" tubing. Tested the yield for 52 hours and when pumping 2340 gallons per hour water level in the bar hole was 30 feet below surface. Shaft. 0. to 25 feet

TA 1193

81/217

(22)

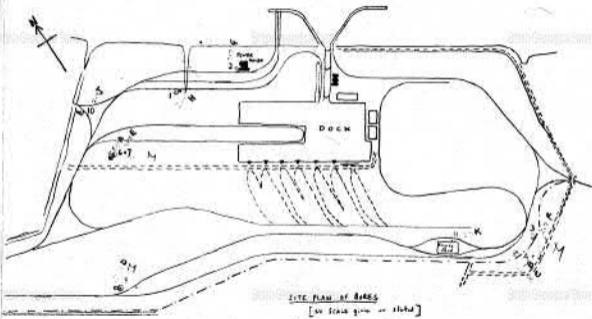
N. 9. This is a good addition to the northern side of channel and the shallow bed is very near 614.19 N. 6 - 173.5 N. 7 - 190.5 N. 8 - 198' N. 9 - 170.5 whilst N. 2 is - 236.44

The nature of these bores are Mr Smiths and I engaged also for Messrs Isles bores on Mr Evans list N. 169 with 133 feet draft, would be useful if position could be traced. The 4" bore by Smith was only 69' draft being very similar to N. 140 - 143. If Isles have no site plan the consulting engineer Sir Wolfe Barry firm would be the only chance to put this point to the topography.

Yours faithfully
 G. H. Mullins

(3)

31/10/93



SITE PLAN OF DOCKS
[see scale given on sheet]

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70:60

T A 11/93

(24)

SHEET NO. 12
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27

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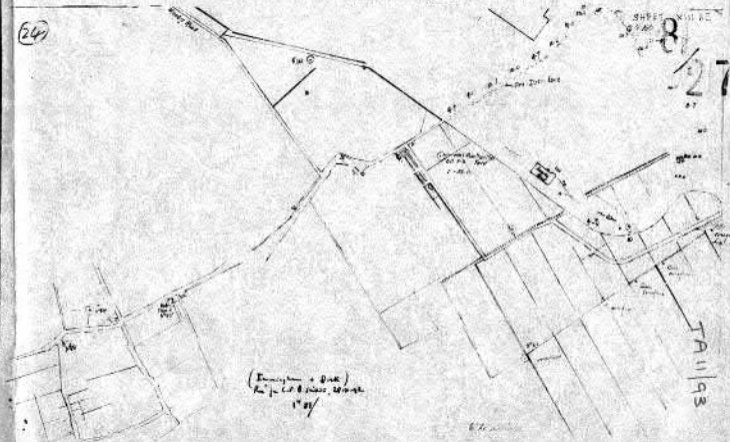
EX 6

Common Property
of the Govt
1-20-41

EX 7

(Enright + Bank)
Rt. to C. B. Jones, 20-41
1-21/

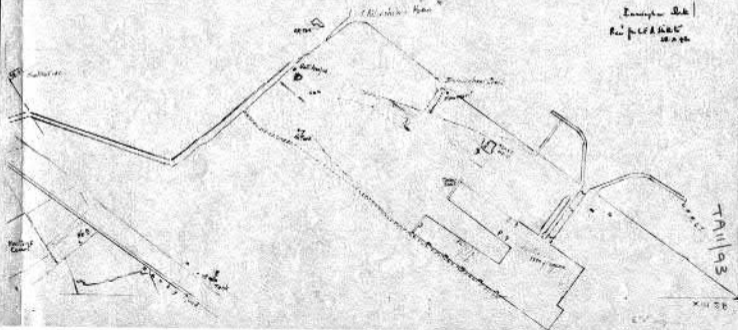
TA 11/93



8
2

(96)

Ensign's Site
RAIPLEAHEAD
18 2 93



RECORD OF WELL (SHAFT OR BORE)

TA 21
54 / 20301532

TA 21

2171
215

At Immingham Dock
 Town or Village Immingham
 County Lincolnshire Six-inch quarter sheet
 For London and North Eastern Ry Co.
 Exact site of well Near Railway sidings & Dwelling Houses.

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

Level of ground surface above sea-level (O.D.) 3 1/2 feet.

Is well-top at ground level? Yes. If not, state how far ^{above} below; _____ feet.

Shaft _____ ft., diameter _____ ft. Details of headings _____

Bore 200 ft; diameter of bore: at top 6" ins.; at bottom 6" ins.

Lengths, diameters, perforations, etc., of lining tubes 105'-0" of 6" Steel jointed Black Tubed inserts, 1-6" above ground.

Water struck at depths, below well-top, of (feet) _____

TEST DETAILS Rest-level of water 7'-6" ^{above} below well-top. Suction at _____ ft. Yield on 16 1/2 hours' pumping: 9500 gallons per hour (max. capacity of pump 9500 g.p.h.),
 Month Nov with depression of 36-6 feet. Recovery to _____ in _____ mins. hours.
 Year 1945

Rest-level of water in _____ (month), _____ (year), _____ ft. above below well-top.
 Highest " in _____ (month), _____ (year), _____ ft. above below "
 WORKING CONDITIONS Lowest " in _____ (month), _____ (year), _____ ft. above below "
 Suction at _____ ft. Rate of pumping _____ galls. per _____ for _____ hours per day.
 with average depression of _____ ft. Recovery to _____ in _____ mins. hours

Quality of water (attach copy of analysis if available) enclosed.

Well made by A. Smith and Sons (Grimby) Ltd Date of well 23/11/45
 Information from _____

ADDITIONAL NOTES.

Local Borehole.

LOG OF STRATA OVERLEAF.

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

Date received.	G.S.M. Office File No.	1" N.S. Map No.	1" O.S. Map No.	Site marked (use symbol) on 1" Map.	on 6" Map.
<u>29/1/46</u>					

(For Notes use only)
 2
 GEOLOGICAL
 CLASSIFICATION

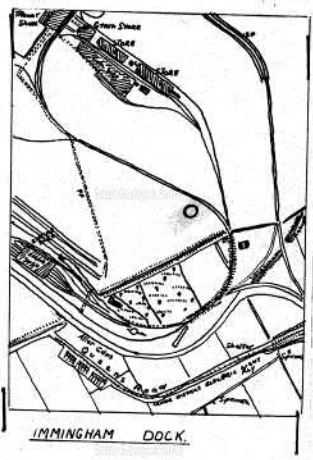
NATURE OF STRATA

If measurements start below
 ground surface, state how far... ..

THICKNESS		DEPTH	
feet	inches	feet	inches
2	0	2	0
12	0	14	0
21	0	35	0
23	0	58	0
14	0	72	0
13	0	85	0
5	0	90	0
10	0	100	0
100	0	200	0

TA21/50
 81/215

Made Up Ground	2	0	2	0
Soft Brown Warp	12	0	14	0
Soft Blue Warp	21	0	35	0
Boulder clay with seams of Running Sand	23	0	58	0
Sand and Gravel	14	0	72	0
Boulder clay	13	0	85	0
Black Gravel	5	0	90	0
Soft Dirty Chalk	10	0	100	0
White Chalk	100	0	200	0



3.

COPY

81 TA 21/50

(3)

Sample of water received from F. SMITH & SON (BRISTOL) on the 12th day of December 1945, taken from borehole at Immingham Dock on the 11th December, examined with the following results.

215

Physical Characters - clear and bright, contains small amount of white sediment (chalk)

Bacteriological Exam.

Colonies per 1 m.l. on Nutrient Gelatine at 22°C	
" " " after 48 hours	62
" " " " 72 hours	180
" " " on Agar at 37°C	
" " " after 48 hours	4
" " " " 72 hours	9

B. Coli (Faecal or Presumptive) in 100 m.l. Negative

Chemical Analysis

Parts per million

Total solids dried at 100°C	292.000
do do at 180°C	264.000
Free Ammonia	0.005
Albuminoid Ammonia	0.008
Chlorine as Chlorides	19.000
Nitrogen as Nitrates	2.000
Lead, Iron and other heavy metals	nil
Total Hardness (Clarkes)	23.60°
Permanent do	3.90°
Temporary do	19.70°

This is a good Wold Water and satisfactory in all respects for domestic and other purposes.

(Sgd) J. A. Foster F. R. I. C. Etc. Capt.

County Analyst E. R. of Yorks etc.



RECORD OF WELL (SHAFT OR BORE)

81 TA 21/50
N171
215

At Immingham Dock.
Town or Village Immingham.
County Lincolnshire. Six-inch quarter sheet 13 SEWE
For London and North Eastern Ry Co.
Exact site of well Near Railway Sidings & Dwelling Houses.
CR: #33 1532 TA 21 NW/5

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

Level of ground surface above sea-level (O.D.) _____ feet.
Is well-top at ground level? Yes If not, state how far above; _____ feet;
below; _____ feet.

Shaft _____ ft., diameter _____ ft. Details of headings _____

Bore 200 ft; diameter of bore: at top 6" ins.; at bottom 6" ins.

Lengths, diameters, perforations, etc., of lining tubes 105'-0" of 6" Galv painted Black
Tubes inserted, 1-6 above ground

Water struck at depths, below well-top, of (feet) _____

TEST DETAILS Rest-level of water 7'-6" N. above well-top; Suction at _____ ft. Yield on 16 1/2 hours' pumping 19500 gallons per hour (max. capacity of pump 7500 g.p.h.),
Month Nov with depression of 36-6 feet. Recovery to _____ in _____ mins.
Year 1945 hours.

WORKING CONDITIONS Rest-level of water in _____ (month), _____ (year), _____ ft. above below well-top.
Highest " in _____ (month), _____ (year), _____ ft. above below "
Lowest " in _____ (month), _____ (year), _____ ft. above below "
Suction at _____ ft. Rate of pumping _____ galls. per _____ for _____ hours per day.
with average depression of _____ ft. Recovery to _____ in _____ mins.
hours

Quality of water (attach copy of analysis if available) Unloaded.

Well made by H. Smith and Sons (Grimsby) 5 Osborne St. Grimsby Lincoln
Information from _____ Date of well 23/11/45

ADDITIONAL NOTES.

Local Borehole.

LOG OF STRATA OVERLEAF.

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

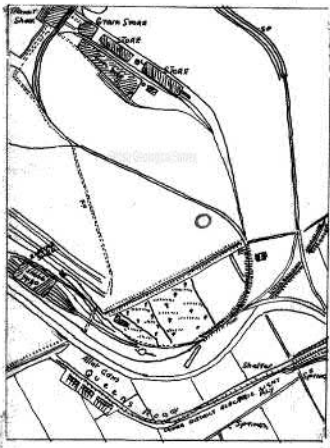
Date received.	G.S.M. Office File No.	1" N.S. Map No.	1" O.S. Map No.	Site marked (use symbol) on 1" Map. on 6" Map.
<u>29.1.46</u>				

NATURE OF STRATA

If measurements start below
 ground surface, state how far...

THICKNESS		DEPTH	
Feet	Inches	feet	Inches
2	0	2	0
	3.66		4.27
12	0	14	0
	6.40		10.64
21	0	35	0
	7.04		17.42
23	0	58	0
	4.27		21.75
14	0	72	0
	2.76		25.71
13	0	85	0
	1.52		27.44
5	0	90	0
	2.05		30.05
10	0	100	0
	20.48		66.36
100	0	200	0

- Made Up gravel
- Soft Brown Warp.
- Soft Blue Warp.
- Boulder clay, with seams of Running Sand.
- Sand and Gravel
- Boulder clay
- Chalk Gravel
- Soft Dirty Chalk.
- White Chalk.



IMMINGHAM DOCK.