



NGRC
BOREHOLE RECORDS
ADJUSTMENT FORM

QUARTER SHEET TQ57NE

BH REGISTRATION NUMBER 1005 - 1081

RECORDS ENTERED AND HELD BY WALLINGFORD

BH REGISTRATION NUMBER(S)

271/194 Messrs. Thames Board Mills Ltd., Purfleet

TQ 57/76
A-Q

- (a) (formerly St. Louis Park Mills). (Sealed). L.M. p. 31; W.S.E. p. 307. Surface +10. Bore 252. Yield 10,000 g.p.h. Hardness: total 571. Saline. *LeGrand, 1886.*
- (b) (Sealed). W.S.E. p. 307. Surface +10. Bore 250. Yield 20,000 g.p.h. (max.), varies with tide. *LeGrand, c. 1890.*
- (c) (Sealed). W.S.E. p. 307. Surface +10. When bore 243, yield 300 g.p.h., saline; bore 268, yield 360 g.p.h.; bore 368, yield c. 90 g.p.h.; bore 410, yield c. 180 g.p.h.; bore 443, yield 1,800 g.p.h., saline; bore 454, yield 1,200 g.p.h. *Batchelor, 1891.*
- (d) (Disused). W.S.E. p. 307. Surface +10. Bore 112. Water struck at -40 to -65. Yield 20,000 g.p.h. (c.5 h. test). *Batchelor, 1892.*
- (e) (Disused). W.S.E. p. 308. Surface +6%. Bore 130. Drawdown 10. Yield 101,000 g.p.h. Hardness: total 553. *Batchelor, 1892.*
- (f) *Purfleet Rest Garden No. 1.* (Disused). Surface +10; Shaft 90; rest bore. Depth 197. R.W.L. -2%. *Batchelor, 1905.*
Hardness: P. 2,060, T. 680, Cl 6,600. Anal. Aug. R.W.L. -16. P.W.L. -22. Yield 45,000 g.p.h. Oct. 1954. R.W.L. -19%. Jan.; -6%. Feb.; -6. Aug. 1955. P.W.L. -25. Yield 30,000 g.p.h. Nov. 1956. R.W.L. -18. Oct. 1957. Bore collapsed. Before 1960. (Disused).
- (g) *Purfleet Rest Garden No. 2.* Surface +6%. Bore 200. Water struck at -63% to -73%, at -93% and -148%. Yield 60,000 g.p.d. *Batchelor, 1905.*
R.W.L. -16%. P.W.L. -25%. Yield 34,000 g.p.h. Nov. 1953. Hardness: P. 2,395, T. 445. Cl 7,450. Anal. Aug. 1954. R.W.L. -23%. P.W.L. -28%. Yield 40,000 g.p.h. Oct. 1957. R.W.L. -1%. Yield 50,000 g.p.h. Aug. 1960.
- (Disused) (h) *Purfleet Rest Garden No. 3.* Surface +6%. Bore 200. R.W.L. -3%. Yield 30,000 g.p.h. *Batchelor, 1907.*
Hardness: P. 2,375, T. 450. Cl 7,500. Anal. Aug. R.W.L. -18%. P.W.L. -22%. Yield 45,000 g.p.h. Oct. 1954. R.W.L. -21%. P.W.L. -31%. Yield 35,000 g.p.h. Oct. 1957. R.W.L. -1%. Yield 45,000 g.p.h. Mar. 1960.
- (i) (Filled in). Surface +6%. Bore 351. Lining tubes: 50 x 15 in from 7 down (40 perforated). Yield 809,700 g.p.d. *Batchelor, 1908.*
R.W.L. -18%. Sept. 1951; -15%. Nov. 1953.
- (k) (Filled in). Surface +6%. Bore 401. Lining tubes: 50 x 15 in (40 perforated). Water struck at -323% to -326%. R.W.L. -6%. Yield 687,600 g.p.d. *Batchelor, 1908.*
P.W.L. -53%. Yield 48,000 g.p.h. Oct. 1952. R.W.L. -15%. P.W.L. -25%. Yield 32,000 g.p.h. Nov. 1953.
- (l) (Filled in). Surface +10. Bore 301. R.W.L. -1%. P.W.L. -8. Yield 947,635 g.p.d. *Batchelor, 1912.*
Yield 25,000 g.p.h. Dec. 1939; 18,000 g.p.h. (average); 22,000 g.p.h. (max.). Cl 7,769. Sept. 1946. R.W.L. +0. Oct. 1948; -6. P.W.L. -58. Yield 33,000 g.p.h. Sept. 1949. P.W.L. -43. Yield 32,000 g.p.h. June 1952. R.W.L. -11. Nov. 1953.
- (m) (Filled in). Surface -2%. Bore 300. R.W.L. -14%. P.W.L. -23%. Yield 1,680,000 g.p.d. *Batchelor, 1912.*
P.W.L. -20%. Yield 70,000 g.p.h. 1913; 45,000 g.p.h. Dec. 1939; 60,000 g.p.h. (average); 80,000 g.p.h. (max.). Cl 7,274. Sept. 1946. R.W.L. -22. P.W.L. +60. Yield 75,000 g.p.h. Sept. 1949. Collapsed. 1950.
- (n) (Filled in). Surface +8%. Bore 300. R.W.L. -2%. P.W.L. -8%. Yield 924,134 g.p.d. *Batchelor, 1912.*
Air lift. Before 1930. R.W.L. -10%. P.W.L. -46%. Yield 60,000 g.p.h. Sept. 1949. P.W.L. -53%. Yield 56,000 g.p.h. Oct. 1952. R.W.L. -14%. Nov. 1953.
- (p) (Filled in). Surface +50. Shaft 85 x 11 x 11; rest bore. Depth 335. Headings: 474 x 6 x 4 E., floor 72 down; 455 x 6 x 4 W., floor 72 down. Lining tubes: 20 x 36 in from 12 down (perforated). Water struck at -48, -75, -86, -97 and -103. When depth 185, R.W.L. -14, P.W.L. -33, yield 15,000 g.p.h. (test); depth 335, R.W.L. -14, yield 27,310 g.p.h. (test). *LeGrand, Dec. 1930.*
Enlarged into 48 in bore to 130 down. R.W.L. -14. P.W.L. -34. Yield 42,000 g.p.h. (8 h. test). ? Apr. 1931.
- (q) *Mardyke.* Surface +8%. Well-top -1%. Bore 150. Lining tubes: 45 x 18 in from 5 down. R.W.L. -28. P.W.L. -32 (not at equilibrium). Suction -87%. Yield 14,050 g.p.h. (for 19% h.). P.W.L. -42% (not at equilibrium). Yield 33,000 g.p.h. (for 23% h.). P.W.L. -68% (not at equilibrium). Recovered to -45 in 15 min., to -43 in 2 h. and to -37% in 24 h. Yield 50,000 g.p.h. (for 12 d.) (13% d. test). Hardness: NC. 705, C. 445. Cl 1,540. Anal. *Isler, Apr. 1955.*
Deepened to 350. R.W.L. -29. P.W.L. -32%. Yield 14,050 g.p.h. (for 20 h.). P.W.L. -40%. Yield c. 33,500 g.p.h. (for 24 h.). P.W.L. -74. Recovered to -41% in 24 h. and to -34% in 8 d. Yield 50,900 g.p.h. (for 12 d.) (14 d. test). Hardness: NC. 790, C. 445. Cl 1,780. Anal. *Isler, July 1955.* Cl 1,652. Mar. R.W.L. above -1%. Sept.; -13%. P.W.L. -22%. Yield 35,000 g.p.h. Oct. Cl 1,053 (average). 1958; 1,065 (average). 1959. R.W.L. -31%. Mar. Cl 1,163 (average). 1960. R.W.L. -26%. P.W.L. -57%. Yield 30,000 g.p.h. Oct. Cl 670 (average). 1961.

(c) Drift	...	...	53	53
Uck	...	...	214	267
Mck	...	...	187	454

271
TQ5776A+B
194

WEST THURROCK

4. Purfleet. Thames Paper Mills, formerly St. Louis Park Mills. On the marsh less than half a mile east-south-eastward of Purfleet Railway-station. Five wells. ? About 10 ft. above Ordnance Datum.

No. 1. Close to the railway at the eastern end of the grounds. 1886. Made and communicated by Messrs. LE GRAND and SUTCLIFF.

	Thickness.	Depth.
	Ft.	Ft.
Peat and clay ...	11	11
[Alluvium.] Peat and wood ...	6	17
River ooze [marsh-clay]	12	29
[River Drift] Sand and gravel ...	21	50
[Upper] Chalk and flints ...	202	252

Information from E. REED (Manager) differs slightly, making: Soil, 4 ft.; peat and clay, 9 ft. The yield was 10,000 gallons an hour. The water was salt, and its hardness 40°.

A.
A
L.M. 1889
page 31

Visited 21 Dec 1939

Sited on bin Essex #3 S.W. (W) O.D. +10 TQ 5607 7771

Disused; covered over. TRE

Location no longer visible on the site WQ 27.6.60

No. 2. Near the railway, at the western end of the Company's land. Communicated by E. REED, manager. ^{Made by Le Grand} _{S.B. 2/237}
About 20,000 gallons of water [? per hour] got at full tide, less at low tide.

	Thickness.	Depth.
	Ft.	Ft.
Soil ...	1	1
[Alluvium, 29 ft.] Peat and clay ...	9½	10½
Ooze and mud	19½	30
Ballast [River Gravel] ...	20	50
Chalk, with salt water ...	200	250

194
B.
B
TQ 5585 7770

Visited 21 Dec 1939

Sited on bin Essex #3 S.W. (W) O.D. +10.

Disused; covered over TRE

Location no longer visible on the site WQ 27.6.60

Visited 26th February 1953.

As the bin, all wheel tracks were out of action, way to infiltration by flood water was. Water supply was being obtained from. Pindulment company, and. T.P.M. - bus to the North.

Published in
'Water Supply of
of Essex',
page 308, 307



5
for original see 27/1/194
copy. 27/1/194
TQ57/76A-0

Thames Board Mills Limited
Purfleet, Essex, England

The Director,
Geological Survey & Museum,
Exhibition Road,
LONDON, S.W.7.

Cur ref PI/DaM.2. LAN/22A
Department e
Phone extension 63
Your ref.
Department
18.9.46.

Dear Sir,

When Mr. F.W. Carron and Mr. P.D. Miller saw Dr. Buchanan recently in connection with Purfleet water supply, we promised Dr. Buchanan to let him have a copy of our 10 year chart showing the pumping rates, well levels, rainfall and 'X' content at our Rifle Range wells.

Dr. Buchanan will note that we have added on the enclosed chart the 'X', or salt content to the chart which we showed him but, unfortunately, owing to the fact that we have no records before 1940 we are unable to give the salt content over the full period of 10 years by the chart.

It will be noted that the salt content does not closely follow the graph of the rainfall, although, if we move the salt content graph forward one year in order to probably allow for any lag between the rainfall and salt content it does show up a little nearer. It would appear, however, that the pumping rate is the sine qua non of 'X' content.

We promised Dr. Buchanan to let him have some further information regarding the up-to-date characteristics of our wells. This is not so detailed as we would have liked because the levels of our Nos. 6 & 7 wells have never been taken owing to the inaccuracy of the apparatus installed for its measurement but we are able to add a little to the information Dr. Buchanan has on record at the moment.

Nos. 1 to 5 wells and the Beacon Hill well have not been in use for a number of years, at least 18.

Nos. 6 & 7 wells have been in intermittent operation for the for the past 20 years and particulars are as follows:-

No. 6 Well - end of rising main below O.D. 131' 0"
Depth of well 311' 0"
Average output 18,000 g.p.m.
Maximum output 22,000
Present 'X' content condition 897 grains/gal.
Standing level unknown.

No. 7 Well - End of rising main below O.D. 121' 5"
Depth of well 300' 0"
Average output 60,000 g.p.m.
Maximum output 80,000
Present 'X' content condition 839 grains/gal.
Standing level unknown

No. 8 Well depth is 308.43'; no pump is installed but the well was used in conjunction with an air lift arrangement up to 1930.

We hope the above information will prove to be of interest to you.

Yours faithfully,
THAMES BOARD MILLS LIMITED.
(signed) P. Iszatt.
Deputy for Director.



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ADDITIONAL INFORMATION SHEET

Licence No.

Date of completion of well catalogue March 1963

271 / 194

Date of publication

TQ57/76 A-Q

Additional Sheet No. 1

DATE	*	ADDITIONAL INFORMATION	INIT.																								
14.2.66	F G H	"Rest Garden Bore" not used now. Water taken occasionally from one and returned if bad.	JFM																								
"	Q	R.W.L. 21 ft. from pumphouse floor on Saturday, 1.1.66 (midnight) = 12 hrs. after pump shut-down. "which is high: Mardyke stream was high at the time. Usually the R.W.L. = 28 ft. below floor. "P.W.L. is usually about 61 ft. or so". Mardyke bore is pumping most of the time: R.W.L.'s are taken some weekends - No other bores are used at the Mills (besides No 10 R.G.H. - see record). Information by phone (Partlet 5555) from assistant to Mr. H.T. Wilson, Power Engineer, 12.1.66.	JFM																								
24.10.66	Q	R.W.L. 34' b. well - top, at 9 AM, 24.10.66. Last pumped 17.10.66. From return sent to Mr. H.T. Wilson. Filed WD/B/271/194	JFM 3-11-66																								
8/71	A	<table border="1"> <tr> <td>Dry G</td> <td>Peat and clay</td> <td>11</td> <td>11</td> </tr> <tr> <td>50</td> <td>Peat and wood</td> <td>6</td> <td>17</td> </tr> <tr> <td></td> <td>River ooze [muck-clay]</td> <td>12</td> <td>29</td> </tr> <tr> <td></td> <td>Sand and gravel</td> <td>21</td> <td>50</td> </tr> <tr> <td>UCh</td> <td>Chalk and flints</td> <td>202</td> <td>252</td> </tr> <tr> <td>202</td> <td></td> <td></td> <td></td> </tr> </table>	Dry G	Peat and clay	11	11	50	Peat and wood	6	17		River ooze [muck-clay]	12	29		Sand and gravel	21	50	UCh	Chalk and flints	202	252	202				
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202																											

(4130) W134964/P.S.127 5m 9/63 G.W.B.Ltd. Cp.863

FILMED * INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE P.T.O.

Section 6	Pumping test	Observ. well	Recorder	E.R. log	GEOLOGICAL SURVEY, WATER DEPARTMENT SOUTH KENSINGTON, LONDON, S.W.7.

4

DATE	*	ADDITIONAL INFORMATION	INIT.
	B	Drift Soil 1 1 50 Peat and clay 9½ 10½ Doge and mud 19½ 30 Ballast 20 50	
		Uck Chalk with salt water 200 250 200	
	D	(Museum) - Drift clay 10 10 10 Chalk and flints 33 43 Uck Flints did not need 102 shelling out - - ? pot hole 17 60 Chalk and flints 52 112	
	E	Drift clay 6 6 9 Peat 3 9 Uck Chalk and flints 121 130 121	
	F	Drift } Old well 90 90 Uck } 90 Uck Chalk and flints 107 197 107	
FILMED	INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE		ent



ADDITIONAL INFORMATION SHEET

Licence No.

Date of completion of well catalogue

Date of publication

271 / 194
TQ 57/76 A-Q

Additional Sheet No.

DATE	*	ADDITIONAL INFORMATION	INIT.
8/71	J	Drift 7 Clay Peat	4 4 3 7
		Uck } Chalk mixed 2 9 235 } 242 } " & flints 175 184 " " " , hard & dark 58 242	
		Uck } 174 } 48 } " , white hard 48 290	
		Mck } Chalk 44 334	
		61 } " sticky 17 351	
	K	Drift 6 Mould Brown clay Blue " Peat	1 1 1 2 2 4 2 6
		Chalk & clay 2 8 " soft, with flints 10 18 " flinty and tough 16 34	
		Uck } Mck } " & flints 24 5 279	
		394 } " " " , harder from 320 44 323	
		" " " 43 306	
		" hard, from 348 very hard 34 400	
		not 401	

FILMED

* INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE

P.T.O.

Section 6

Pumping test

Observ. well

Recorder

E.R. log

GEOLOGICAL SURVEY,
WATER DEPARTMENT
SOUTH KENSINGTON,
LONDON, S.W.7.

6

DATE	*	ADDITIONAL INFORMATION	INIT.
	L	Drift Soil 1 1 clay 3 4 Peat 3 7 grey sand and stone 3/4 7 3/4 soft chalky sand 3/4 11	
		Uck Chalk and flints 56 1/2 67 1/2 324 " " " , very flinty 44 111 1/2 " " " 123 1/2 235 Mck Dark sticky chalk 66 301 66	
	M	Drift Soil 1 1 10 Bluish clay 2 1/2 3 1/2 Peat 1 1/2 5 Sandy clay 1 6 Dirty chalky sandy clay 4 10	
		Uck Dirty chalk 4 14 220 Chalk and flints 216 230 Mck Dark sticky chalk 70 300 70	
	N	Drift Soil 1 1 Brown clay 2 3 Peat 1 4 6 1/2 grey sand 1 1/2 5 1/2 chalky sand 1 6 1/2 Uck Dirty chalk 3 1/2 10 Chalk and flints 70 80 277 1/2 " " " , very flinty 83 163 " " " 49 212 Dark chalk 30 242 " rough chalk 30 272 Very hard rough chalk 12 284 Mck Soft sticky chalk 16 300 16	
FILMED	INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE		

M/L

ADDITIONAL INFORMATION SHEET

Licence No.

271 / TQ 57 / 76
194 A-Q

Date of completion of well catalogue

Date of publication

Additional Sheet No.

DATE	*	ADDITIONAL INFORMATION	INIT.
8/71	P	Drift) Existing well 85 85 Uck) 85	
		Hard chulk and flints 5 90 Chalk and flints 142 232	
		Uck) Hard chalk 6 238 Mck) Chalk and flints, sticky 3 241 25 0 Chalk and flints 3 1/2 244 1/2 Hard chalk 1 245 1/2 Chalk and flints 38 1/2 284 Hard chalk 14 1/2 298 1/2 " " tough earthenless 36 1/2 335	
	Q	Made Top soil 4 4 4 (Loamy soil & stones 3 7 Drift 8 (Chalk overlay flints 5 12	
		Chalk & flints 60 72 Uck) Putty chalk 15 87 Mck) Chalk & flints 133 220 338 Dark grey chalk & flints 40 260 grey chalk 50 310 Putty chalk 40 350	
DATA Bank			

(4130) Wt. 34984/P.S.127 5m 9/63 G.W.B.Ltd. Cp. 863

FILMED * INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE P.T.O.

Section 6	Pumping test	Observ. well	Recorder	E.R. log	GEOLOGICAL SURVEY, WATER DEPARTMENT SOUTH KENSINGTON, LONDON, S.W.7.



DATE	*	ADDITIONAL INFORMATION	INIT.
23.6.67	80	LONDON SALINITY SURVEY - 1967	
	27/1/94/3	EC - 255	
		CL - 21	
FILMED	INSERT WELL REFERENCE LETTER, IF MORE THAN ONE WELL AT SITE		

Additional Information Sheet No. Commenced.....