### [Report 1954] / Medical Officer of Health, East Dereham U.D.C.

#### **Contributors**

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1954

# ANNUAL REPORT

of the

Medical Officer of Health

of the

Urban Sanitary Authority

of

EAST DEREHAM

Norfolk

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### STAFF

Medical Officer of Health:

A.B. GUILD, M.B., Ch.B., D.P.H., D.I.H.

Surveyor and Sanitary Inspector: C.McD. O'DONNELL, M.S.I.A., C.R.S.I.B.

Waterworks Superintendent:

CARL STREETS ASSOCIATION .

# EAST DEREHAM URBAN DISTRICT

# ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR 1954

Mr. Chairman, Mrs. Aldiss and Gentlemen,

I have the honour to submit my Annual Report for the year 1954.

The estimated mid-year population of East Dereham for 1954 was 6,610, an increase of 39 over that of the preceding year.

# VITAL STATISTICS.

89 live births, of which 7 were illegitimate, were registered during the year and there were 85 deaths from all causes.

The birth rate (13.47) showed a marked decrease of 2.66 per 1,000 of the population as compared with 1953. The birth rate now corresponds closely with that pertaining in the pre-war years. The England and Wales rate was 15.3.

There were 4 still births during the year, the same number as last year. This gives a still birth rate of 0.60 as against 0.61 while the England and Wales rate was 0.37.

The births comparability factor, the ratio of the national to the local fertility index, naturally fell to 1.01 as against 1.08 in previous years.

The number of deaths showed a further increase, 85 as against 79, and this gives a death rate of 12.86, an increase of 0.84. The death rate for England and Wales was 11.4. The deaths comparability factor was 0.81 indicating that mortality in East Dereham was 19% lower than in the base years 1947/48.

There were 4 deaths of infants under 1 year of age (3 under 4 weeks of age) compared with 3 in 1953. This gives an infant mortality rate of 44.94: the England and Wales rate was 25.5. The causes of death were prematurity 2, congenital developmental defect 1, broncho-pneumonia with congenital heart disease 1.

The infectious diseases were responsible for the following deaths - respiratory tuberculosis 1, pneumonia 6. Cancer in one form or another accounted for 21 deaths - a marked increase over the previous year when 12 deaths were attributable to this cause. No deaths were due to influenza which had been a relatively mild disease.

The increase in deaths was mainly due to an increase in those due to cancer in one form or another. It would appear that 1954 was the first year in which the number of deaths from this cause exceeded 20 (12,15,18, 15,15).

### INFECTIOUS DISEASES

173 cases of infectious disease were notified during the year of which 119 were due to measles and 36 due to whooping cough.

Combined immunisation against diphtheria and whooping cough has been generally adopted and the relevant data are given later in the report.

Food Poisoning - Two cases were due to Salmonella typhimurium. The first occurred in one of the staff of Dereham Isolation Hospital who was indisposed on her return from holiday in another part of the County. The second case had contracted the illness while on holiday in London, the journey having been performed by bus service.

The third case was caused by Salmonella enteritidis var. jena. The origin was never traced as the individual had never had a meal outside his own home, or left his home, apart from going to his place of work on a farm, for several weeks prior to the onset of the illness.

Poliomyelitis. This case was mild in character and it is interesting to note that she had a previous attack in 1947.

The incidence of the notifiable diseases is given in the following tables, the first giving the total notifications with the corresponding figures for the previous three years and the second table giving the age distribution.

Disease   1954   1953   1952   1951   Hospital   E.D.U.D.C.   E & W.	(	ilstribution.			*		Admitted	Notification per 1,000 Pe	
Measles       119       40       179       13       5       0.76       3.31         Whooping Cough       36       49       8       130       2.39         Pneumonia       5       2       5       15       2       0.30       0.60         Erysipelas       -       1       -       4       -	Ι	Disease	1954	1953	1952	1951		E.D.U.D.C.	E & W.
Whooping Cough 36 49 8 130 2.39  Pneumonia 5 2 5 15 2 0.30 0.60  Erysipelas - 1 - 4  Cerebro-spinal fever - 1  Infectious hepatitis - 11 2 2  Dysentery 4 - 2 -  Puerperal pyrexia 3 - 1 1 3 0.45  Poliomyelitis 1 2 1 - 0.15 0.04  Food poisoning 3 1	8	Scarlet Fever	2	11	1	2	1	0.15	0.97
Pneumonia       5       2       5       15       2       0.30       0.60         Erysipelas       -       1       -       4         Cerebro-spinal fever -       1       -       -         Infectious hepatitis -       11       2       2         Dysentery       4       -       2       -         Puerperal pyrexia       3       -       1       1       3       0.45         Poliomyelitis       1       2       1       -       0.15       0.04         Food poisoning       3       -       -       1       -         Ophthalmia neonatorum       -       -       1       -	1	Measles	119	40	179	13	5	0.76	3.31
Erysipelas - 1 - 4  Cerebro-spinal fever - 1  Infectious hepatitis - 11 2 2  Dysentery 4 - 2 -  Puerperal pyrexia 3 - 1 1 3 0.45  Poliomyelitis 1 2 1 - 0.15 0.04  Food poisoning 3 1	7	Whooping Cough	36	49	8	130			2.39
Cerebro-spinal fever - 1  Infectious hepatitis - 11 2 2  Dysentery 4 - 2  Puerperal pyrexia 3 - 1 1 3 0.45  Poliomyelitis 1 2 1 - 0.15 0.04  Food poisoning 3 1	]	Pneumonia	5	2	5	15	2	0.30	0.60
Infectious hepatitis - 11 2 2  Dysentery 4 - 2 -  Puerperal pyrexia 3 - 1 1 3 0.45  Poliomyelitis 1 2 1 - 0.15 0.04  Food poisoning 3 1  Ophthalmia neonatorum 1 -	I	Erysipelas	-	1	-	4			
Dysentery       4       -       2       -         Puerperal pyrexia       3       -       1       1       3       0.45         Poliomyelitis       1       2       1       -       0.15       0.04         Food poisoning       3       -       -       1       -         Ophthalmia neonatorum       -       -       1       -	(	Cerebro-spinal fev	er -	1	-	-			
Puerperal pyrexia       3       -       1       1       3       0.45         Poliomyelitis       1       2       1       -       0.15       0.04         Food poisoning       3       -       -       1       .         Ophthalmia neonatorum       -       -       1       -	]	Infectious hepatit	is-	11	2	2		1	
Poliomyelitis 1 2 1 - 0.15 0.04  Food poisoning 3 1  Ophthalmia neonatorum 1 -	I	Dysentery	4	-	2	-			
Food poisoning 3 1  Ophthalmia neonatorum 1 -	I	Puerperal pyrexia	3	-	1	1	3	0.45	
Ophthalmia neonatorum 1 -	1	Poliomyelitis	1	2	1	-		0.15	0.04
neonatorum 1 -	I	Food poisoning	3	-	-	1	- 5 - 4		
Total 173 117 200 168	(		_	-	1	_			
		Total	173	117	200	168			

Disease	0-	1-	2-	3-	4-	5-	15-	25-	35-	45⊷	55-	TOTAL
Scarlet Fever	-	-	-	-	-	2	-	-	-	-	-	2
Measles	3	10	12	12	14	66	1			1		119
Whooping Cough	4	2	2	6	7	13	-	-	2	-	-	36
Pneumonia	1	-	-	-	-	-	-	-	2	-	2	5
Dysentery	-	-	-	-	-	1	-	1	2	-	-	4
Puerperal pyrexia	-	-	-	-	-	-	2	1	-	-	-	3
Poliomyelitis	-	-	-	-	-	1	-	-	-	-	-	1
Food Poisoning	-	-	-	-	-	-	2	-	-	-	1	3
Total	8	12	14	18	21	83	5	2	6	1	3	173

# Tuberculosis

During the year 5 cases were added to the register, of whom one was an inward transfer. The comparative figures for the previous three years are:-

1953 - 4

1952 - 8

1951 - 8

The distribution of these five cases by age and sex is as under:-

Age Period	Respi	ratory	Non-respiratory		
	M.	F.	М.	F.	
0 - 5	-	-	1	-	
25 -	-	-	-	1	
35 <b>-</b> 45 <b>-</b>	2	~	-	-	
45 -	-	1 (a)			
	2	1	1	1	

(a) denotes one inward transfer.

The numbers remaining on the register were:-

	Respiratory			Non-re	espiratory	У	
	M.	F.	Total	M.	F.	Total	Grand Total
31.12.53	13	14	27	11	11	22	49
31.12.54	14	14	28	5	8	13	41

There was one death from respiratory tuberculosis during the year, giving a local rate of 0.15.

The statistics for the County of Norfolk per 1,000 of the population in 1954 are given below with the data for East Dereham in brackets for purposes of comparison.

# Formal Notifications

Respiratory	Case Rate	Non-respiratory	Case Rate
167 (2)	0.44 (0.30)	46 (2)	0.12 (.30)
The mortality	figures for the	same period were:-	
	01	-	

Respiratory	Case	Rate		Non-respiratory	Case	Rate
34 (1)	0.09	(0.15)	1"	7 (0)	0.18	(0)

# Causes of Death

The causes of death are given in the following table supplied by the Registrar General:-

	Male	Female	Total
Muhaman lagis magni watany		1	,
Tuberculosis, respiratory	0	7	2
Malignant neoplasm, stomach	2		4
Malignant neoplasm, lung bronchus	0	1	4
Malignant neoplasm, breast	-	4	4
Malignant neoplasm, uterus	-	3	3
Other malignant & lymphatic neoplasms	3	5	8
Diabetes	-	1	1
Vascular lesions of nervous system	6	7	13
Coronary disease, angina	5	5	10
Hypertension with heart disease	-	1	1
Other heart disease	6	9	15
Other circulatory disease	2	2	4
Pneumonia	2	4	6
Other diseases of respiratory system	1	-	1
Gastritis, enteritis and diarrhoea	-	1	1
Hyperplasia of prostate	1	-	1
Congenital malformations	1		1
Other defined and ill defined diseases	4	2	6
Motor Vehicle accidents	1	-	1
All other accidents	1	_	1
Suicide	-	1	ī
	38	47	85

# GENERAL STATISTICS

Area (in acres)	5,313
Populations	
(estimated mid-54)	6,610
Rateable Value	£32,302
Estimated product	
of a penny rate	£121

# MEDICAL STATISTICS

Extracts from vital statistics for the year relating to the net births and deaths after correction for inward and outward transfers as furnished by the Registrar General:-

LIVE BIRTHS	Males	Females	Total	EAST 1954	DEREHAM 1953	ENGLAND & WALES 1954
Legitimate Illegitimate	49	33 6	82 7			
	50	39	89			
Birth Rate per		of the e t populat		13.47	16.13	15. 3
STILL BIRTHS						
Legitimate Illegitimate	1	3	4			
	1	3	4			
Still Birth Re estimated n				0.60	0.61	0.37
DEATHS (All a	ages)					
	38	47	85			
Crude Death Ra	A CONTRACTOR OF THE PARTY OF TH			12.86	12.02	11.4
INFANT DEATHS						
Legitimate	3	1	4			
Infant Mortali		per 1,00	00	44.94	28.30	25.5

# DIPHTHERIA AND WHOOPING COUGH IMMUNISATION SCHEME

The following immunisations were carried out during the year by general practitioners and the Assistant County Medical Officer.

In most cases the primary immunisation in infants is against diphtheria and whooping cough and these are therefore included with primary diphtheria immunisations alone in the table of immunisations. It is satisfactory to note that there has been an appreciable increase in the number of infants protected before reaching the age of one. This is to some extent due to the fact that combined immunisations are begun at an earlier age than was the custom with plain diphtheria immunisations.

	Under 1.	. 1	2	3	4	5 - 9	10 - 14	Total
Primary	79	20	6	-	1	26	3	135
Reinforcing					26	131	41	198
							Total	333

Records show that up to 31.12.54, 1,288 children under the age of 15 were protected against diphtheria (a slight increase over the preceding year).

In addition complete immunisations against whooping cough were carried out in 17 children between the ages of 1 to 4.

# VACCINATION.

There was an appreciable increase in the number of infant vaccinations, 20 more than in the previous year.

	Under 1 year.	1.	2 - 4	5 - 14	15 & over
Primary	40	2	2	-	2
Revaccinations	-	ca	1	2	9

# SANITARY CIRCUMSTANCES OF THE AREA

#### WATER SUPPLY

Ten bacteriological samples were taken from private supplies. The results were:-

Highly satisfactory	Satisfactory	Suspicious	Unsatisfactory
3	3	_	4

Of the unsatisfactory samples, one was caused by excessive ground water being polluted from an overflowing septic tank. The septic tank was emptied and the well, which serves two houses, was treated with chloros. Further samples were reported as highly satisfactory. The other unsatisfactory samples were taken from a private house in Yaxham Road. This house will be connected to the new water main.

Total yearly consumption	58,181,500
Increase on previous year	2,090,200
Average daily consumption	159,401
Average gallons per head per day including industrial	32
Total estimated population served with water	4,900
Number of houses supplied with town water  (a) Direct to houses 1.146	1,448

(b) By means of stand pipes 302

#### WORK DONE

680 yards of 3" and 4" water main was laid at Southgreen Housing Site and connections made to 50 new houses on this site.

An extension of 280 yards of 3" water main was installed at Westfield Lane.

A supply tank of 500 gallons capacity was installed at Etling Green and the bacteriological examination of this water was satisfactory.

89 properties and houses have been connected to the town supply.

ll bacteriological and 1 chemical examination were made on the supply from the water works. In all cases the reports were highly satisfactory.

A copy of the chemical analysis is included at the end of the report.

### HEAD WORKS.

Work was commenced on the iron removal filtration plant. By the end of March 1955 all drainage and connections had been made, together with the erection of the new filter house. Plant and equipment have also been received and completion is expected June 1955.

# SEWAGE DISPOSAL.

A new 15" sewer has been laid from the disposal works to the South Green housing site. It is intended that this sewer will be extended to the Toftwood area at a later date. The Ministry of Housing and Local Government have approved the Council's proposals for extensions and enlarging the Disposal Works and stage 1 of the scheme will be put into hand shortly.

Part of Commercial Road sewer has been showing signs of failure during the year, and plans etc. are being prepared for relaying the defective portion.

Test baiting of the sewers for rats show no evidence of infestation.

#### CLOSET ACCOMMODATION

A few conversions of pail closets were made during the year but no major scheme is envisaged until the Disposal Works is increased.

Night soil collection has been maintained satisfactorily throughout the year and no complaints were received about the service.

REFUSE COLLECTION

A weekly collection is being maintained.

The refuse tip at Hoe has not given rise to any complaints and generally speaking I consider both the collection and disposal of refuse have improved as compared with the previous year.

Poison baiting and gassing treatments were carried out to reduce rat infestation.

# SANITARY INSPECTION OF THE AREA

The following table summarieses the inspections made during the year:

Description.	Inspections	Informal Notices
Drainage	172	17
Factories, Workshops & Bakehouses	60	1
Slaughterhouses & Butcher's shops	307	3
Food Shops	80	-
Cowsheds, Dairies, etc.	8	1
Restaurants	21	LESS CHAI
Verminous & Filthy Premises	8	-
Housing	108	9
Nuisances	26	8
Infectious Diseases	-	-
Rats & Mice	61	-
Refuse Collection	15	-
Nightsoil	2	- Stock
Water Supply	19	Out over -

Of the 39 informal notices served during the year, 35 were complied with.

# CAMPING SITES

Temporary licences were granted to two caravans.

# SMOKE NUISANCE

Complaints were received of a smoke nuisance from a low foundry chimney. The owner was approached and he extended the chimney; no further complaints have been made.

#### SWIMMING BATHS AND POOLS

There are no public baths in the district. There is one private swimming bath.

# DISINFESTATION AND DISINFECTION.

No infestation of bed bugs were reported or discovered. Three cases of flea infestations were found and the premises were disinfested. In one case articles of bedding and old clothes were destroyed. Two lots of bedding were steam disinfested.

### HOUSING SURVEY

The housing survey continued and areas were selected as possible clearance areas. Where tenants were re-housed from properties in these areas the houses were inspected and, where considered necessary, were represented as being unfit. The houses were then made the subject of a closing order. It is hoped that by this system a gradual improvement of housing conditions will be made pending comprehensive Clearance Area procedure.

Closing Orders were made on three houses during the year.

No applications were received for "Certificates of Unfitness" under the Housing Repairs and Rents Act., 1954.

Several enquiries were made about improvement grants. Of six schemes submitted, five were approved and two of these were completed during the year.

### INSPECTION AND SUPERVISION OF FOOD

# MILK SUPPLY

Three dealer's licences were issued authorising the use of the special designation "Tuberculin Tested" in accordance with the Milk (Special Designation) (Raw Milk) Regulations, 1949.

Four dealer's licences were issued authorising the use of the special designation "Pasteurised" in accordance with the Milk (Special Disignation) (Pasteurised and Sterilised Milk) Regulations, 1949.

The dairies were regularly inspected and have been found to be satisfactory.

A case of combined tuberculosis and brucella abortus infection in a small local herd was dealt with as required by Regulations.

# FOOD CONDEMNED

Thirty condemnation certificates were issued during the year, covering:-

92 tins

242-lbs of cheese

14-lbs of salted peanuts

76 milk chocolate teacakes

29 swiss rolls

31 jam rolls

411-lbs imported beef (affected with bone taint)

652-1bs home killed pork (8 sides found to be decomposing due to bad storage).

As a result of reports that a particular brand of imported cream was suspected of containing typhoid bacillus, all the shops and wholesalers in the district were visited. One retailer had a stock of this tinned cream and voluntarily withdrew it from sale.

### MEAT INSPECTION

Up to the 1st of July the Ministry of Food controlled the slaughterhouse in Norwich Street. Prior to decontrol, meetings were held with the butchers to ensure that the supply of meat was maintained and that slaughtering was carried out in suitable premises. Most of the local butchers combined to use the existing slaughterhouse, the multiple firms being supplied from their own slaughterhouses situated outside the urban districts.

Complaints were received during the year of smells from the slaughterhouse. Since decontrol the number of animals slaughtered has decreased and it is hoped that the smell nuisance will not be so prominent. To assist in reducing this nuisance more frequent emptying of the manure store is being carried out.

Although ante-mortem inspection is not always possible, all carcases are inspected after slaughter. Casualty carcases are subjected to a post-mortem inspection whenever possible. Routine inspections of butchers shops and manufacturing premises were carried out. The majority of these premises are satisfactory and on the whole food is handled cleanly.

The following animals were slaughtered during the year:-

	Prior to de-control	After de-control	Total
Cattle	535	306	841
Calves	125	17	142
Sheep	1,299	503	1,802
Pigs	923	532	1,455
	CARCASES INSPECTED AND	Sheep & Pigs	
Number killed	841 142	1,802 1,455	
Number inspected	841 142	1,802 1,455	Printer .

From 1st January to 30th June, 19
-----------------------------------

	Cattle	Calves	Sheep & Lambs	Pigs
ALL DISEASES EXCEPT TUBERCULOSIS				- 200
Whole carcase condemned	3	1	6	2
Carcases of which some part or organ was condemned	200	3	8	92
Percentage of numbers inspected affected with diseases other than tuberculosis	37.94%	3.2%	1.08%	10.18%
TUBERCULOSIS ONLY				
Whole carcase condemned	6	1 Lincolner	06/1_0201	4
Carcases of which some part or organ was condemned	37	-	-	4
Percentage of numbers inspected affected with tuberculosis	8.04%	to sorrective and the	dees of III	0.87%
From 1st July to 31st Decemb	er, 1954			
ALL DISEASES EXCEPT TUBERCULOSIS				
Whole carcase condemned Carcases of which some part			-	-
or organ was condemned Percentage of numbers inspectaffected with diseases other		-	-	24
than tuberculosis	14.7%	-	-	4.51%
TUBERCULOSIS ONLY				
Whole carcase condemned	1975 3.00	-	-	1
Carcases of which some part organ was condemned	or 29	-	4200	6
Percentage of numbers inspec affected with tuberculosis	ted 9.48%	-	-	1.32%

Tot	al for the year:-			Cheen	
	DISEASES EXCEPT SERCULOSIS	Cattle	Calves	Sheep & Lambs	Pigs
	ole carcase condemned cases of which some part or	3	1	6	2
org Per	an was condemned centage of numbers inspected ected with diseases other	245	3	8	116
	n tuberculosis	29.49%	2.82%	0.78%	8.11%
TUE	ERCULOSIS ONLY				**************************************
	le carcase condemned case of which some part or	6	-	-	5
org	an was condemned centage of numbers inspected	66	-	-	10
	ected with tuberculosis	8.56%	-	-	1.03%

From the tables it will be seen that after decontrol there was a fall in condemnation of carcases and parts or organs affected with diseases other than tuberculosis. This appears to be attributable to a better quality animal being slaughtered and to a reduction of damage to animals in transport.

After decontrol the rise in condemnation of parts or organs affected with tuberculosis was due to localised infections of heads and lungs in cattle, and heads in pigs.

# FACTORIES ACTS, 1937 and 1948

### Part 1 of the Act

1. Inspection for purposes of provisions as to health.

	Number on Register	Inspec- tions	Number of written notices	Occupiers Prosecuted
Factories in which Sections 1,2,3,4 and 6 are to be enforced by the Local Authority	5	8	_	
Factories not included in (i) in which section 7 is enforced by the Local Authority	46	47	-	-
Other premises in which section 7 is enforced by the Works Sites Local Authority	3	5	-	-
Total	54	60	-	-
	12.			Contd

Cases in which defects were found - 1.
 This was remedied on informal action.

No prosecutions were instituted under the Acts.

During the year one factory was issued with a Certificate of Adequate Means of Escape in Case of Fire.

During the year your Medical Officer of Health again carried out the duties of Appointed Factory Doctor, 114 juveniles, of whom 51 were resident in Dereham, were examined for fitness for employment. In addition 20 periodical examinations were carried out, as required under special regulations for individuals employed in dangerous trades (chromium plating and processes involving the use of lead compounds).

#### HOUSING

During the year 18 houses were erected by the Council and 16 by private enterprise.

The number of applicants on the housing list at 31st December, 1954 was 315, compared with 264 a year previously.

# NATIONAL HEALTH SERVICE ACT, 1946

# Local Health Services under Part III

# Domestic Help Service

4 part time and 34 occasional home helps were employed during the year and 30 cases were assisted in the Dereham area.

# Mental Health - Administration.

Following the retirement of Mr.J.G.Larwood, Local Welfare Officer, in August 1954, his duties have been taken over by Mr.A. Boothman who has been a Welfare Officer on the staff of the County Council since 1948.

8 cases have been admitted to the mental hospital, 6 of these being voluntary patients and 2 certified.

In all cases where admission arrangements are made by the Welfare Officer a social history is prepared and submitted to the Medical Superintendent of the hospital. Visits and reports are made with respect of patients on leave, on trial, and when discharged, at the request of the hospital.

# Mental Defectives.

The following cases were visited and reported on periodically:-

Under Statutory Supervision - 7 (two visited by female P.S.W)
Under Friendly Supervision - 1

Two children attend the fortnightly Occupation Centre at Beech House, Gressenhall, and one child receives training at home.

# Old People's Clubs

Two Old People's Clubs continue to function in the area, with a combined membership of about 180.

# Infant Welfare Centre.

This centre continues to be held twice a month and attendances have been satisfactory.

# National Assistanct Act, 1948

No cases were dealt with under this Act.

I have the honour to be,

Your obedient Servant,

A.B. GUILD

### LINCOLNE SUTTON AND WOOD

Clarence House, 6, Clarence Road, Norwich

Cert. No. 936 F - 1505/W

2nd February, 1955

# CERTIFICATE OF ANALYSIS OF WATER

Sample received from East Dereham U.D.C.

Marked 465 Bore, No. 3 bore at East Dereham U.D.C. Waterworks.

Date Received 26th January, 1955 Appearance when received - Slightly opalescent, trace of orange deposit.

Nature of Deposit - Trace of iron compounds

Colour - Slightly yellow Odour - Nil

Reaction - Pract. neutral pH 7.4 Taste - Satisfactory

# Results of Chemical Analysis in Parts per Million

Ammoniacal Nitrogen	0.13	Hardness as CaCO3:	
Albumoid nitrogen	0.01	Total	250
Nitrate nitrogen	Nil	Carbonate (temporary)	240
Nitrate nitrogen	Nil	Non-carbonate (permaner	nt)10
Chlorine as chlorides	22	Alkalinity as CaCOz	240
Oxygen absorbed (4 hr.27°C.)	0.12	Free carbon dioxide	15
		Total solids (at 180°C)	336
		Iron (total)	1.0
		Metals in solution	Nil

#### OPINION

This water is of very good organic quality, and the analysis as a whole shows no evidence of pollution. As compared with the previous analysis (our certificate No. 1013E) there are small variations in such characteristics as the hardness and the total solids, which are of little importance. The iron content is rather lower on this occasion: it was pointed out on the previous certificate that fluctuations in the iron content of waters such as this are not uncommon. The pH of this water is on the alkaline side of neutrality, and the free carbonic acid content is reasonably low relatively to the hardness. This type of water would not be expected to have any serious corrosive action on metals. Some solvent action is to be expected on new galvanised or copper pipes, but this action usualydiminishes to vanishing point before very long, owing to the formation of a protective film on the inside of the pipes. We do not consider that the iron content of the water is likely to have any bearing on corrosion, though it may give rise to stains and deposits. In our opinion, this water is fit for drinking purposes, and is suitable for general purposes subject to our remarks about iron content.

(signed) Eric C. Woods.
for Lincolne Sutton and Wood

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