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East Retford
Rural District Council.

ANNUAL REPORT

for the year 1915

BY

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L.R.C.P., M.R.C.S.,

MEDICAL OFFICER OF HEALTH.

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TO THE RURAL DISTRICT COUNCIL OF EAST RETFORD.

LADIES AND GENTLEMEN,

I have the honour to present to you my eleventh Annual Report, for the year 1915.

Population.—A large number of the adult males have joined the armed forces, and a special estimate of the population has been made by the Registrar General. The figure thus supplied is 13,948. The decrease in the civil population is thus estimated to be 1,060.

Births.—The total number of births was 317, giving a birth-rate of 22·73. Table A shows the distribution of births as to sex and locality.

TABLE A.

Registration Sub-Districts	Legitimate Births		Illegitimate Births		Totals	
	Males	Females	Males	Females	Males	Females
Gringley ...	34	21	...	1	34	22
Clarbrough ...	50	42	2	1	52	43
East Retford...	27	28	1	2	28	30
Tuxford ...	42	30	1	1	43	31
Misson ...	15	15	...	1	15	16
Totals ...	168	136	4	6	172	142
Add births from outside ...	...	...	1	2	1	2
Deduct non- resident births	...	...	...	...	...	...
Totals ...	168	136	5	8	173	144

Deaths.—The number of deaths registered in the District was 182, from these must be deducted six deaths of persons belonging elsewhere, and 29 deaths of residents belonging to the District occurring outside must be added, giving a net figure of 205. The net death-rate is thus 14·69.

The public Institutions outside the District in which residents have died are as follows :—

- The Retford Hospital.
- The East Retford Union Workhouse.
- The Sheffield Royal Infirmary.
- The Notts. County Asylum.
- The Doncaster Infirmary.

Deaths of non-residents occurring in the Rampton Asylum have been transferred away.

The Union Workhouse is situated in the Borough of East Retford.

Infantile Mortality.—The number of deaths of infants under one year of age was 26, giving a death-rate per 1,000 births of 82. Details of the vital statistics will be found in the table on page 13.

Water Supply.—This is described in my report for last year. During the year I made a report on the water supply of the parish of Ragnall given below. The poor supply for this parish has long been known, but the matter was brought to a head by complaints received ; had it not been for the war it is probable that a proposed scheme would have been installed by now. When it is done it will be advisable to deal also with the parish of Fledborough in the same scheme.

Sewage.—The Ranskill sewage scheme has been passed, but is deferred owing to the war.

Schools.—The medical inspection of school children is carried out by the County Council. The following schools have been closed for the undermentioned causes :—

School	Date	Cause
Everton	January	Influenza
Clayworth	January	Influenza
Laneham	February	Influenza
Rampton Woodbeck	March	Measles
Finningley	March	Measles
South Leverton	July	Measles
Torworth	August	Measles
Clayworth	September	Measles
Sturton	September	Measles
Sutton	October	Whooping Cough
East Markham	November	Measles
West Markham	November	Measles
Torworth	November	Measles
Bothamsall	December	Measles
Headon	December	Measles
North Leverton	December	Scarlet Fever
West Drayton	December	Measles

Slaughter-houses.—Are clean and regularly lime-washed.

Cowsheds.—The cowsheds are inspected, and on the whole are kept fairly clean. Milk is sent to East Retford, Gainsborough and Doncaster for consumption, and to a dairy at South Leverton to be made into cheese.

Housing Accommodation.—This is sufficient for the needs of the District. Owing to the necessity for cutting down expenses only urgent work has been attended to. Tabulated details will be found in the report of the Designated Officer on page 24.

Troops have been billeted during the year in Tuxford and in Sutton. I have visited the billets, and consulted as to their suitability for the purpose with the Military Officers.

INFECTIOUS DISEASES.

The total number was 34. Of these four were removed to the East Retford Corporation Hospitals. Tabular statements will be found on Tables B and C, and on page 11.

TABLE B.

Month	Diphtheria	Erysipelas	Scarlet Fever	Enteric Fever	Continued Fever	Puerperal Fever	Acute Poliomyelitis	Ophthalmic Neonatorum	Totals
January	...	1	...	...	...	...	...	...	1
February
March	...	1	1	...	...	...	...	...	2
April	1	1	...	...	...	...	2
May	1	...	...	...	...	...	1
June	4	...	...	...	...	...	4
July
August	1	...	...	1
September
October	4	1	2	...	...	...	7
November	...	1	1	...	...	...	...	1	3
December	...	1	4	...	...	...	2	...	7
Totals	...	4	16	2	2	1	2	1	28

TABLE C.

Year	Diphtheria and Memb. Croup		Scarlet Fever		Enteric Fever		Pulmonary Tuberculosis		Totals		Total Deaths from all causes
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	
1906	1	1	18	1	1	...	...	...	20	2	201
1907	8	1	73	4	2	...	...	...	83	5	200
1908	8	2	58	3	2	...	...	...	68	5	174
1909	13	2	43	...	2	2	...	...	58	4	200
1910	6	1	53	2	1	1	...	...	60	4	198
1911	5	...	47	1	8	1	...	...	60	2	186
1912	11	1	23	...	4	...	13	8	51	9	165
1913	6	1	24	...	3	1	23	20	56	22	183
1914	10	...	30	1	3	...	12	13	55	14	193
1915	...	...	16	...	2	1	4	12	22	13	205
Average for 10 yrs	6·8	·9	38·5	1·2	2·8	·6	...	...	53·3	8	190·5

Small-pox.—In February notice was received as to some Belgian refugees who were Small Pox contacts living at Gamston. These were kept under observation for two weeks, but nothing developed.

Scarlet Fever.—16 cases were notified, of whom three were removed to Hospital. In addition, three cases occurred amongst soldiers encamped in Babworth Park, these also were removed to Hospital.

Diphtheria.—The District has remained free except for one soldier at Babworth Camp who was removed to Hospital.

Enteric Fever.—Two cases were notified, one being fatal. In addition there were two soldiers from Babworth Camp.

Continued Fever.—Two cases were notified, one of whom was removed to Hospital. In addition, there were two cases of soldiers from Babworth Camp. No Bacteriological evidence could be found in the stools or blood, and as both had been inoculated against Typhoid the Widal test was useless. In all probability these cases were Mild Enteric or Paratyphoid.

Ophthalmia Neonatorum.—One case was notified and was removed to Doncaster Union.

Anthrax.—No case was reported during the year.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Influenza.—There was a small outbreak in the early part of the year.

Measles.—This disease was very prevalent all over the District towards the end of the year. There were two deaths from this cause.

There is no Isolation Hospital in the District. The negotiations between the Rural District Council and the Corporation of the Borough of East Retford recounted in my last report have been brought to a satisfactory termination. Plans for an Isolation Hospital have been drawn up and passed, but as the necessary loan cannot at present be sanctioned the building has to be postponed.

THE FACTORY AND WORKSHOP ACT.

The workshops and workplaces are on the whole well kept. There is one factory engaged in the manufacture of iron implements and doing some munition work. There are no underground bakehouses, factory laundries or dye works.

Offensive Trades.—There is one blood and bone boiler. The premises are cleanly and not a nuisance.

Outworkers.—None are employed in the District and none are resident.

My report this year is much shorter than usual owing to the omission of many of the usual details.

I am,

Your obedient servant,

Stanway R Beale

Retford,

February, 1916.

TABLE I.
Rural District of East Retford. Vital Statistics of Whole District during 1915 and previous Years.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths. †		Nett Deaths belonging to the District.			
		Un-corrected Number	Nett.		Number *	Rate.	of Non-residents not registered in the District.	of Residents registered in the District.	Under 1 Year of Age.		Rate.	
			Number	Rate.					Number	Rate per 1000 Nett Births		
1	2	3	4	5	6	7	8	9	10	11	12	13
1910	14700	...	313	21.7	178	12.1	...	20	28	89.4	198	13.4
1911	14776	306	312	21.1	162	10.9	1	24	18	57.6	185	12.5
1912	14845	319	321	21.6	144	9.7	1	21	23	62.3	164	11.0
1913	15081	292	296	18.7	168	10.6	2	15	15	50.6	181	11.4
1914	15108	302	303	20.0	179	11.8	5	19	25	82.5	193	12.8
1915	13948	314	317	22.73	182	13	6	29	26	82.0	205	14.69

This Table is arranged to show the gross births and deaths registered in the district during the calendar year, and the births and deaths properly belonging to it with the corresponding rates. * In Column 6 are included the whole of the deaths registered during the calendar year as having actually occurred within the district, but excluding the deaths of Soldiers and Sailors that have occurred in hospitals and institutions in the district. † "Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided.

Total population at all ages, 14776. Total families or separate occupiers, 3446. (At Census 1911).
 Area of District in acres (land and inland water) 92740.

TABLE II.
East Retford Rural District. Cases of Infectious Disease notified during the year 1915.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.							TOTAL CASES NOTIFIED IN EACH LOCALITY.					TOTAL CASES REMOVED TO HOSPITAL.		
	At all Ages.	At Ages—Years						1	2	3	4	5			
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65							65 & upwards	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera (C) Plague (P)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	4	...	...	1	2	...	...	...	...	...	...	...	...	...	3
Scarlet Fever	16	1	9	3	3	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever (R)	2	...	...	...	...	1	1	1	...	...	...	...	...	...	1
Continued Fever (C)	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Pulmonary Tuberculosis	4	...	...	3	1	...	...	...	...	...	...	...	...	...	...
Other forms of Tuberculosis	2	...	1	...	...	...	...	...	...	...	...	...	1	1	...
Totals	34	1	2	12	8	6	4	1	15	3	9	4	5	...	

No Isolation Hospital in the District.

TABLE III.

*East Retford Rural District.**Deaths registered during the year 1915, classified by age and cause*

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of Residents or Non- Residents in Instituti'ns in the District.
	All ages.	Under 1	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	
1	2	3	4	5	6	7	8	9	10	11
All causes { Certified ..	193	22	6	4	10	8	16	42	85	5
{ Uncertified	12	4	1	...	...	...	...	...	7	...
Enteric Fever	1	...	...	...	...	...	...	1	...	...
Small-pox .....	...	...	...	...	...	...	...	...	...	...
Measles	2	...	1	1	...	...	...	...	...	...
Scarlet Fever .....	...	...	...	...	...	...	...	...	...	...
Whooping Cough	1	1	...	...	...	...	...	...	...	...
Diphtheria and Croup ..	...	...	...	...	...	...	...	...	...	...
Influenza	3	...	...	...	...	...	...	1	2	...
Erysipelas .....	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	12	...	...	...	1	4	3	3	1	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Other tuberculous diseases	2	...	1	...	...	...	1	...	...	...
Cancer, malignant disease	14	...	...	...	...	...	2	5	7	...
Rheumatic Fever .....	...	...	...	...	...	...	...	...	...	...
Meningitis	4	...	1	1	2	...	...	...	...	...
Organic Heart Disease ..	16	...	...	...	1	1	...	8	6	1
Bronchitis	14	...	...	1	...	...	...	1	12	...
Pneumonia, all forms ..	8	2	1	...	...	...	...	3	2	...
Other Diseases of Res- piratory Organs	5	...	...	...	...	...	...	2	3	...
Diarrhoea and Enteritis	2	1	...	...	1	...	...	...	...	...
Appendicitis & Typhlitis	3	...	...	...	1	1	1	...	...	...
Cirrhosis of Liver	4	...	...	...	...	...	...	2	2	...
Alcoholism ..	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease	6	...	...	...	...	1	1	3	1	...
Puerperal Fever	1	...	...	...	...	...	1	...	...	...
Other Accidents and Diseases of Pregnancy and Parturition ..	1	...	...	...	...	...	1	...	...	...
Congenital Debility & Malformation, includ- ing Premature Birth	15	14	...	...	...	...	1	...	...	...
Violent Deaths, exclud- ing Suicide ..	11	1	1	...	1	1	1	4	2	...
Suicides	1	...	...	...	...	...	1	...	...	...
Other Defined Diseases	42	6	2	1	3	...	2	8	20	4
Diseases ill-defined or unknown ..	37	1	...	...	...	...	1	1	34	...
Totals	205	26	7	4	10	8	16	42	92	5

TABLE IV.

East Retford Rural District. Infant Mortality.

1915. Nett Deaths from stated causes at various Ages under 1 Year

CAUSE OF DEATH.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total Deaths under 1 year	
All causes {	Certified	7	2	9	8	1	2	2	22
	Uncertified ..	2	..	1	..	3	..	1	4
Small-pox	
Chicken-pox	
Measles	
Scarlet Fever	
Whooping-cough	1	..	..	..	1	
Diphtheria and Croup	
Erysipelas	
Tuberculous Meningitis	
Abdominal Tuberculosis	
Other Tuberculous diseases	
Meningitis (<i>not Tuberculous</i>)	
Convulsions	1	..	1	..	2	1	1	5	
Laryngitis	
Bronchitis	
Pneumonia (all forms)	1	..	..	1	2	
Diarrhoea	
Enteritis	
Gastritis	1	..	1	
Syphilis	
Rickets	
Suffocation, overlying	
Injury at Birth	
Atelectasis	
Congenital Malformations	1	..	..	..	1	
Premature Birth	4	..	..	..	4	3	..	..	..	7
Atrophy, Debility, and Marasmus	4	..	..	1	5	1	..	..	..	6
Other causes	1	..	..	1	2	1	..	..	..	3
Totals	9	..	1	2	12	8	2	2	2	26	

Nett Births in the year { Legitimate .. 307
 { Illegitimate .. 10

Nett Deaths in the year of { Legitimate Infants .. 24
 { Illegitimate Infants .. 2

(Copy).

REPORT OF THE WATER SUPPLY OF THE PARISH OF RAGNALL.

TO THE RURAL DISTRICT COUNCIL OF EAST RETFORD.

LADIES AND GENTLEMEN,

In accordance with your instructions received through Mr. Henry, I have examined the water supply of Ragnall, and report as follows:—

Ragnall is a village in the Rural District, situated eight miles south-east of Retford; the village itself is about one mile from the river Trent, but the parish extends to the river.

The area of the parish is 1,210 acres; there are 40 houses, and the population at the last census was 169.

The population is entirely agricultural, there is one large farm house, one shop and bakery, the remainder being small farms and labourers' cottages. Some of the land is farmed by farmers in adjoining parishes.

Soil.—This is, for the most part, of a heavy clay, but in some parts, especially in the lower portions of the parish, this is overlaid with a deposit of river alluvium.

In the course of my investigations I visited all the houses with the exception of two which were very outlying.

I found that in all cases the water supply is obtained from shallow wells. These, with one or two exceptions, are so constructed that there are no means of excluding water from the top of the well and in all cases they are liable to pollution with surface water.

The water is so hard that it is impossible to use it for washing purposes and rain water is relied on, in a few cases rain water is used for drinking.

There is a general opinion amongst the inhabitants that the wells do not contain good drinking water, and there is a tendency amongst many to go to any well but the one on their own curtilage.

Many of the inhabitants take the trouble to fetch their water from a well in a field some 400 yards distant from the nearest house. Even this water is of a dark colour described as black. No sample was taken of it for analysis because it is merely a well in a field intended for the use of cattle and the distance from the nearest house is an unreasonable one to expect people to carry their supply of water. I have termed it the "field well."

Quite a large number of the inhabitants have been in the village only a few months, varying from three to eighteen, and although they say they have had good health one cannot draw any conclusions. For the same reason an analysis of the death return would not be of service owing to this migratory tendency.

There have been no outbreaks of zymotic disease in recent years.

From my enquiries I gathered that the majority of the inhabitants in the parish would like to have a good wholesome supply of water. Some of the occupiers of the outlying houses said they were satisfied and did not want a supply laid on, as they were afraid they would have to pay extra rates without the benefit of the supply.

The parish may be divided roughly into four groups as follows :—

- 1.—Four houses on the Lincoln Road.
- 2.—The main group in the village.
- 3.—Twelve houses at the extremity of the village.
- 4.—Two farms and two cottages outlying up a lane.

GROUP I.

The first of these, Langley's Farm, is situated about 200 yards from the main road up a lane. The tenant has been in occupation since April, 1915.

The water is said to be of good quality and in plenty. It is very hard and cannot be used for washing. The well is away from sources of pollution, and there is no reason to doubt the quality, except the result of the other analyses.

The next house faces the main road, and is in occupation of Miss Wilson ; owner, Mr. Whissel. It is a farmstead, but the present tenant does not take the land. This water cannot be used for washing, being so hard, and is said to occasionally contain worms. It is always filtered before use. There has been no illness in the house.

The well is about 27 feet deep.

Sample A. See table.

The next house is a farm in occupation of Mrs. Flear ; owner, J. H. Marshall. It faces the main road from which it is about 30 yards distant.

The well is at the back of the house, and is adjacent to the crew yard which has an earth bottom, and is at a lower level than the top of well. The well is said to have been deepened a few years since.

The water is said to be unfit for drinking, and after rain is muddy, it is very hard and cannot be used for washing, it often has an oily scum on the surface.

The appearance of the water is said to be worse after the beasts have been trampling in the crew yard, especially in wet weather. Small red worms are occasionally seen, and one was seen in a sample drawn for me. The analysis shows that this water contains the products of animal excreta.

Occasionally the well goes dry. There is a good supply of rain water to this house.

Sample B.

Farm, occupier George Atkin, agent for owner, W. Harpham, Norwell. Water said to be good and pure, clear but hard, never turbid. The well is away from the crew yard. The tenant has lived in this house for nine years.

GROUP II.

Two cottages on the left after turning from the main road; owner, Mrs. J. H. Marshall; tenants, Messrs. William Whitton and H. North.

There is one pump for the two cottages, the water is muddy and is said not to be fit for drinking although it is so used. The water appears to run in to the well from the surface of the path. The people have to fetch the water often from the field well.

Mr. North says he drinks the water and likes it, but it is not always very clear. He has been in occupation since April last, has one child, no illness. Since the recent rain he has got water from the field well.

Farm house, occupied by Mr. Wynne; owner, Mrs. Marshall. The water from the pump in the yard is very hard and cannot be used for washing, it is used for nothing but swilling floors. It is clear and never known to be muddy and is sometimes drunk cold; ordinarily, for cooking and drinking, water is brought from the field well.

House, occupied by Mr. Cooling; Mrs. Marshall, owner. The house pump is said to contain water not fit to drink, it smells badly and occasionally has worms in it. It is too hard for drinking. Water from the field pump is used.

A group of five cottages. There is one pump for the five cottages, it is situated at the back and on the side of a steep slope, there is concrete around the base of the pump, but it is not well laid and water can obviously get underneath it and enter the well. A short distance above the pump there is a foul-smelling pigstye not properly drained, liquid refuse could escape and foul the well.

The appearance of the water is very muddy, and there are worms to be seen after rain. The water is said to have caused the illness of one woman who drank it.

Sample C. The analyst's report shows that this water is of a very dangerous quality and contains many organisms of excrementitious origin.

The tenants of the lowest cottage of this group use the water from Whitton's cottage, they never use water from their own common pump; at present they are using rain water; they do not like it but they say it is better than any other. They never use the water from the field pump.

Mrs. Newbert, occupier of a smithy; owner, Mrs. Marshall. Water from a pump at the back; it is always used after filtration. They are quite satisfied with the water, except that it is very hard and unsuitable for washing clothes.

RAGNALL WATER SUPPLIES.

Sample Mark.	Appearance	Odour.	Total Solids.	Chlorides as NaCl.	Cu Co ₃	Nitrite.	Bacteriological Cultures.		
							at 20° 72 hours	at 37° 72 hours	B. Coli
			Grains	per	gallon		Colonies	per cubic centimetre	
A	Clear and bright. Well aerated. Small grey deposit.	None	96.9	16.5	22.75	Present	400	Plate covered	1
B	Clear and bright. Well aerated. Minute deposit.	None	63.7	7.1	22.75	Minute quantity	200	Plate covered	1
C	Opalescent. Yellow brown colour. Brown deposit.	None	76.6	4.6	13.6	Minute quantity	3000	Plate covered	150
D	Clear and bright. Well aerated. Minute deposit.	None	209.3	5.0	21.0	Trace	1000	None	None
A (double basket)	Clear and bright. Well aerated. Very minute deposit.	None	150.8	10.9	32.9	Small quantity	64	1	None
B (double basket)	Clear and bright. Well aerated. Very small deposit.	None	122.5	23.6	41.6	Large quantity	250	Plate covered	5
7	Clear and bright. Well aerated. Very minute deposit.	None	152.6	20.1	29.4	None	2000	1	1
8	Clear and bright. Well aerated. Very minute deposit.	None	120.0	20.3	24.1	None	800	7	7
9	Slightly opalescent. Yellow brown colour. Small brown deposit.	Slight sewage odour.	70.7	16.5	28.0	Very large quantity	More than 10000	155	150
10	Faintly opalescent. Minute deposit.	None	55.3	7.1	19.6	Large quantity	2000	Plate almost covered	14
11	Clear and bright. Well aerated. Minute deposit.	None	119.3	24.9	28.0	Large quantity	3000	Plate nearly covered	32

17th July, 1915.

W. G. YOUNG.

Private house ; occupier and owner, Mr. J. H. Marshall. The pump on the premises is well constructed and appears to be so made as not to allow the ingress of surface water. Nevertheless the water is not used for cooking or making tea, it is much too hard ; it is used for drinking occasionally. Water is brought from the field well. Rain water is used generally.

Sample D. This is the only water which is free from suspicion of animal pollution, although the water is very hard and useless for washing purposes.

The farm cottages to Ragnall Hall Farm. The well here is dilapidated and all the water is brought from the well at the farm buildings. (See below).

Next are six houses in a group and a public house. Owner, T. Glenn. There is one pump for all. The water is used only for swilling floors, not for drinking ; it is clear, but has an unpleasant taste.

For drinking, water is brought from the farm buildings, a distance of about 200 yards.

At the shop the water is said to be too hard and furs pans, &c. (this is the same water as the last). The water is too hard for washing clothes, and even for the face, as it affects the skin.

Ragnall Hall Farm buildings. Tenants under T. Glenn. The well is situated at the side of a very foul crew yard, which is deep in manure and liquid. The water is said by the present tenant to be always clear, but the occupier of the farm says the water is often discoloured. The water is used for drinking and cooking, but not for washing.

Sample B. double case. It will be seen that the analyst condemns this water, and in view of the number of people who use it, this is important.

Ragnall Hall Farm. The pump here is under cover ; the water is used for all purposes, but is filtered before being used for drinking. It is very hard and sometimes contains worms.

The family have had good health.

Sample A. double case. It will be seen that the analyst says this water is probably safe, but may become dangerous.

Next are two cottages on the right of the road. Occupiers, Messrs. Barlow and Taylor. There is a pump in the garden in front of the houses which are fairly new. Mrs. Barlow is liable to a sore throat.

Sample 7.

GROUP III.

There are first four houses with one pump. The water is used for all purposes although it is said not to be good for drinking, some tenants boil it before use. The water gets muddy after rain and the well is liable to have foreign bodies put in by children.

Then came two cottages further on at the corner of the lane. There is no complaint made, and the water is used for all purposes. The well appeared as though contamination were possible, and a sample was taken. No. 8.

The next two houses had water of which no complaint was made, and the tenants had lived there many years, Messrs. Hinchcliffe and Barthorpe.

The following house, occupied by Mrs. Hopkins for four years, the water from the pump is not used as it made the tenants ill. It is turbid in appearance and contains many insects, and after rain worms can often be seen. Behind the well, and close to it, is an old dyke and a pond in the adjoining field. The dyke was formerly the common drain.

Sample 11.

The last two houses on the road, Messrs. Talbot and Highfield say the water is good, but "a little smelly." The water is used for drinking.

GROUP IV.

These houses are situated a long way up a lane and on rising ground.

Mr. Hilton has been on the farm for one year. The water is said to be very good and looks perfectly clear. The well is some distance away from the crew yard and there is no obvious pollution.

Farm, occupied by Mrs. Barlow; owner, Rev. Blow, Dunham. The pump is situated in the yard, and adjacent to the crew yard. The water stinks of sewage and is yellow in colour. It is said to be worse in wet weather. The well is not very deep.

Sample 9. This is the worst sample of all and is heavily polluted with liquid from the crew yard.

A second well exists to this house in the front garden, there is no pump and the water has to be drawn up by means of a bucket.

Sample 10. This is very bad and dangerous water.

In making the examination, Mr. Henry, the Inspector of Nuisances, made a preliminary examination and then accompanied me on my first visit. On my second visit, I was accompanied by the analyst, Mr. W. G. Young, who very kindly offered his services on the field, in order that he might see the actual sources of the water supplies, and so give a better opinion than by a mere analysis.

Mr. Young's report is as follows:—

Hanway Beale, Esq., M.D.,
 Medical Officer of Health.
 Ragnall Water Supply.

Dear Sir,

I send you attached the results of my examination of the eleven samples of water from the wells which you examined in Ragnall.

You will observe that the only water which we can describe as being wholesome and free from suspicion is that marked D, although in this case the hardness is very great, and the water while fit and wholesome for drinking purposes, is hopeless for washing or boiler purposes.

The sample marked A double basket is probably safe, but it contains organisms growing at blood heat on bile agar and is liable to become dangerous. It should be boiled before use.

All the other samples contain animal excreta in varying proportion. Samples C and No. 9 are very bad; indeed they are heavily polluted with crew yard liquor. Of the others, samples 10 and 11 are the worst, and B double basket and No. 8 are, in my opinion, certainly unfit for human consumption and should be condemned. Samples A and B may be used if boiled previously for 30 minutes.

Yours faithfully,
 (Signed) W. G. YOUNG.

In the taking of these samples, I have endeavoured to take the best, the worst and also water which might or might not be good.

The result as shown by the analysis is practically uniformly bad, only one water is safe for use and that is so hard as not to be of any use for washing or infusing tea, and water is sent for from a field well.

When one considers that a bad result is shown by waters which were thought to be fair in quality, it is very strongly borne in upon one that those waters which have not been sampled may give a similar result and be polluted also.

The results of analysis show that a large proportion of the inhabitants of the parish are without a suitable water supply, worse, that the water which they have and use is not only unsuitable but dangerous.

These being the facts, it remains only to make a recommendation as to what should be done to rectify this state of affairs and render the sanitary condition of the parish healthy.

Fortunately, the parish adjoins the main pipe line of the supply for the City of Lincoln, and powers exist in the Lincoln Waterworks Act, whereby the Rural District Council can take a supply for certain parts of the District, of which Ragnall is one.

My opinion is that there should be a scheme prepared for the supply of the parish with this water without delay, as the matter is urgent.

As regards the outlying farm occupied by Mrs. Barlow, the present well should be filled in and a new one sunk away from sources of pollution.

The most important matter at present is to commence the scheme for supplying the main part of the village with wholesome water.

I have the honour to be

Your obedient Servant,

HANWAY R. BEALE.

July 19th, 1915.

**ANNUAL REPORT for 1915, by
THOMAS HENRY, Sanitary Surveyor and
Inspector of Nuisances.**

COMPLAINTS AND INSPECTIONS—

1	Number of Complaints received during the year ...	...	6
2	Number of Houses, Premises, &c., Inspected ...	...	230
3	Number of Re-inspections of Houses, Premises, &c. ...	...	1150

RESULTS OF INSPECTIONS—

Formal Orders issued for Sanitary Amendments of Houses and Premises :			
4	For the Abatement of Nuisances ...	14	} 47
5	„ Provision of New Drains ...	12	
6	„ „ Privies and Ashpits ...	17	
7	„ „ Wholesome Water ...	4	
8	Houses, Premises, &c., Cleansed, Repaired, &c. ...	...	3
9	School Urinals repaired and New Provided ...	...	2
10	Overcrowding Abated ...	...	3
11	Drains to Houses and Buildings : New, Provided ...	...	41
12	„ „ Repaired, Cleansed, Trapped, &c. ...	...	18
13	„ „ Ventilated ...	...	2
14	New Cesspools for House Drainage ...	...	2
15	Old Cesspools Abolished ...	...	1
16	Water Closets : New, Provided ...	...	5
17	„ Abolished ...	...	3
18	Privies converted into Pan Closets ...	...	7
19	Pan Closets converted into Privies ...	...	1
20	Old Privies Abolished ...	...	14
21	Privies : New, Provided ...	...	30
22	„ Repaired ...	...	2
23	Ashpits or Ashbins : New, provided ...	...	30
24	„ „ Repaired ...	...	4
25	Urinals to Public Houses Provided... ..	...	1
26	Waste Pipes connected with Drains, &c., Disconnected ...	...	4
27	Animals Removed, being improperly kept ...	...	14
28	Pigsties adjoining Houses Abolished ...	...	0
29	„ Provided with Drains ...	...	4
30	Privies and Ashpits Emptied and Cleansed ...	...	12
31	Yards and Causeways Paved and Repaired ...	...	7

WATER SUPPLY—

32	Pumps and Wells : New, Provided	...	...	...	6
33	„ „ Cleansed, Repaired, Covered, &c.	...	...	...	2
34	Water Certificates for New Houses Granted	...	...	...	8

LODGING HOUSES—

35	Number of Lodging Houses Registered under 35th Section of " Public Health Act, 1875 "	1
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REMOVALS—

36	Removals of Accumulations of Dung, Stagnant Water, Animal and other Refuse	10
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THE HOUSING OF WORKING CLASSES ACT, 1890-1909—

37	Houses Closed (voluntarily) (Darlton)	1
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CANAL BOATS ACT, 1884—

38	Canal Boats Inspected	10
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LEGAL PROCEEDINGS—

39	Summonses	0
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The foregoing statistics barely represent the large amount of work actually carried out in many individual cases. To do so it would be necessary to give the lengths of drains laid, number of gullies, inspection chambers, &c. One drain might represent a cottage drain, or an elaborate system to one house, and premises. For instance, one house recently drained, after notice, represents 300 yards of pipes, six inspection chambers, gullies, &c. In this case, among others, I took levels, and prepared a section, in order to make a satisfactory scheme.

During the year, I have written very many letters, and had personal interviews with a number of owners or owners' representatives, upon their various premises, in order to explain the Council's requirements. In the ordinary course of events, an interview (also on the premises) with a builder follows, generally for the preparation of an estimate for the work, and

when the latter is settled, another interview for setting out the work. These interviews have invariably resulted in the necessity of the sanitary improvements being appreciated, and the execution of the work has generally proceeded satisfactorily.

It will be noticed from the preceding schedule that the number of Public Health Act notices served for the provision of privies, ashpits and drains, show a diminution, as compared with some previous years. This is due to the fact that many inspections under the Housing, Town Planning, &c., Act, have been made of houses, previously dealt with under the Public Health Act. During the 18 years I have held the office of Inspector of Nuisances, 844 privies, 914 ashpits, and 1124 drains to houses, have been constructed; and as combined privies and ashpits cost not less than £10 each, and drains average say £2 each, it will be seen that a sum of about £11,500 has been caused to be expended on this branch of private sanitary work by the District Council.

The combined privy and ashpit now approved is considered the most practical form of this convenience, I have seen, and the least offensive, if properly treated, viz: by covering the fæcal matter with ashes; but some occupiers, although given full instructions, seldom attain this standard, while in the case of pan closets they never do so, and it has in consequence become a common-place remark that "he who recommends a pan closet should be compelled to empty it."

Houses Voluntarily Closed.—One working class house has been voluntarily closed, by the owner, in Darlton Parish, in preference to complying with the Council's required amendments, and a very satisfactory new house built, designed by Mr. W. Southall, Architect, Retford.

Sustained and Unrecorded Inspections.—Many minor nuisances which entail an inspection are not recorded, and I frequently find that verbal notices are sufficient to ensure the emptying of privies and ashpits, and the removal of offensive accumulations. This may be described as ‘sustained inspection,’ of which there is no record.

Paved Causeways.—In several instances new paved causeways to houses, where none previously existed, have been provided through my advice, without formal notices.

VOLUNTARY SANITARY IMPROVEMENTS.

It is a frequent occurrence for owners to voluntarily undertake sanitary improvements to their cottages, which are also unrecorded, and my advice is sought, and freely given, for such a desirable object.

NEWCASTLE ESTATE.

The system of thoroughly repairing all the Duke of Newcastle's property (each Village is being taken in rotation), and referred to in my previous reports, is practically at a standstill owing to the war.

EATON HALL ESTATE.

The present owner (C. W. Kayser, Esq.) of this Estate has continued the renovation of the cottages in Eaton Village and elsewhere, in a very satisfactory manner. Two new houses have been built and are occupied. The scavenging of this Village is carried out by the owner. The whole of the work is carried out under the supervision of Mr. W. N. Brackett, Mr. Kayser's agent.

NEW HOUSES.

Owners of new houses are required, in accordance with the Public Health (Water) Act, 1878, to obtain a certificate from the Rural District Council that the water supply is wholesome, and within a reasonable distance from the house. I therefore make it a practice to send to such owners, a leaflet containing extracts from the said Public Health (Water) Act, pointing out the owners' responsibility in this respect. I also see that a privy, ashpit, and drain are provided to each house, as required by the Public Health Act, 1875. Full instructions are sent to building owners, regarding the construction of these requirements, and the work is generally carried out as satisfactorily as if Bye-laws were in force. Similar particulars also accompany all notices served under Section 23 of the Public Health Act. The system in vogue is now so well understood, that plans of new houses are generally submitted for my inspection, if carried out under the supervision of an architect.

BUILDING BYE-LAWS.

No Building Bye-laws are in force in this District, and hence there are no restrictions upon the erection of new houses, (which have been hitherto satisfactorily constructed) beyond the provision of a wholesome water supply, and sanitary accommodation, as described above.

WATER SUPPLY.

Four new borehole wells have been sunk into the sandstone by owners during the year, upon private property.

Tuxford and East Markham Water Supply.—Under the powers secured by the District Council in the Lincoln Corporation Water Act of 1908, the scheme for supplying the Parishes of East Markham and Tuxford, designed by Mr. E. J. Silcock, M.I.C.E., of Leeds, has been completed.

The first connection was made on May 26th, 1913, at Tuxford, and since that date to December 31st, 1915, 141 houses and premises in East Markham Parish, and 232 ditto in Tuxford Parish have been supplied with water from the mains. This must be considered very satisfactory progress, and the Water Inspector (Mr. T. H. Good) deserves his share of credit. Since the war commenced reluctant owners are more reluctant than before to take advantage of this excellent water supply for their houses.

A workshop has been rented at Tuxford to enable the Water Inspector to cleanse and repair meters, &c.

Chiefly, in my opinion, through the provision of a good public Water Supply, a building development has commenced at Tuxford, where a number of railwaymen have purchased land from the Newcastle Estate and built thereon houses for their own occupation. Up to date, nine such houses have been built, but the war has stopped further building operations.

The Tuxford and East Markham Parish Councils have provided suitable standpipes, hose and fire prevention appliances. Brigades have been formed and practise under the supervision of the Water Inspector.

Ragnall Water Supply.—The Medical Officer of Health having fully reported thereon, I was instructed to prepare a scheme to supply both Ragnall and Fledborough. In the latter Parish water for domestic use for five houses has to be fetched a distance of not less than 500 yards. Various ratepayers were desirous of a joint scheme with Ragnall. It was proposed to spread the cost over a period of three years. Plans and an estimate were submitted to the Local Government Board, but sanction was not obtained, owing to the war.

MILITARY SANITARY SERVICE.

Scavenging for the troops billeted during the year at Tuxford was carried out by the Scavenging Contractor, and special scavenging had to be organised for the troops billeted at Sutton and Barnby Moor, the cost of which has been paid for by the Army Authorities.

SEWER WORKS, &c.

During the year various Works have been executed in the following Parishes, in accordance with the directions of the Sanitary Committee, by the Council's workmen, under my direction. The new pipes used are Glazed Stoneware Socketed Pipes, generally known as Sanitary Pipes.

I have refrained from mentioning all the usual details, in order to condense this report.

The Parishes are Eaton, East Drayton, Finningley, Gamston, Lound, Mattersey, Marnham, Misson, Normanton-on-Trent, North Leverton and Torworth.

Ranskill.—During the year there have been recurring stoppages in the sewers and in one case a house was flooded with sewage. The Sewerage Scheme, held up by the war, is very urgent.

Tuxford.—One of the numerous sewage outfalls being complained of, a length of 300 yards of 9 inch pipes has been laid; a catchpit constructed, and by arrangement, the sewage allowed to flow on to the land as an experiment, by agreement with the agent to the Estate and the occupier.

TUXFORD SCAVENGING.

This work has been carried out by Mr. E. Lilleker, in a satisfactory manner, and without complaint.

SEWERS, SEWAGE DITCHES, & CESSPOOLS

In the new sewers, flushing is effected by valves during rain, and holding back. The old sewers are flushed with a flushing water cart. Several cases of blocked sewers have been effectively dealt with, by the aid of the drain rods, which have also been lent to various ratepayers, to cleanse their drains. This is appreciated.

There are sewage ditches in every Parish, and catchpits in most, and they have been regularly and thoroughly cleansed, and where necessary, deodorised, throughout the district. Many of these ditches have very flat gradients, such as Sutton, Lound, Mattersey, Finningley, Rampton, Marnham, etc., and entail frequent cleansing for considerable distances. The sewage tanks constructed in Everton, Clayworth, and Tuxford have proved beneficial, in helping to clear the streams.

DISINFECTIION.

All houses have been disinfected, under my direction, after infectious diseases, including Tuberculosis.

COMMITTEES.

During the year Sub-Committees to consider proposed sewer extensions, and difficult cases of suggested sanitary improvements on private property, have made inspections in various Parishes.

THOMAS HENRY,

Sanitary Surveyor and Inspector of Nuisances.

Retford,

February, 1916.

HOUSING, TOWN PLANNING, &c., ACT, 1909.

REPORT by THOMAS HENRY,
Designated Officer.

1	Number of Houses inspected	...	...	...	...	188
2	Number which on inspection were found to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	...	1
3	Number of Representations made to Local Authority with a view to making of Closing Orders	...	...	...	...	1
4	Number of Closing Orders made	...	...	...	...	0
5	Number of Houses the defects of which were remedied without the making of Closing Orders	...	...	...	...	120
6	Number of Houses which after making of Closing Orders were put in a fit state for human habitation	...	...	...	...	0
7	Number of Houses closed voluntarily without the making of a closing Order	...	...	...	...	1
8	Formal Notices served	...	...	...	...	13
9	Remedies suggested in ditto	...	...	...	...	80

The general character of the defects found and dealt with consist of: insufficient light and ventilation to rooms and food stores, leaky roofs, insufficient and defective eaves gutters to houses and outbuildings, defective stairs and floors, stairs and step ladders to bedrooms without handrails, broken fire grates and stoves, a few dirty houses, defective yard and causeway paving, absence of food stores, untrapped sink wastes, etc.

During the year, amendments to 120 houses have been executed as follows:—

1	Windows made to open	...	...	...	...	18
2	New Windows	...	...	...	...	41
3	Eaves Gutters provided	...	...	...	...	6

4	Yards and Causeways paved	...	...	...	...	13
5	New Floors and Floors repaired	...	...	...	...	15
6	Ventilators to provide "through" ventilation...	...	...	...	...	8
7	New Fire Grates and ditto repaired	...	...	...	...	5
8	Roofs repaired	...	...	...	...	21
9	Stairs repaired and Handrails provided	...	...	...	...	9
10	Ceilings repaired	...	...	...	...	18
11	Chimneys	...	...	...	...	5
12	Handrails to Stairs provided	...	...	...	...	9
13	Skylights to Back Bedrooms provided	...	...	...	...	2
14	New Doors	...	...	...	...	3
15	Damp Courses inserted	...	...	...	...	3
16	New Food Stores	...	...	...	...	12

House Rents.—These vary considerably, as the following particulars of 554 houses shew:—

1	From 1/- to 1/6 per week	...	...	...	...	75
2	„ 1/7 „ 2/- „	...	...	...	...	192
3	„ 2/1 „ 2/6 „	...	...	...	...	67
4	„ 2/7 „ 3/- „	...	...	...	...	56
5	„ 3/1 „ 4/- „	...	...	...	...	37
6	„ 4/1 and above,,	...	...	...	...	36
7	Rent included in Wages	...	...	...	...	41
8	Rent included in Farm Rent	...	...	...	...	23
9	Owned by Occupier	...	...	...	...	27
						554

The closet accommodation, ashpits, drains, and water supply are dealt with under the Public Health Act and Public Health (Water) Act, and a very large amount of this work has been done in previous years; see page 24.

Work under this act has been held up owing to the war.

THOMAS HENRY,

Retford, February, 1916.

Designated Officer.



