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SEVENTH REPORT
ON THE
SANITARY CONDITION
OF THE
Urban District
OF
RICKMANSWORTH,

FOR THE YEAR ENDED DECEMBER 31ST, 1904.

BY
MARK SHARMAN,

D.P.H. Scot.,

Medical Officer of Health.

1905.

BROWN & SON, Printers, Rickmansworth.

To

THE RICKMANSWORTH URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the pleasure of presenting to you my seventh Annual Report.

In compliance with the wishes of the County Medical Officer of Health for Hertfordshire I have again this year further re-arranged the headings of this Report to facilitate its incorporation into the Report for the County.

I am,

Your obedient servant,

MARK SHARMAN,

Medical Officer of Health.

RICKMANSWORTH,

April, 1905.

REPORT.

THE RICKMANSWORTH URBAN DISTRICT began its existence in April, 1898. It has been carved out of the old Civil Parish of Rickmansworth, which was one of the Parishes of the Watford Rural District.

The Urban District consists of the Town of Rickmansworth, the Hamlet of Batchworth, and the most populous parts of the Villages of Croxley Green and Mill End.

For the purposes of this Report, the District is divided into three localities, viz:—(1) Rickmansworth—including Batchworth, (2) Croxley Green, and (3) Mill End.

Rickmansworth is separated from Croxley Green on its East side by the River Chess, and from Mill End on the West side by the Old Belfry Lane, which runs into the Uxbridge Road opposite the “Half-Way-House” Inn, and by an imaginary line continued across to the Southern border of the District.

The part of Croxley Green included in the District, begins on the Eastern side of the junction of the Watford Road with Croxley New Road, and embraces the whole of the latter Road, Scots Hill, and part of the Copthorne Estate. The District then narrows into an irregular strip comprising the Town and

Batchworth (Moor Park and Rickmansworth Park being excluded). It then widens out so as to include the Cemetery and the Cottages known as Bankside Downs on the North-West. From Rickmansworth the District extends on either side of the Uxbridge Road as far as Long Lane, including St. Peter's Vicarage, and the Pumping Station of the Rickmansworth and Uxbridge Valley Water Company at Drayton Ford, and, of course, the thickly populated part of the Village of Mill End.

STATISTICS.—(see Tables I, II & IV.)—The Rickmansworth Urban District contained a population by census in 1901 of 5,627 persons; the number estimated to the middle of 1904 is 6,245. The District comprises an area of 572 acres (of which 16 acres are water). The number of inhabited houses for 1904 is 1,249 giving an average density of population per house of 5 persons. The average number of persons per acre of dry land in the District is 11·23.

During the year 1904 fifty-eight deaths have been registered in the Urban District of Rickmansworth to which must be added for statistical purposes three deaths which took place in Watford Union Infirmary, two deaths in the Isolation Hospital (one from Diphtheria and one from Scarlet Fever) and one death in the Watford District Hospital. Including all cases the death-rate for the year is 10·2 per thousand persons living. It will be observed that the death-rate is low.

The age distribution was as follows:—

Under one year	...	...	...	10
At one year and under five	..	..	..	6
„ five years	„	fifteen	...	1
„ fifteen	„	twenty-five	...	4
„ twenty-five	„	sixty-five	...	20
„ sixty-five and upwards	...	...	...	23

It will be seen that 15·6% of the registered deaths occurred in children under one year of age and 35·9% of persons over 65 years of age. It is interesting to note that of the persons who died at the age of 65 and upwards ten persons reached the age of eighty years, two of which died at the age of ninety and ninety-three years respectively.

The deaths occurring in the three localities into which the District is divided for the purposes of this Report were as follows :—

Rickmansworth	...	...	...	35
Croxley Green	...	...	...	20
Mill End	...	...	...	9

The “yearly” death-rate per thousand being :—

Rickmansworth	...	...	...	10·6
Croxley Green	...	...	...	10·1
Mill End	...	...	...	9·1

It will be observed from the above figures that Mill End has the lowest “annual death-rate” of the three localities which the Urban District contains.

BIRTHS.—There were 157 births registered, giving the “yearly” birth-rate for the District as 25·1 per thousand, of these 84 were females and 73 males.

Taking the births in the three localities, the figures are :—

		Females.	Males.	Total.
Rickmansworth	...	44	40	84
Croxley Green	...	26	16	42
Mill End	...	14	17	31
		—	—	—
Totals	...	84	73	157
		—	—	—

The “yearly” birth-rate being respectively 25·6, 21·3 and 31·3 per thousand, whilst the average birth-rate for England is about 30 per thousand. It is unsatisfactory to note that among the registered births for the year there were seven illegitimate

births, three at Rickmansworth, one at Croxley Green, and three at Mill End.

The high death-rate among these children is largely due to the fact that in many instances the burden of expense incidental to the birth of the child and to after maintenance falls almost wholly upon the mother, who puts the child out to nurse, thus depriving it of maternal care.

It is a significant fact that the birth-rate of the District is on the downward grade.

INFANTILE MORTALITY.—The deaths of Infants under one year were in the proportion of 63·7 to a thousand registered births for the whole District. Dividing up the District into the various localities the rates of infantile mortality are :—

Rickmansworth	...	...	...	47·6
Croxley Green	...	...	...	47·6
Mill End	...	...	...	120·0

It should be pointed out that this "rate" has decreased to nearly half the "rate" of the previous year. The "infant mortality" at Mill End is still greatly in advance of the other localities, the "rate" being almost three times the "rate" for Rickmansworth and Croxley Green respectively.

PHYSICAL FEATURES.—Geologically the subsoil of the District is gravel upon chalk, Rickmansworth District being on the extensive tracks of gravel lying between St. Albans and Beaconsfield. The gravel is mostly from a few feet to 25 feet in thickness, seldom more; it varies in character from pebble gravel or shingle (largely made up of flint and quartz pebbles) to coarser gravel and sand. The chalk of part of the Northern margin of the "London Basin" comes to the surface in the Rickmansworth District. It is interesting to further refer to the more superficial geology of the District as brought to light by the excavations rendered necessary in carrying out the Sewerage Scheme; these

remarks more particularly apply to the lower-lying localities of Rickmansworth and Mill End. The last mentioned localities are probably placed upon the site of an ancient river bed, and later a marsh which has produced the so-called "drift" frequently met with in low-lying districts generally. This "drift" is both alluvial and diluvial in character, and is composed of patches—varying in size—of shingle, clay, gravel, sand and peat, mixed up in the most heterogeneous fashion. The true shingle is the lowest and water-bearing stratum lying just above the chalk formation. The true "gravel upon chalk" layer gradually increases as the gradients of the District rise, and finally predominates in the elevated parts.

The elevation of the District varies from about 250 feet above sea-level at its highest point in Croxley Green to rather less than 150 at Batchworth and Mill End, the general fall taking place through Mill End to its most Western boundary.

The District is drained through the Chess, the Colne, and the tributaries of the latter. Water in many of the low-lying places is found at from 2 to 4 feet below the surface.

INFECTIOUS DISEASES.—The seven principal Zymotic diseases caused two registered deaths. The "yearly" Zymotic death-rate is .32 per thousand.

Small Pox	...	...	...	...	...	0
Measles	...	...	...	...	...	0
Scarlet Fever	...	...	...	...	...	1
Diphtheria and Membranous Croup					...	1
Whooping Cough	...	...	...	...	...	0
Fevers	{	Typhus	...	...	...	0
		Enteric	...	...	...	0
		Other or Doubtful		...	...	0
Diarrhœa	...	...	...	...	...	0
						—
						2

ISOLATION HOSPITAL.—The District is well provided for in this direction, the Watford Joint Hospital Board giving every facility for the removal and care of infectious cases. The Council is to be congratulated upon having an Isolation Hospital so near at hand for dealing with infectious diseases. The staff of the Hospital thoroughly deserve the confidence and thanks of the Urban Council for their hearty co-operation in preventing and dealing with the spread of notifiable diseases in the Rickmansworth Urban District. Nineteen cases have been removed to the Hospital during the year, out of thirty-nine cases notified.

The extension of the Hospital referred to in last year's Annual Report has been completed, twenty-four additional beds have been provided, as well as improvements and alterations in the administrative block.

DISINFECTION.—Bedding and such other articles as cannot be safely and efficiently disinfected at the patients' homes are removed by the Isolation Hospital Authority and dealt with by means of the Steam Disinfector, and then returned to the houses of the owners.

BACTERIOLOGICAL ARRANGEMENTS. — At present medical practitioners in the District are at liberty to send "throat specimens" to either the Lister Institute or to the Laboratory of the Watford Joint Isolation Hospital, at the expense of the Council, in order that they may be examined bacterially for the presence of the *Bacillus Diphtheriæ*.

During the year 1904 fifty investigations have been made of "throat specimens" of which nine showed the germs of Diphtheria.

EPIDEMIOLOGY (see Tables III. & IV.)—Since October, 1890, the District has been under the operation of the Infectious Diseases (Notification) Act, and during the period over which this Report extends 39 cases have been notified as against 73 cases during the year 1903.

Small Pox	...	...	...	0
Chicken Pox	...	...	...	6
Diphtheria (and Membranous Croup)	...	...	...	9
Erysipelas	...	...	...	6
Scarlet Fever	...	...	...	15
Enteric or Typhoid Fever	...	...	...	3
Puerperal Fever	...	...	...	0
				<hr/>
				39

This gives a Notifiable Sickness-rate of 6·2 per thousand of the population, a very marked decrease for the year under investigation.

SMALL POX.—No case of Small Pox has been notified during the present year.

VACCINATION.—Six years' experience of the working of the Vaccination Acts of 1898 is now forthcoming, and the results are gratifying. In some Districts, amongst which Rickmansworth must be included, this is particularly so. There is no doubt that these results are largely due to the entire use of Calf Lymph and to "domiciliary" as distinguished from "stational" vaccination. The following figures are of interest.

<i>Year.</i>	<i>Primary Vaccinations.</i>		<i>Re-Vaccinations.</i>
1895	...	124	...
1896	...	88	...
1897	...	95	...
*1898	...	71	...
†1899	...	172	...
1900	...	144	...
1901	...	132	...
1902	...	142	...
1903	...	132	...
1904	...	145	...
			3
			121
			783
			28
			18

*N.B.—The few cases of this year were undoubtedly partly due to Boards of Guardians and individuals waiting for the Act of 1898.

†Vaccination Act of 1898 in force.

Satisfactory infant Vaccination must not lull the public into the belief that its effect is everlasting: re-vaccination is required once again in youth or early adult life.

It is a regrettable state of affairs that some parents should deliberately, in the face of all scientific knowledge and facts, neglect to protect their children against such a dreaded and loathsome disease as Small Pox.

During the coming year the Legislature still have to seriously face the question of Vaccination in all its aspects. It is to be hoped that some really satisfactory conclusion will be arrived at on this momentous question.

CHICKEN POX.—Six cases of this disease were notified.

MEASLES.—No death during the current year has been recorded in the District as the result of Measles.

SCARLET FEVER.—With regard to Scarlet Fever, it will be seen that fifteen cases have been notified for the year 1904 as against nineteen during the previous year. Two cases have come from Rickmansworth, seven from Croxley Green, and six from Mill End.

It should be stated with reference to Scarlet Fever that the Rickmansworth Urban District shows improvement in the number of cases notified, notwithstanding prevalence of the disease in surrounding districts.

The isolation of this disease presents great difficulties. These seem to arise "pari passu" with the amount of knowledge garnered in. Opinions have been constantly changing during the last few years as to when and how this disease is spread. It is most subtle in its manifestations. It is undoubtedly highly infectious in its early stages, and apparently so quite late on during convalescence. Turning to the question of the isolation of this disease the

Medical Officer of Health is of opinion that serious consideration should be given to the surroundings of the person to be isolated; where a patient can be isolated with safety as regards his fellows in his own house there seem to be many reasons for recommending such a course of action; on the contrary where the patient resides in a house containing a large number of susceptible individuals and limited accommodation, removal to an Isolation Hospital is of the utmost value to the public and to the patient. The Medical Officer of Health still holds the opinion that the dissemination of the disease is closely associated with the attendance at Elementary Schools of children suffering or convalescent from a mild attack.

WHOOPING COUGH.—No death has been registered as occurring from this disease during the year.

DIPHTHERIA.—Nine cases only have been notified during the year 1904 as compared with twenty-seven cases last year, a decidedly satisfactory state of matters.

On the 3rd March the Council unanimously decided to supply the public in their District with Diphtheria-Antitoxin free of charge. The advantages to be gained by this procedure are (1) there is a supply of Antitoxin in the Town which can be drawn upon at any time in cases of emergency (2) it may enable patients suffering from this disease to be kept at their homes instead of being removed to the Hospital, and so save the Ratepayers' money without danger to the patient.

The Medical Officer of Health would like to see the term "Membranous Croup" excluded from the list of Notifiable Diseases. It was the evident intention of the Legislature that disease of a Diphtheritic nature should be included under one of the headings Membranous Croup or Diphtheria, probably all cases notified under the former heading are Diphtheria, and even if they are not no harm is done by notifying them as Diphtheria, the treatment is the same for both diseases. In the

present state of knowledge we have either to deal with Diphtheria or no Diphtheria, the juggling with names does not help us in our difficulties in determining the nature of diseases.

ENTERIC (TYPHOID) FEVER.—Three cases were notified during the year, none of which proved fatal, a satisfactory record. One case was particularly severe; the happy termination of the case was undoubtedly due to the careful nursing received at the Isolation Hospital.

EPIDEMIC INFLUENZA.—One death has occurred during the current year. No deaths were noted for last year as arising from this disease.

DIARRHŒA.—The number of deaths from Diarrhœa since 1898 are as follows:—

1898	...	...	...	eleven deaths
1899	...	...	..	six „
1900	...	...	...	four „
1901	...	...	...	one „
1902	...	...	...	no „
1903	...	...	...	three „
1904	...	...	...	no „

There is no death from this disease to record during the present year. The deaths from Diarrhœa (see above) have steadily declined since the creation of the Urban District. This decided improvement is no doubt due to the better drainage and scavenging of the District; the terms being used in their broadest sense.

PUERPERAL FEVER.—No case has been notified during the year.

ERYSIPELAS.—Six cases were notified for the year 1904. Seven were recorded during the year 1903. It is difficult to understand what advantages are gained by notifying these cases, when such diseases as Measles, Whooping Cough, Diarrhœa and Consumption, are omitted from the List of Notifiable Diseases.

TUBERCULOUS DISEASES (Including Phthisis or Consumption).—Eight deaths have occurred from these diseases during the year, five in Rickmansworth, one in Croxley Green, and two in Mill End. This gives a “yearly” death-rate for these diseases of 1·28 per thousand for the whole District.

The death-rate from Phthisis alone is ·32 per thousand.

Consumption or Phthisis must be again prominently brought under notice. Great things are to be achieved by its early recognition and prompt treatment in a Sanatorium or Hospital. Every day adds to our knowledge of the treatment of the Consumptive. Even though the patient cannot remain for as long as could be desired under treatment in the Sanatorium, a few weeks’ sojourn in a well-planned and well-ordered institution is of untold value to the patient and his friends as an education as to the mode of living in the future. The treatment of this disease may be summed up under four headings (1) Fresh Air, (2) Sunlight, (3) Good Food, (4) Rest. It may not be out of place to quote a sentence summing up a Report for the last four years from a well-known Sanatorium, it is as follows:—“There can hardly be any case of Phthisis (Consumption) wherein there is not something to hope for, from Sanatorium treatment.”

CANCER.—With regard to Cancer, six deaths have been registered in the Urban District, three from the locality of Rickmansworth, two from Croxley Green, and one from Mill End. The death-rate from this disease is therefore ·96 per thousand living.

RAINFALL.—Through the courtesy of the Manager of the Rickmansworth and Uxbridge Valley Water Company the rainfall of the District as recorded at Drayton Ford is appended for the years 1902, 1903 & 1904, they afford an interesting comparison.

Rain Gauge.—Diameter of funnel 8 inches; height of top, above ground, $1\frac{1}{4}$ foot; above sea level, 146 feet.

		1902		1903		1904
		Inches		Inches		Inches
January	...	0.83	...	2.52	...	2.43
February	...	1.29	...	1.59	...	3.28
March	...	1.44	...	2.52	...	1.26
April	...	0.76	...	3.10	...	1.35
May	...	2.23	...	1.91	...	2.71
June	...	2.69	...	5.73	...	0.98
July	...	1.51	...	3.81	...	1.68
August	...	4.88	...	2.95	...	2.01
September	...	0.49	...	1.62	...	1.60
October	...	1.76	...	6.82	...	1.45
November	...	1.94	...	1.60	...	1.52
December	...	1.15	...	2.06	...	2.08
Totals	...	20.97	...	36.23	...	22.35

WATER SUPPLY.—The District draws its water for drinking and domestic purposes from the Rickmansworth and Uxbridge Valley Water Company's mains, deep wells with or without pumps, and shallow wells, which are in some instances only 6 to 12 feet in depth.

The sources from which the inhabitants obtain their drinking water are certainly becoming purer, shallow wells are now seldom used.

The Company's water—save for its hardness—is thoroughly good and absolutely free from organic pollution.

The number of new connections made during the last six years with the Uxbridge Valley Water Company's mains are as follows:—

1899, new connections made	...	...	105
1900, " "	...	...	78
1901, " "	...	...	78
1902, " "	...	...	90
1903, " "	...	...	51
1904, " "	...	...	93

No doubt during the coming year the number of connections with the Company's mains will be increased. A plentiful supply of water is always needed for flushing purposes to make a Drainage Scheme satisfactory and successful.

WATER ANALYSIS.— During the year six samples of water were sent for analysis, of which four were good, one bad, and one doubtful. The closer supervision of the water supplies of the district has certainly produced satisfactory results.

The Medical Officer of Health has made an analysis of the water drawn from the Rickmansworth and Uxbridge Valley Water Company's main passing through the High Street, with the following result:—

Colour	...	...	...	good.
Odour	...	...	...	none.
Turbidity	...	...	...	none.
Sediment	...	...	...	slight white powder (chalk).
Microscopic Examination				nothing definite.
Residue on Examination	...			white (chalk).
Chlorine	...	...	...	1.26 grains per gallon.
Total hardness	...	...	16.0	„ „
Permanent hardness	...	...	3.5	„ „
Nitrites	...	...	...	absent.
Nitrates	...	...	...	absent.
Oxygen absorbed	...	...	...	.85 parts per million.
Free Ammonia or Saline Ammonia	...	...	...	0.003 parts per million.
Albuminoid Ammonia or Organic Ammonia	...	...	...	0.002 parts per million.

Even at the risk of repetition, the following remarks must be again emphasised this year. It is evident that this would be a really good, pure water were it not so hard. The question of hardness is more to be looked at from a domestic than a hygienic point of view, in that it is not likely to cause any waterborne or

Zymotic disorder, but the amount of "chalk" that the consumers have to try to digest is certainly not good for their constitutions. Hard water is distinctly bad for kettles and boilers, necessitating their constant cleaning and repair, which if postponed is liable to cause danger to householders by the possible bursting of the boiler. Every boiler in this district should be cleaned, that is, the incrustation of lime should be removed, at least once in every three months, if an effective heating of the water is desired. The crust which forms in boilers may be loose or hard, the former condition is the result of the deposit of salts, causing temporary hardness, the latter the result of salts causing permanent hardness. It is stated that one quarter of an inch of incrustation—which is a bad conductor of heat—produces waste of coal to the extent of 45 per cent. It has been calculated that one grain of chalk wastes 8 grains of soap, and hence arises the difficulty for washing purposes of the hard water such as is drawn from the deep chalk formations. Owing to the hardness much soap is needed for lathering. Occasionally when water is drawn into a vessel from the service pipe of the Water Company's mains it appears to be "milky" or even "chalky." If the vessel or glass receptacle be allowed to stand, it will be found that the water gradually clears from below upwards, which proves that the cloudiness is due to air. This condition is brought about by the water having been superærated during the process of pumping into the mains from the Waterworks. This state of the water need cause no anxiety on the part of the consumers.

HARDNESS.—In all the Annual Reports of the Medical Officer of Health prominent notice has been taken of this question. Again this year it is strongly commented upon, and will be in future Reports until some remedy is obtained.

It is probably productive of many minor ailments which in their cumulative effect may become serious.

There is every reason for regret, that, in a matter so important for the well-being of the inhabitants of the District, there is no appeal to the Local Government Board or other superior authority. This opinion of the Medical Officer of Health is again endorsed by the County Medical Officer in his Report for 1903 as follows:—"The water is very hard and no softening process is employed."

An immense benefit would be conferred on the community by the Rickmansworth and Uxbridge Valley Water Company if they could see their way to mitigating the hardness of the water by some softening process, as is done in other parts of the country; it would add greatly to the popularity of the supply, which is very pure, apart from its hardness.

Surely some such simple system as that based on the principles of the "Porter-Clark" process might be inaugurated by the Rickmansworth and Uxbridge Valley Water Company whereby the water could be softened. If this course were adopted it is certain that it would lead to an increased consumption of the water, which many people at the present time refuse to use owing to its hardness.

Towards the end of 1903 a deputation from the Urban District Council met the Chairman and Officers of the Water Company to urge upon the Company the desirability of reducing the hardness. A letter was subsequently received from the Company on January 20th stating that the Directors of the Company desired to meet the wishes of the District Council as far as practicable, but they could not place on the Company's revenue a heavy charge for water softening unless a somewhat increased scale of charges for the supply of water were agreed to, and that the Company have no power to carry out any arrangements or adopt any suggestion without first obtaining the sanction of Parliament, and that they would require the concurrence of the various Authorities in the area of supply in support of any application to be made for powers.

DRAINAGE.—A full description of the System of Drainage has been given in the Reports for the past two years, and it will be sufficient to state here that the sewers, with the exception of those in the low-lying District of Mill End, empty by gravitation into an underground storage tank at Batchworth. For dealing with this low-lying part of the District, a small pumping station is provided at Mill End for lifting the sewage into the Batchworth main outfall sewer.

As stated in the Report for last year, the works were completed on December 31st, 1903, with the exception of one of the tanks at the Sewage Farm, the floor of which had given way owing to a subsidence in the ground.

This tank was made good by the Surveyor and the first connection was made to the sewers on March 7th, 1904, and from that date up to the 31st December, 1904, 661 houses (about half of the District) have been connected. This speaks well for the success of the scheme, showing, as it does, the anxiety of owners to take advantage of improved drainage facilities, and only in one instance was it necessary to bring pressure to bear on the owner; and this was a case where the cesspools had to be pumped out daily and the property was being advertised for sale by auction.

It is satisfactory to note that the drainage work already carried out has, generally speaking, been well done, owners and others being willing to conform to the Regulations framed with a view of saving expense and trouble in the future by having the new drains properly constructed and tested in the first instance.

All drains are first tested with water before being filled in and afterwards with the "smoke test." This latter test has proved very useful in tracing defects above ground, and in some cases underground also, where the trenches had been carelessly filled in and the joints disturbed.

Out of 661 houses connected only seven blockages have occurred, a very satisfactory state of affairs. In most instances these were caused by foreign substances, such as short pieces of

clothes-prop, sacks, iron spikes, condensed milk tins, ashes, etc., having been put down the drains. In the old pail-closet and cesspit days people were accustomed to put ashes and rubbish in the pails and pits to be emptied by the scavengers, and some of them hardly realized that the modern w.c. pans are not made for the same purpose.

Most of the blockages occurred soon after the houses were connected, and since the drains have been cleared no further trouble has arisen.

Tenants should not expect drains to carry off any superfluous rubbish as well as ordinary sewage.

It would be well if owners were to make arrangements to have the drains on their premises periodically examined, tested and swept. Drains, like other parts of a dwelling, need attention from time to time.

The flush main which was provided for the purpose of flushing the sewers and for street watering has been a source of trouble during the year under review owing to leakages in the pipes. The Contractors for the Sewerage Scheme were called upon to remedy this, but it was not until December of this year that the work was considered satisfactory by the Engineer. In consequence it has been difficult to properly flush the sewers, but now that the "flush" main and "flush" chambers are in working order no further trouble is anticipated.

The Medical Officer of Health would urge upon the Council the importance of flushing the sewers frequently rather than too infrequently. By so doing, many of the smells complained of may be avoided.

In view of the pessimistic reports which have been circulated as to the efficiency of the Drainage Scheme generally, it is well to point out that no hitch has occurred in the working since the scheme has been in operation.

SEWAGE DISPOSAL.—After the sewage has been collected at Batchworth Storage Tank it is pumped up on to high land near

Woodcocks Hill and dealt with by being passed through Septic Tanks on to fourteen acres of land eminently suitable for the purpose.

SCAVENGING.—This department is carried out under contract. The Medical Officer of Health recommended last year that covers be provided for all the Dust Carts, the unwholesome contents of which are often distributed broadcast on a windy day. The covers are still conspicuous by their absence. No doubt in the near future this work will be dealt with more efficiently by the Council's own staff.

NUISANCES (see Tables V. and VI.)—Efforts are being made to improve the conditions and positions of the Public House Urinals since there will be no difficulty in arranging for their drainage into the new system of sewers.

The Medical Officer of Health desires to draw the attention of the Council to the practice of carting manure through the Town during the day time. The carts are often heavily laden, and some of the contents not infrequently shake off into the street. The removal of manure, especially in the central and busy parts of the Town, should be carried out in the early morning.

ROADS AND STREETS.—Owing to the numerous connections which are being made to the sewers most of the paths and roadways, and particularly the former, are not in very good condition, and until all the houses in the District are connected it will be impossible to properly and thoroughly deal with this question.

If the present rate of progress is maintained during next year all the houses in the District should be connected with the sewers by the end of 1905, and it is to be hoped that the roads will then be dealt with systematically.

The Medical Officer of Health observes that Church Lane, Mill End, has been repaired with good granite instead of the usual field flints, and is in consequence much improved, although the gravel carting is heavy.

HOUSES UNFIT FOR HUMAN HABITATION.—The Closing Order obtained two years ago in reference to the Cottages known as Marble Arch still remains in force.

PREMISES UNDER SUPERVISION. (Dairies, Cowsheds, and Milkshops).—These have been regularly inspected. The Council will no doubt be in a better position to improve the conditions of these premises when the connections to the main drainage have been made.

Whilst considering the question of Milk Supplies, the Medical Officer of Health would again draw attention to the unfavourable conditions under which milk is obtained, stored, and then purveyed to the Public. It is needless to go into details; "he who runs may read" and observe for himself. Less care is taken with our cows than our horses, for what reason one is quite at a loss to understand. Everyone knows that milk is a most "explosive" fluid, and but little care is taken to see the milk is obtained, as it ought to be, under conditions of the most scrupulous cleanliness both on the part of the milker and the cow herself. The milker's hands should be thoroughly washed, also the udders and teats of the cow, before any milking is begun.

A further point to be urged is that all Dairy Cows should be regularly inspected by a reliable Veterinary Expert from time to time, so that incipient disease or uncleanness in the cow may be detected. Prevention is better than cure. It is highly desirable that no preservatives should be added to milk in order to enhance its keeping powers; the constant ingestion of drugs, etc., even in small quantities, must be harmful to the consumer.

SLAUGHTER-HOUSES.—Pending the general demand for Public Abattoirs in Towns of any importance, the Council should take every precaution that the existing Slaughter Houses are kept in an efficient sanitary state consistent with their construction.

FACTORY AND WORKSHOP ACT, 1901.—The Factories and Workshops in the District have been regularly inspected.

During the year 1905 when most, if not all, of the Factories and Workshops will be connected with the Sewerage Scheme, opportunity will be afforded for a more detailed examination to be made, and consequent improvement as regards the sanitation of the premises.

Thirty-seven Workshops have been inspected during the year as follows :—

Bakeries	...	...	...	...	...	8
Millinery and Dressmaking Establishments						9
Builders' and Plumbers' Shops	...	...				5
Wheelwrights' and Blacksmiths' Shops	...					3
Cycle-repairing Shops	...	...	...			3
Tailoring Shops	...	...	...	...		3
Boot Manufactories	...	...	...	...		1
Miscellaneous Workshops	...	...	...	...		5

THE EDUCATION ACT. (Elementary Schools).—The recent legislation on Education brings into prominence the County as a unit (a very convenient one). The Education Act places the County or Borough as the case may be, in the closest relationship to the Sanitary Authority. There can be no doubt that the aims and requirements of the Health and Educational Authorities are virtually synonymous, although working from a different point of view.

Up to the present too much attention has been paid to the mind, largely overlooking the fact as to how the body has been nourished and envired. The mind or brain of a child must be in a fit condition to receive education; in many instances one is inclined to think that the body is sacrificed to the mind.

This is a serious and national question, and those who have the interests of the Empire at heart cannot fail to consider whether in our endeavour to impart knowledge we are not allowing the physical nourishment and training of the rising generation to be neglected.

The time has arrived when some further attempts should be made to exclude children wholly or partially from school who by their attendance are damaging their own health or those of their fellow pupils. The State insists that every child must attend School unless physically unfit ; it is the duty of the State to go further and see that the amount of study required is of such a nature that can be borne without injuriously affecting the child's body.

In many instances little is known of the true home surroundings of children attending the Elementary Schools ; bad food, late hours, and insanitary conditions may be their lot on returning from School ; there is no wonder that many of these children when at School are heavy, drowsy and stupid.

A further point of the utmost importance whilst pursuing this subject is the earliest age at which children should attend School. At present the age of three years is optional, the age of five years is compulsory. No child should attend School before the age of five years. All the infectious diseases are much more likely to be contracted before the age of five than after. This statement applies to such diseases as Diphtheria, Scarlet Fever, Measles and Whooping Cough, &c. There are reasonable grounds for considering that Infant Schools are largely responsible for the spread of the above-mentioned diseases. Apparently but little advantage is to be gained by sending children of these tender years into rooms where there is every prospect of the germs of disease being present whether latent or active. It would be much better for these little ones that they should be using their bodies and minds in ways more in accordance with the dictates of nature.

The Medical Officer of Health again with great pleasure recognises the great help afforded by the Clerk, Inspector of Nuisances, Collector of Rates, the District Registrar of Births and Deaths, and the Manager of the Water Works in giving information of value in the framing of this Report.



TABLE I.

**Vital Statistics of Whole District during 1904 and previous years.
Rickmansworth Urban.**

Year.	Population estimated to middle of each Year.	Births.		Total Deaths registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the Dis't	Deaths of Residents registered in Public Institutions beyond the Dis't	Nett. Deaths at all ages belonging to the District.	
		Number.	Rate.*	Under 1 year of age.		At all ages.					Number.	Rate.*
				Number.	Rate per 1,000 Births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1891.	4769†	—	—	—	—	—	—	—	—	—	—	—
Half- Year 1898.	5780	91	31.4	12	131.8	36	12.1	—	—	—	35	12.0
1899.	5885	160	27.2	17	106.2	57	10.0	—	—	2	59	10.0
1900.	5550	171	30.8	16	93.5	51	9.1	—	—	3	54	9.7
1901.	5640	155	27.4	16	103.2	56	9.9	—	—	5	61	10.8
1902.	5983	152	25.3	16	105.2	78	13.0	—	—	10	88	14.6
1903.	6155	163	27.3	19	113.1	61	9.9	—	—	10	71	11.5
Aver- ages for years 98-1903	5833	163	28.2	17.4	108.8	61.6	10.7	—	—	5.5	66.9	11.4
1904	6245	157	25.1	10	63.7	53	9.3	—	—	6	64	10.2

† No other data available.

* Rates calculated per 1,000 of estimated population.

Total population of all ages, 5627

Number of inhabited houses, 1181

Average number of persons per house, 4.76

At Census of 1901.

Area of District in acres (exclusive of area covered by water), 556.

Institutions outside the District receiving sick and infirm persons from the District.

Watford Union Workhouse.

Watford District Joint Isolation Hospital.

Watford District Cottage Hospital.

Hill End Asylum, St. Albans.

TABLE II.

**Vital Statistics of separate Localities in 1904 and previous years.
Rickmansworth Urban District.**

Names of Localities		Rickmansworth.				Croxley Green.				Mill End.			
Year.	Population estimated to middle of each Year	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year	Births registered.	Deaths at all Ages.	Deaths under 1 year.	
1898 Half-Year. }	3145	49	16	4	1850	34	15	6	785	8	4	2	
1899.	3200	76	33	8	1895	56	20	6	790	28	6	3	
1900.	3000	87	30	8	1750	56	16	4	800	28	8	4	
1901.	3040	82	36	10	1790	46	17	3	810	27	8	3	
1902.	3204	82	39	6	1834	43	25	5	950	27	14	5	
1903.	3230	87	36	8	1975	58	20	6	950	23	15	5	
Averages of Years 1898 to 1903.	3136	82.2	34.5	8	1849	53.3	20.5	5.4	847	25.6	10	4	
1904	3285	84	35	4	1970	42	20	2	990	31	9	4	

TABLE III.

**Cases of Infectious Disease notified during the Year 1904.
Rickmansworth Urban District.**

Notifiable Disease.	Cases notified in Whole District.							Total Cases notified in each Locality.			No. of Cases removed to Hospital from each Locality.		
	At all Ages.	At Ages—Years.						Rickmansworth.	Croxley Green.	Mill End.	Rickmansworth.	Croxley Green.	Mill End.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.						
Small-pox ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken Pox...	6	1	4	1	—	—	—	2	1	3	—	—	—
Cholera ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria ...	9	—	2	5	1	1	—	8	1	—	3	1	—
Membranous croup	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas ...	6	—	—	—	—	3	3	4	—	2	—	—	—
Scarlet fever ...	15	—	4	9	2	—	—	2	7	6	2	5	6
Typhus fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric fever ...	3	—	—	1	—	2	—	2	1	—	2	—	—
Relapsing fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals ...	39	1	10	16	3	6	3	18	10	11	7	6	6

Isolation Hospital: Watford Joint District Isolation Hospital. Situated in the Watford Rural District.

TABLE IV.

Cause of, and Ages at Death, during Year 1904.
Rickmansworth Urban District.

Causes of Death.	Deaths in whole District at subjoined Ages.							Deaths in or belonging to Localities at all Ages.			Deaths in Public Institutions in the District.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Rickmansw'rth	Croxley Green.	Mill End.	
Small-pox	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—
Scarlet fever	1	—	—	1	—	—	—	—	1	—	—
Whooping-cough	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and mem- branous croup	1	—	1	—	—	—	—	1	—	—	—
Croup	—	—	—	—	—	—	—	—	—	—	—
Fever { Typhus	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—
Epidemic influenza	1	—	—	—	—	1	—	1	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa	—	—	—	—	—	—	—	—	—	—	—
Enteritis	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	—	—	—	—
Other septic diseases	1	—	—	—	1	—	—	1	—	—	—
Phthisis	2	—	—	—	—	2	—	1	1	—	—
Other tubercular diseases	6	1	2	—	2	1	—	4	—	2	—
Cancer, malignant disease	6	—	—	—	—	4	2	3	2	1	—
Bronchitis	5	1	—	—	1	1	2	1	4	—	—
Pneumonia	4	—	2	—	—	—	2	2	1	1	—
Pleurisy	—	—	—	—	—	—	—	—	—	—	—
Other diseases of Res- piratory organs	1	—	—	—	—	—	1	1	—	—	—
Alcoholism } Cirrhosis of liver }	3	—	—	—	—	3	—	3	—	—	—
Venereal diseases	—	—	—	—	—	—	—	—	—	—	—
Premature birth	4	4	—	—	—	—	—	2	1	1	—
Diseases and accidents of parturition	—	—	—	—	—	—	—	—	—	—	—
Heart diseases	5	—	—	—	—	2	3	3	2	—	—
Accidents	3	—	—	—	—	2	1	2	1	—	—
Suicides	1	—	—	—	—	1	—	1	—	—	—
All other causes	20	4	1	—	—	3	12	9	7	4	—
All causes	64	10	6	1	4	20	23	35	20	9	—

V.

RICKMANSWORTH URBAN DISTRICT COUNCIL.

INSPECTOR'S REPORT.

Sanitary Work completed in the Year 1904.

Total No. of Complaints received ...	...	...	...	114
„ „ Houses and premises visited	...	...	...	892
Houses cleansed and repaired	...	...	...	4
Notices served	...	...	...	26
Privy or sink cesspools emptied	...	...	...	58
Accumulations of offensive matter removed	...	...	...	8
House Drains—Repaired, cleansed, trapped, &c.(not including Houses newly drained)	...	...	...	26
Smoke-test applied	...	...	...	3
Houses connected with Sewers	...	...	...	661
Water Supply—Samples for Analysis	...	...	...	6
Wells closed	...	...	...	4
Houses connected with water mains...	...	...	...	93
Night soil and House refuse removal—Complaints received and attended to	...	...	...	10
Infectious Disease—Patients removed to Isolation Hospital	...	...	...	19
Houses inspected	...	...	...	35
Houses disinfected	...	...	...	23
Bedding, &c. removed to steam disinfectors	...	...	...	23
Schools—Visits made	...	...	...	...Frequent.
Bakehouses—No. on Register	...	...	11	} Regularly inspected
Dairies and Cowsheds—No. on Register	...	...	17	
Slaughter Houses—No. on Register	...	...	8	
New Buildings—Plans passed	...	...	...	21
Canal Boats Acts, 1877 and 1884—No. of boats inspected...	...	...	...	45
No. of Contraventions	{ Certificate not identifying Owner with boat 1 Absence of Certificate ... 5 Cabins requiring painting and repair ... 1 Female over 12 improperly occupying Cabin 1			8

NOTE.—The work of redraining houses in the district is under the Surveyor's Department and it is therefore difficult to properly proportion the Sanitary Inspector's work this year, the Inspector being also the Surveyor.

VI.

SUMMARY OF WORK.

Done through the Sanitary Inspector in the Urban Sanitary District of Rickmansworth during the year ended December 31st, 1904, as required by the Hertfordshire County Council.

	Total No. for year.	Result of Inspection, &c.
1. Complaints received	114	{ in 15 instances no nuisance existed at the time of visit.
2. Nuisances detected without complaint	28	
3. Nuisances abated	126	
4. Notices served... ..	26	
5. Summonses taken out	—	
6. Convictions	—	
7. Cottages inspected	35	
8. Lodging-houses inspected	—	
9. Slaughter-houses inspected	8	on Register } Frequent " } " } Inspections "
10. Bakehouses inspected	11	
11. Dairies and Milk shops inspected	10	
12. Cowsheds inspected	7	
13. Workshops inspected... ..	37	
14. Filthy houses cleansed sec. 46 Public Heath Act, 1875	2	
15. Houses disinfected	23	
16. Overcrowding abated	—	
17. Houses placed in habitable repair	1	
18. Houses closed	—	
19. Houses erected or re-built for which Water "Certificates" were applied	—	
20. "Certificates" granted	—	
21. " deferred	—	
22. Wells sunk, or improved supplies of water afforded	—	
23. Wells cleansed or repaired	—	
24. Wells closed	4	
25. Houses connected with sewers	661	
26. " " with water mains	93	
27. Earth pail or improved Privies constructed or existing Privies altered	—	
28. Privies and W.C.'s repaired; W.C.'s supplied with water	—	
29. Cisterns cleaned, repaired or covered	—	
30. Animals improperly kept	2	
31. Samples of water taken for Analysis	6	
32. Compensation paid for destruction of infected bedding	2	
33. Seizure of unsound Meat, &c.	—	

(Signed) ALBERT FREEMAN.

BULLETIN OF WOUNDS

of the Department of the Army, Office of the Surgeon General, Washington, D. C., 1901, as published by the Surgeon General's Office.

No. of Cases	Total	Percentage
1	100	100
2	100	100
3	100	100
4	100	100
5	100	100
6	100	100
7	100	100
8	100	100
9	100	100
10	100	100
11	100	100
12	100	100
13	100	100
14	100	100
15	100	100
16	100	100
17	100	100
18	100	100
19	100	100
20	100	100
21	100	100
22	100	100
23	100	100
24	100	100