[Report 1904] / Medical Officer of Health, Doncaster R.D.C.

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

DONCASTER

Rural District Council.

. Annual Report .

... OF THE ...

Medical Officer of Health.

FOR 1904.

C. J. RUSSELL McLEAN, M.D., D.P.H.

Presented January 7th, 1905.

Doncaster:

THE "GAZETTE" CO. LTD., GENERAL PRINTERS.

ANNUAL REPORT

Of the Medical Officer of Health for the Year 1905.

To the Chairman and Members of the

Doncaster Rural District Council.

GENTLEMEN,

I have the honour to submit for your consideration my Report on the health and sanitary condition of your district during the year 1904,

The district, comprising an area of 91,704 acres, is divided into five registration sub-districts, containing 45 parishes.

Inhabited houses in the district number ...	6698
Empty ,, ,, ,, ...	185
Giving a total of	6883
New houses completed during the year (included)	130
Population (census 1901)	27820
Population (estimated to the 1st July, 1904) ...	30620
Average number of persons per house	4·5
Do. do. do. do. (Yorkshire)	4·7
Average number of persons per acre	·33
Do. do. do. do. (Yorkshire)	0·92
The gross estimated rental March, 1904, was	£377,586
The rateable value for Agricultural land March, 1904, was	£57,369
Do. do. other hereditaments ...	£221,902
Total	£279,271

ALTITUDE.

The height above sea level at various places in the district is as follows:—

Fenwick,	Bench mark,	near Railway gates ...	21·6	feet
Askern	,, ,,	on Church ...	31·2	,,
Bentley	,, ,,	near Chapel ...	31·2	,,
Bawtry	,, ,,	on Pump, High street	35·9	,,
Campsall	,, ,,	on Church	58·0	,,
Thurnscoe	,, ,,	,, ,, ...	132·7	,,
Conisboro'	,, ,,	,, ,, ...	211·5	,,
Clifton	,, ,,	near Manor House ...	425·8	,,

INDUSTRIES.

These are chiefly coal-mining and agriculture, but also extensive glass and tile works, lime quarrying, brick making, brewing, malting, and sugar boiling works. A large extension of coal mining is shortly expected in several parts of the district.

BUILDING OPERATIONS.

These were not so extensive as in the preceding three years, and were as usual chiefly confined to the mining centres, where cottage houses are still in demand. Owing to the opening up of new coal fields in different parts of the district, there are prospects of a large increase in the erection of houses in the near future. There were 98 plans of new buildings submitted during the year, and of these 78 were approved and 20 rejected. Several wooden structures were erected in different parts of the district, but two of these have been removed. In several cases these buildings are very unsightly, and their removal should be demanded.

METEOROLOGY. (Table XII.)

The climatic conditions of this year were of a somewhat opposite character to those of 1903, especially as regards rainfall. In the previous year we had excessive

rain, winds, and summer temperature below the average. This year there was less than the usual rain fall and wind, whilst the summer temperature was about the average. The average for the monthly temperature for 1904 was, however, lower by nearly a quarter of a degree than that for 1903. The early summer was favourable for grass, the hay crops being good and well gathered. There was excessive sunshine in July and August, which, with the great absence of moisture, led to scorching of pastures and crops, and depreciation in the quantity and quality of grain. The root crops were reported as about an average. Until well into November the ground remained very hard, many springs and wells having dried up, and but for the excessive rainfall of the previous year, which filled up all the underground reservoirs, there would have been greater shortage of water than was the case. With a continuance of low rainfall during the Spring of 1905, there may probably be trouble next summer due to shortage of water. The health of the district as regards the ordinary diseases has been slightly below the average, and there has been great prevalence of infectious diseases, especially of Infantile Diarrhœa and Typhoid Fever, the excessive dryness of the soil tending probably to permit of an accumulation of pollution which in ordinary seasons, and with normal conditions of rainfall, gets washed away.

VITAL STATISTICS.

POPULATION.

At the Census of 1891 the population of the district was 20,050; at that of 1901, including the new Carrhouse and Elmfield district, it had risen to 27,819; and on July 1st of this year I estimated the population to be 30,620,

Calculated from the number of occupied houses in the district, viz., 6,698, and allowing the Yorkshire average of 4·7 persons to each house, the population figure is 31,480.

No account is taken of the temporary increase in population due to the presence of several hundred men engaged on the construction of new railways and canals in the district.

The *natural increase* for the year or excess of births over deaths is 534, this alone being more than the estimated increase, and suggesting that the population is really more than the above figure. The chief increase in the population has taken place in the *Barmborough* sub-district, which contains the mining centres of Denaby Main and Thurnscoe, the natural increase here alone being 430. In the *Campsall* sub-district there is also an increase, chiefly contributed by the parish of Bentley, where there is an annual rise in the population of about 52. The *sub-district of Doncaster* (Carrhouse and Elmfield) shows an increase in population, but not to the same extent as last year. In the *sub-districts* of *Bawtry* and *Tickhill* the population is practically stationary, or shows slight decrease.

BIRTH RATE.

There were 1,171 births registered in the whole district during the year, namely, 600 males and 571 females, yielding a *birth-rate of 38·2 per 1000* persons living, and 3·9 above the average of the nine preceding years. The birth-rate is very high.

In England and Wales (Rural) the rate was 26·8.

In the sub-districts the birth rate was as follows:—

Barmborough	46·0	per 1,000
Bawtry	24·8	,,
Campsall	22·0	,,
Doncaster	35·5	,,
Tickhill	30·1	,,

In the Parish of Conisboro' the birth rate was 52·6 per 1000

,,	,,	Denaby	,,	45·1	,,
,,	,,	Thurnscoe	,,	54·8	,,
,,	,,	Bawtry	,,	23·7	,,
,,	,,	Wadworth	,,	26·5	,,

No information is given by the Registrar of the Campsall sub-district as to the number of births in Bentley, Askern or other parishes in that area.

ILLEGITIMATE BIRTH RATE.

Of the births 37 were illegitimate, this being equal to 3·1 per cent. of the total births, or 1·20 per 1000 of population.

DEATH RATE.

There were registered in the whole district 637 deaths, —males 333, females 304, yielding a *death-rate of 20·7 per 1000.*

CORRECTED DEATH RATE.

Making allowance for deaths notified, of residents of the district who died outside it, and for those of strangers within it, the total number of deaths for the year is ~~615·8~~, 653 which yields a *true or correct death rate of 21·2 per thousand*, this being 4·1 above the average of the preceding seven years. The death rate in England and Wales (Rural) was 15·3.

In the sub-districts the death-rate was as follows:—

Barmborough	23·3	per 1000
Bawtry	14·8	,,
Campsall	16·7	,,
Doncaster	15·7	,,
Tickhill	18·4	,,

In the Parish of	Askern	the death-rate was	22·0	per	1000
,, ,,	Bawtry	,, ,,	12·3	,,	
,, ,,	Bentley	,, ,,	12·5	,,	
,, ,,	Conisboro'	,, ,,	27·5	,,	
,, ,,	Denaby	,, ,,	30·3	,,	
,, ,,	Wadworth	,, ,,	14-1	,,	
,, ,,	Thurnscoe	,, ,,	21·7	,,	

The death-rate from ordinary diseases (446) was 14·5 per 1000; that from epidemic or preventible diseases (191) was 6·2, this latter being a very high rate.

INFANTILE DEATH RATE.

There were no fewer than 238 deaths reported of children *under one year old*, and which, calculated on the number of births registered (1,171), yields an *infantile death-rate of 203·2 per 1000* ***births,*** or more than one death in *every 5 children born.* This is a very excessive rate, and shows an enormous waste of infant life. Of the 238 deaths, 57 were due to Epidemic Diarrhœa, 20 to Whooping Cough, 27 to Diseases of the Chest, and no fewer than 34 to Premature Birth. Last year there were 187 deaths, yielding a rate of 195, whilst in 1902 the rate was 153·9.

In rural England and Wales the rate was 125.

The rates in various districts and parishes for this and the preceding three years are as follows:—

	1901.	1902.	1903.	1904.
The whole district ...	197	153·9	195·4	203·2
Barmboro' sub-district..	220	165·7	221·2	228·4
Bawtry ,,	150	48·1	126·5	117
Campsall ,,	83	127·6	138·6	88
Doncaster ,,	...	.	...	259
Tickhill ,,	210	46·5	148·9	185·1
Conisborough Parish ...	212	121	220·9	237·8
Denaby ,,	248	264	276·1	272·1
Thurnscoe ,,	260	260	227·8	239·7
Bentley ,,	No information received as to number of Births in this parish			

Except as regards the sub-district of Doncaster, where the figures are as yet too small to be reliable, it will be seen that the highest child mortality is in the densely populated mining centres. The rates in Denaby, Thurnscoe, and Conisbro' are very excessive, the three townships together with a combined population of over 15,000 persons yielding an infantile death-rate equal to 245 per 1000 ***births,*** or a death of one child out of every four born—a terrible waste of child life. This question will be referred to later on when dealing with the question of Infantile Diarrhœa.

1. ORDINARY or NON-PREVENTIBLE DISEASES.

(446 deaths = 14·5 per 1000). There were 446 deaths registered during the year from all the ordinary diseases, yielding an ordinary or non-preventible death-rate of 14·5 per 1000. In the previous year there were 379 deaths (12.5 per 1000), and in the year before that there were 368 deaths (12·6 per 1000. The rate for this year is in excess of that for several years.

RESPIRATORY DISEASES (86 death = 2·8 per 1000). There were 86 deaths caused by Chest Affection as against 89 last year, and 90 in the year previous. Of the deaths this year 42 were due to Pneumonia (Inflammation of the Lungs), and 44 to Bronchitis. Consumption of the Lungs is not included under this heading.

CIRCULATORY DISEASES (30 = ·97). There were 30 deaths caused by affections of the Heart compared with 29 last year and 30 in the previous one.

CANCER (20 = ·65). There were 20 deaths registered from various forms of Cancer during the year as compared with 17 last year and 18 in the year previous. Of the cases this year 15 were Abdominal, 3 Pelvic, and 2 Breast.

DISEASES OF PARTURITION (6 = ·19), Six deaths were reported due to accidents of child-birth, over and above 4 deaths from lying-in Fever, referred to hereafter; one death was reported in the previous year.

PREMATURE BIRTH (34 = 1·1). 34 deaths were registered from this cause. Last year there were 24, and in 1902 11. The remarkable increase is difficult to account for.

CORONER'S CERTIFICATE of death was given in 19 cases, 18 being the result of accident and one of suicide, the rate being ·61 per 1000. In 1903 there were 16 cases, being the same as in the preceding year.

UNCERTIFIED DEATHS numbered 3 (= ·09) as compared with the same figure last year, and 6 in the year previous. So low a number of unregistered deaths is very satisfactory, as from a theoretical point of view there should be no deaths in the country where the cause is unknown.

PHTHISIS PULMONALIS, or Consumption of the Lungs (26 deaths = 0·84 per 1000). There were 26 deaths registered from Consumption during the year, yielding a rate of ·84 per 1000, or 1 in every 17·1 of the deaths from ordinary diseases. Being a preventible disease, it would more properly be included under that heading.

Last year there were 21 deaths, and in 1902 there were 16. The rate, though somewhat above our average, is under that of the country generally, as is to be expected in a Rural district.

OTHER TUBERCULAR DISEASES (13 = 0·42.) Deaths from these diseases numbered 13, and of those 4 were due to an affection of the Abdomen, 6 to the Head, and 3 to general Tuberculosis.

It is estimated that 15,000 children under ten years of age die from the various forms of Tubercular diseases in England every year. The total deaths from all forms of Tubercular diseases number 39, yielding a death-rate of 1·27. Last year there were 43 deaths, giving a rate of 1·42. The disease is declining in adults (Consumption of Lungs), but increasing in children (other forms of Tubercle).

TUBERCULOSIS. In my last annual report I recommended certain measures as likely to be of service in preventing the spread of the disease. These consisted in—

1st.—Voluntary Notification of every case of consumption.

2nd.—Removal of cases in the early stage of the disease to a Sanitorium.

3rd.—Warning the patient and friends as to the danger arising from the sputum of consumptives.

4th.—Disinfection of all consumption case-houses when the patient is removed to Sanatorium, or at the termination of the illness.

5th.—Exclusion of all Tuberculous meat and milk from the market.

6th.—Improvement in the Sanitary conditions of dwelling-houses, schools, or workshops and localities, and prevention of overcrowding.

VOLUNTARY NOTIFICATION OF CONSUMPTION.

On my recommendation you have adopted this measure, and it comes into force in January, 1905. By this means the Sanitary Authority will learn of the existence of some proportion of the cases of Consumption in the early stages, and be in a position to advise as to the measures already mentioned. I have drawn up a leaflet for distribution to such cases, giving patients and their attendants the special instructions necessary in order to try and prevent a further spread of the disease either in their own families or elsewhere.

II. EPIDEMIC or PREVENTIBLE DISEASES.

(191 deaths = 6·22 per 1000). There were 191 deaths registered as caused by all the infectious or preventible diseases, compared with 120 deaths last year, and 81 in the year previous.

The figure for this year is very high, and is chiefly due to there being 82 deaths from Diarrhœa and Enteritis, 42 from Whooping Cough, and 37 from Measles, all of these being affections to which the public generally give little heed, and consider unimportant, Measles and Whooping Cough alone causing 72 more deaths this year than last.

MEASLES (37 deaths = 1·2 per 1000). There were 37 deaths in the district due to Measles. Last year there was only one (a very exceptional condition), and in the year

previous 18. The death-rate for this year is high. At Conisbro', in the third quarter, there were 22 deaths, and at Denaby there were 4, and of the total deaths 34 were in children under 5 years of age. The disease this year followed a regular circuit in the district, and chiefly in the summer months—appearing in epidemic form at Warmsworth, Conisbro', Clayton-with-Frickley, Campsall, Bentley, Fenwick and Moss, Awkley, Edlington, and Arksey. At these places, except Conisbro' and Bentley, the schools were closed. A few cases also occurred at Bawtry and Kirk Bramwith. This is not a notifiable disease, but, by the kind co-operation of the school authorities, early information of many of the outbreaks was received. There are some 66 towns and 27 Rural districts in England where Measles is notified, but at present I have not much faith in the measure being made compulsory. Nothing of much use can be done to stay the epidemic course of this affection with the exception of school closure. This method is undoubtedly of much use, and, if adopted in good time, suppresses the disease in less than a month, especially as regards infant departments ; in fact, I am of opinion that if all children under 5 or 6 years of age were excluded from our schools, that a large number of them would escape the disease altogether, and result in a great and permanent reduction in the death-rate, as the older a child is after the second year of life, the less and less chance it has of attack, and a still less chance even if it does acquire the disease of it ending fatally. Seventy-five per cent. of Measles cases, and 90-95 per cent. of the deaths are in young children (3 to 6 years). In Switzerland the infant schools are closed for a period of two months during the measles season with most beneficial results.

The disease is highly infectious, and especially so in the very early stages, which renders it particularly liable to be spread in very young children by school agencies, whilst notwithstanding the fact that about ***13,000*** children die every year in England from Measles alone, many parents cannot be

induced to see that it is a dangerous disease, and that by their visiting and receiving visits during the prevalence of the affection, they also tend to increase its spread, nor can anything be more unfortunate than the popular belief almost amounting to fatalism, that children must contract measles some time, with the result that by culpable neglect many children are attacked who should otherwise have escaped.

WHOOPING COUGH (42 deaths = 1·36 per 1000.)

There were no less than 42 deaths from this disease during the year, yielding a death-rate of 1·36. In the two previous years there were respectively 6 and 10 deaths. This rate is somewhat high.

The disease was prevalent chiefly in Thurnscoe, Conisbro', Denaby, and Bawtry. At Conisbro' there were 24 deaths, mainly in the third quarter, at Denaby 7, and at Thurnscoe 6. All of these deaths occurred in children under 5 years of age, in this respect resembling Measles, as is usually the case. In many points these two affections are much alike. They are both diseases of early life—they are in many instances spread by absolute neglect or indifference—each of them cause a large mortality in young children.

DIARRHŒA AND ENTERITIS (82 deaths = 2·6 per 1000.)

Infantile Diarrhœa, with which is now usually classified Zymotic Enteritis, caused 82 deaths during the year, equal to a rate of 2·6 per 1000, or 1 in every 2·3 of the infectious deaths. This number is excessive, though not quite so high as last year, when there were 94 deaths registered. In 1902 there were 44. The disease was most prevalent in August and September, when there were 54 deaths. Of the deaths 36 occurred at Conisboro', 34 at Denaby, and 8 at Thurnscoe, these being the denser population areas.

The chief causes of this excessive mortality are injudicious feeding of infants, parental poverty and want of maternal care, dirty homes, insanitary surroundings, and pollution

of food, especially milk, by the agency of the common house fly. Of these I think the most important is injudicious or improper feeding, and if mothers would only learn and realize that the best food for a baby is its mother's milk, and so feed them instead of resorting to substitutes, the present terrible infantile mortality would, I am certain, soon be reduced.

Unfortunately many of the present day mothers will not realize this fact, although, of the 150,000 children which die under a year old (over 400 a day), three-quarters are artificially fed. In Liverpool, during the past summer, there were 300 deaths in every 1000 infants under 3 months old who were artificially fed, compared with 20 per 1000 who were nursed at the breast. In France in 1903 statistics show the mortality of suckled children to be 8 per cent., and of handfed children 61 per cent.

As remedies for the excessive infantile mortality I advise :

1st.—The employment of a lady health visitor in the mining villages. Since the employment of these inspectors, in some districts the deaths of young children has been reduced as much as 60 and 70 per cent. Not only are women inspectors better received by housewives, but they are more naturally adapted for the inspection of children, furniture, bedding, and so forth than the ordinary male Sanitary Inspector. A competent, tactful, and kindly Health visitor who can examine into all the sanitary conditions necessary for a healthy home, such as pertain to clothing, feeding, cleanliness in person, house furniture and cooking utensils, proper window ventilation, the avoidance of overcrowding, and especially one who can impart simple instruction to mothers in the feeding and general management of young children, and give practical directions in cases of infectious diseases, must of necessity be a power for good in reducing the *present* day mortality in infants.

2nd.—The compulsory teaching of the elements of Hygiene and Domestic Economy to girls in their last year of attendance at school. By this means the rising generation of mothers would receive simple instructions in such matters as the care of the home, the feeding, clothing, and bringing up of children, the management of infectious diseases, and in many others pertaining and tending to the welfare of the young. Before, however, such a course of instruction can become general in schools, it is necessary that the teachers themselves become qualified to teach the subject, and I believe that before many years elapse that such a course of instruction will become compulsory in all schools, and possibly at the expense of some other less useful branch of education, as I think it is now universally agreed that there are many subjects crammed into elementary school teaching which are quite useless for the future well-being or needs of the large majority of the children.

3rd.—The formation of a local committee in the several larger townships of ladies who are interested in the welfare of the young, and who would be willing to visit the homes of the people and give instruction on the points above mentioned.

TYPHOID (ENTERIC) FEVER (119 cases, 16 deaths = ·52 per 1000). There were no fewer than 119 cases of this disease notified during the year, and of these 16 ended fatally, giving a death-rate of ·52 per 1000 of population. The attack rate was 3·8 per 1000 of population, and the case mortality 13·4 per cent.

The following are the different rates for the last three years :—

	1902.	1903.	1904
No of cases of Typhoid Fever	20 ...	54 ...	119
No. of deaths from ,,	1 ...	7 ...	16
Case rate per 1000 population	·68 ...	1·79 ...	3·8
Case mortality per cent.....	5 ...	12·9 ...	13·4

Of the total number of cases notified 8 occurred in Askern, 8 in Conisboro', 95 in Denaby, and 8 in other parts of the district.

At Askern the disease was chiefly confined to the Crown Hotel Yard, where the first case was reported in August Four other cases occurred in this yard, and three others in the main street, within a short distance from it. The disease was probably imported by a visitor. On analysing the drinking water from a pump in the yard, I found it seriously polluted, and all the persons using the water were at once warned of this condition. The owner of the property also had his attention drawn to the matter, and the well has since been cleaned out and the top made good. The site of this shallow well, however, renders the water unsafe for drinking purposes and since its condemnation, water for drinking has been obtained from another source. Of the eight cases two ended fatally.

At Conisboro' there were 8 cases of Typhoid Fever, occurring in widely-separated parts of the township, and in

persons having no connection with each other, with different milk and water supplies, and having little in common it is impossible to trace the outbreak except in one instance, where a scavenger was effected, and who probably got the infection in Denaby where he was employed. Of the 8 cases one ended fatally.

Denaby Main. By far the larger number of Typhoid Fever cases reported during the year occurred in this parish, there being no fewer than 95 cases notified. Of these 62 were males, and 33 females.

The cases occurred at the following age periods :

Under one year old	0
Between 1 and 5	5
,, 5 and 15	29
,, 15 and 25	28
,, 25 and 65	33
,, 65 years and upwards	0
Total.....	95

During the year 1903 there were 43 cases of this disease notified in Denaby, the last case occurring in December. In the present year there was not a case reported until April 27th. From this date up to July 14th there were other 4 cases, the 5 cases occurring in four different streets. There were therefore only five cases in the first six months of the year, a period when this disease is usually at its minimum.

On the 3rd of August the 6th case occurred, and soon after this there was a fairly general outbreak. Two streets (properly speaking in New Conisboro') suffered chiefly in the incidence of attack, viz., Balby Street and Blyth Street. The The disease reached its maximum in September, and gradually subsided in October and November. The seasonal incidence was as follows :—

	Total Cases.	Balby Street.	Blyth Street.
1st January to 26th April ...	0	0	0
27th April to 31st July	5	0	0
In August	25	9	15
,, September	46	7	11
,, October	14	5	2
,, November	3	0	1
,, December	2	2	0
Total	95	23	29

Of the 95 cases 11 died, equal to 1·3 per 1000 of population, or 11·5 per cent. of the cases. There were 57 cases removed to hospital from this district, and of these 7 died (6 males and 1 female), equal to 12·2 per cent., and of the 38 cases treated at home 4 males died, equal to 10·5 per cent.

As regards the cause of this outbreak. The *water supply* was carefully examined, but nothing found to show that the disease originated or was being spread by its agency An analysis of the water showed that except for the excessive hardness it was of good quality. Had the disease been caused by polluted water, the outbreak would have been of a more explosive character, and the distribution of the cases would have been more general. As regards the *milk supplies*, nothing definite could be proved Case-houses were found which were respectively supplied by all the eleven milk sellers in the district, and others also where no milk was used at all, or only in the condensed form.

In only two instances had *shellfish* been used, and there was nothing to show that in either case these were to blame. The only remaining causes to be considered, therefore, are the *drainage system and the surroundings of the people.* As mentioned in my report on the cases of the previous year, the prevalence of the privy-midden system of excrement removal

and the closeness of these obsolete abominations to dwellings, are the likeliest explanation of the existence of Typhoid Fever. On account of the dry summer there have not been so many complaints of water gaining access to the ashpits, and the scavenging has on the whole been fairly well attended to, but notwithstanding these conditions such places are a great nuisance in thickly populated districts, especially when used by people who will not keep them clean. Unfortunately there are always people to be found, who by their dirty and untidy habits, are not only a danger to themselves, but also to their neighbours as regards infectious diseases. As regards the *drainage* system, it must be remembered that this was to a large extent in a transition stage during the past two years owing to the laying of new sewers, and that due to this latter condition there was much interference with the surface soil. This, therefore, coupled with the fact that owing to the excessive drought of the past year, whereby the sewers and drains were not well flushed, may possibly have had something to do with the outbreak of the disease. It is my opinion also that Typhoid Fever tends to become epidemic at intervals in some districts, apart from any such defects. I would again refer to the common *house fly*, as a very common carrier of infection from the ashpits to various articles of food, especially milk, stored in places in the house to which they can get access after their hunts in these places. I would also mention another point which is I think of much importance, viz , that Typhoid Fever is more commonly spread by direct personal intercourse than is generally supposed. In several instances in Denaby there was direct evidence of such personal contact being the cause of the illness, as for example, where there was a history of a visit to a Typhoid case by friends living some distance away, and of their being attacked after the usual "incubation" or "hatching" period without any other persons in the vicinity of their houses suffering, as one would have expected to be the case if polluted water or milk, or any other defect in common were the inducing agent.

The preventive measures adopted in order to control the outbreak were as follows : Isolation of patient in hospital whenever possible, disinfection and cleansing of house, and cleaning out of closet and ashpit. Where removal to hospital was objected to, disinfectants and sanitary pails were provided for the discharges, these being removed every second or third day by the scavenger, and the contents buried, a clean disinfected pan being left at the same time. A leaflet giving precautions necessary to avoid catching the disease was delivered to every house in Denaby, and also a special leaflet of precautions necessary in home treated cases whenever this was carried out. In Balby Street and Blyth Street I had most of the ashpits sprayed out with chloride of lime, and, when possible, had the refuse from these thrown direct into the carts, instead of being first deposited on the ground. This latter practice is a most objectionable one, and is probably responsible to a large extent for the spread of the disease, as it is absolutely impossible to cleanse the ground after the removal of the refuse, though the extension of asphalted yards renders such cleansing somewhat easier. If some means could be devised whereby the refuse could be thrown direct into the carts—which might be possible if some modification of sludge cart was used—I am sure a great improvement over existing conditions would be found to take place.

Owing to the extent of the outbreak of Typhoid Fever at Denaby Main, one of the Local Government Board Inspectors visited that district in October, and made extensive investigation as to the cause of the outbreak. His report has not yet been received.

As regards the paving of yards and back street, I am glad to say that progress continues to be made, their being 6,222 square yards (200 houses) laid down at Denaby and New Conisboro' during the year. At Thurnscoe several yards have been attended to, and resolutions have been passed authorising a large extent of back streets in the township

to be asphalted. I hope this matter will now have early attention. In Conisboro' many of the yards might with advantage be paved or asphalted.

SCARLET FEVER (68 cases, 2 deaths = ·06 per 1000).

There were 68 cases notified during the year, causing 2 deaths, as compared with 57 cases causing 2 deaths last year, and 164 cases with 3 deaths in the previous year. The disease has been prevalent at Conisboro' (7 cases). Thurnscoe (21 cases), and Bentley (30 cases), but in no case reached epidemic form.

In Barmboro'	sub-district	there	were	33	cases	with	1 death
,, Bawtry	,,	,,	,,	1	,,	0	,,
,, Campsall	,,	,,	,,	33	,,	1	,,
,, Doncaster	,,	,,	,,	0	,,	0	,,
,, Tickhill	,,	,,	,,	1	,,	0	,,

Of the 68 cases 33 were removed to hospital, 19 of those being from Bentley. In all cases directions were given verbally, and by leaflet, as to the precautions necessary to avoid further spread of the disease, the school authorities notified and the premises disinfected, either on removal of the case to hospital, or at the termination of the illness.

DIPHTHERIA (29 cases, 4 deaths = ·13 per 1000).

There were 29 cases of Diphtheria (including 1 of Membraneous Croup) reported during the year. Of these 4 home-treated ended fatally, equal to ·13 per 1000. Last year there were 20 cases and 5 deaths, and in the year before there were 25 cases and 5 deaths. Of the 29 cases this year 3 occurred at Conisboro', 7 at Thurnscoe, 10 at Wadworth, 3 at Adwick-on-Dearne, 2 at Loversall, and 1 each at Askern, Bentley, Denaby, and Carrhouse. Three cases were admitted to hospital from Thurnscoe and 1 from Wadworth, all of these recovering. The precautions taken against a spread of the disease were much the same as those adopted in cases of Scarlet Fever.

PROVISION OF DIPHTHERIA ANTITOXIN.

On my suggestion the Council have recommended that Diphtheria Antitoxin be supplied to medical practitioners for use during outbreaks of Diphtheria in the district, for the *special* purpose of *protecting* other persons in the affected home, and chiefly for those cases where the cost is otherwise prohibitive. Unfortunately the Local Government Board will not, in the meantime, sanction the supply of the serum for *curative* purposes. I have now made arrangements for supplying Medical Practitioners in the district with the serum, and have notified them to this effect. Yours is probably the first Rural Council in the country to arrange for the supply of what is in my experience a most useful preventive against Diphtheria.

ERYSIPELAS (15 cases, no death.)

Fifteen cases of this disease were reported during the year as against 13 last year, and 11 in the year previous.

SMALL-POX (1 case, no death).

Although there have been a large number of cases of Small-Pox in the West Riding during the year, many of them in districts close to our own, I am glad to say we have only had one case. Last year there were 10 cases. The one this year occurred at New Conisboro' in a young man, and was probably acquired on a visit to a neighbouring township where the disease was present. The patient was removed at once to hospital, and the premises disinfected under my superintendence. All persons who had been in contact with the case were re-vaccinated and kept under my observation for a fortnight. The total outlay in connection with the case was the small one of sixteen shillings.

EPIDEMIC INFLUENZA (3 deaths = ·09 per 1000).

This affection was again prevalent in Spring and Winter, and besides causing 3 deaths, contributed to some extent in causing other diseases to end fatally. It has, however, lost the virulence it had a few years ago

PUERPERAL FEVER (4 deaths = ·12 per 1000.)

There were 4 deaths registered due to lying-in fever during the year. Last year there was one death.

EPIDEMIC JAUNDICE (1 death = ·03 per 1000.)

This uncommon disease, which first appeared in Thurnscoe last year, was again prevalent in the early months of this year. One death resulted.

THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

There were 234 cases of infectious disease notified during the year. Last year there were 160 cases, and in the year preceding 216.

The cases reported this year were:

Small Pox	1
Diphtheria	29
Erysipelas	15
Scarlet Fever	68
Enteric Fever (Typhoid)	119
Puerperal Fever	2
	234

The cases were distributed as follows :—

	Scarlet Fever.	Typhoid Fever.	Diphtheria.
Conisboro'	7	8	3
Denaby	4	95	1
Thurnscoe	21	1	7
Bentley	30	1	1
Askern	0	8	1
Wadworth	1	0	10
Rest of District	5	6	6
	68	119	29

The incidence of Scarlet Fever was heaviest at Bentley and Thurnscoe, that of Typhoid Fever at Denaby Main, and that of Diphtheria at Wadworth and Thurnscoe.

In each case the house was visited as soon as possible after the notification was received the source of the infection investigated, and sanitary defects as regards the dwelling, overcrowding, water supplies, drainage, and other matters enquired into and remedied where necessary.

The school authorities in the affected district were notified of the existence of infectious disease, and of the subsequent disinfection of premises on 115 occasions. There were 160 premises disinfected by Sulphur or Formalin during the year, including 17 houses or rooms which had been occupied by consumptives, and 10 schools on account of the prevalence of infectious disease. Last year the total premises disinfected were 103.

Hospital Isolation.

The following cases were removed to hospital during the year :—

Small Pox	1
Scarlet Fever	33
Typhoid Fever	67
Diphtheria	5
Total.....	106 cases

Of the 106 cases 10 ended fatally, viz., 2 from Scarlet Fever, and 8 from Typhoid Fever.

Schools.

A larger number than usual of the 37 schools in the district required to be closed on account of epidemics of infectious disease, Measles being chiefly responsible for this. The following is a list of the schools with the periods of closure :—

Bawtry	Infant Department	3 weeks in January..	Epidemic of Whooping Cough
Warmsworth..	,, ,,	5 weeks in May-June	Epidemic of Measles

Frickley (Clayton) ..	Infant	Department	3	weeks in	June	Epidemic of Measles
Awkley	,,	,,	3	,,	June	,,
Campsall	,,	,,	3	,,	July	,,
Edlington	,,	,,	4	,,	August ..	,,
Moss (Fenwick)	,,	,,	5	,,	Sept. Oct.	,,
Arksey	,,	,,	3	,,	October ..	,,
Bawtry	,,	,,	1	,,	December.	,, and influenza

Besides these periods of total closure, several schools suffered from diminished attendance of children owing to other affections. At Sprotboro' and Warmsworth several families were excluded on account of the prevalence of Scarlet Fever, at Bawtry, Conisboro', and Denaby on account of Whooping Cough, at Rossington for Chicken Pox, at Bentley and Kirk Bramwith for Measles, and at Awkley and Cantley for Mumps.

The exclusion from the new Education Code which came into force in 1903 of the old Clause, whereby a grant was obtained for children absent from school on account of infectious disease, is a great want in such circumstances. Its removal is a mistake, and, in my opinion, indirectly causes the spread of Infectious diseases amongst children. The loss of such epidemic grant does not, I am glad to know, effect the salaries of the teachers. The teachers of the various schools were immediately notified on the outbreak of any infectious disease in their district; and, again, when the premises were disinfected at the end of the illness. In some cases also they were informed when patients returned home from hospital. In all there were 115 notices sent to teachers during the year. Many of the masters have expressed to me their appreciation of these notices, and in return I have to acknowledge receipt of valuable information from them regarding outbreaks of Measles, Whooping Cough, and other diseases which are not included in the list of notifiable diseases. Ten schools were disinfected during the year.

As already mentioned, the children who suffered from Measles and Whooping Cough were chiefly those of very tender age. In my opinion it is a great mistake either to compel or allow children of five and six years of age to attend school. Attendance should not only not be compulsory till after six years of age, but should actually be prohibited, as up to this age period children are incapable of useful learning, and are quickly headed or surpassed by others beginning lessons later on, say between 6 and 7 years old, whilst the confinement for several hours a day in an atmosphere in which is frequently found to be close, stuffy, or polluted, undoubtedly has a prejudicial effect on the health of many children, and this, apart from what I have already pointed out, are the extra risks run by such young children of acquiring one or other of the infectious diseases. The question of these babies earning a Government grant should surely occupy a position secondary to that of preserving their health, whilst the saving of trouble to many idle mothers who are glad to get their children out of the way, should not be encouraged. Besides this it is well known that in most schools the accommodation is at present too small, and the exclusion of children under six years old (estimated to be 611,000, or 14 per cent. of the children in Elementary Schools), would add so much more room for existing requirements, and possibly save large sums which must otherwise be expended to increase the present accommodation.

At many schools the sanitary arrangements are defective, especially as regards closet accommodation, drainage, and water supply.

Except as regards four schools, viz., New Conisboro', Denaby, and Thurnscoe, where Trough water closets are in use, and Hooton Pagnell, where there is a modified Pail closet arrangement, *all* of the other schools in the district (33) have the abominable old-fashioned privy-midden system for the removal of excreta. At Barnby Dun also a new system is at present being considered. In 32 cases, therefore, privy-

closets exist, a condition of affairs that should be impossible in England at the present day. Owing to the small quantity of ashes or other dry material obtainable at schools, a stinking nuisance is the frequent result, and this is especially the case in summer when no fires are in use, the time of all others when an absorbent material is of most importance in such conveniences. As in the majority of places there is no system of water supply or sewerage, removal of excreta by water carriage is impossible, and a dry method is necessary ; but this should surely be the best available method. In all places, therefore, where a water supply and system of sewers exist, water carriage should be adopted.

The system of *trough closets*, with automatic water flush, which are in use at New Conisboro', Denaby, and Thurnscoe, work fairly well. Attention to the water flush, which is sometimes not worked frequently enough, and to the general cleanliness of the closets, is of course necessary. A similar or modified method should be adopted without delay at Bentley and Old Conisboro' Schools, where, together over 1,000 children are daily assembled. Privy-middens in such places are a disgrace.

In all the other schools in the district, where a public water supply and a system of sewers are not available, the existing privy-closets should be replaced by the *Pail or Pan* method, which is just as much superior to the Privy-midden system as water carriage system is to it. This substitution is being pressed for in many rural houses, and surely it is more necessary that it should be carried out in public schools where the young are compulsorily assembled. In a large majority of the schools there are defects in the system or methods of *drainage*, such as the want of traps or gullies, defective outlets, and badly constructed or blocked drains.

The existing *Lavatory* arrangements and *water supply* at most of the schools is another matter requiring attention.

What is the use of preaching cleanliness if the means to that end do not exist in the very places where it is or should be taught and practised. In four schools only are proper wash basins fixed with a water supply laid on. In the others no proper arrangements exist, everything depending on the kindness of the teacher in providing a wash basin, and fetching water, in many cases from a village pump or well situated some distance away. Such a method is not conducive to cleanliness, and, as in such conditions there is no suitable arrangement for obtaining drinking water, it must and does frequently lead to the children drinking water very unfit for such a purpose. It is not the duty of the teachers to provide water for washing or drinking purposes, though many of them do so. The Education Authorities should be called upon to make such provision. In some cases, as for instance in the very smallest schools, there may be difficulties in the way of this, but in many others there is no reason why a well should not be bored and good water obtained which might be forced up into a cistern, and would then supply water for lavatory and other purposes.

The attention of the authorities might also be drawn to the rough state of many of the playgrounds at our schools, which are in a dangerous condition for little children or even the older ones to play in. Under this heading it is interesting to note that garden plots are being provided at some schools in the country, where children who care to are instructed in the elements of gardening. This is common in America, and I was pleased to find such an arrangement in existence at one school in this district during the past year. There are also conditions pertaining to the interior of some of the older schools requiring attention, but I leave a description of these, and also the important question of periodical medical inspection of schools and school children to a future occasion, having pointed out what I take to be some of the most important responsibilities of a Health Authority as regards the subject.

WATER SUPPLIES.

Few changes have taken place in the water supplies of the district during the year.

Conisboro' and Denaby are supplied from a deep bore well (265ft.) in the rock overlying the coal measures, the water being pumped by the Colliery Company to two reservoirs,—one for each township—from whence it gravitates to the consumers. Doubts were raised with regard to the purity of the water supplying Denaby during the autumn, and the possibility of its being the means of the spread of Typhoid Fever in that district. On a full analysis of the water I found it to be of pure quality, though rather hard. The water in the town well, in Wellgate, Conisbro', having been found to be polluted, the well is to be closed.

As mentioned in my last report, the supply at *Thurnscoe* has for some time been too little for the demand in that rapidly growing district. Terms have therefore been made to receive a supply of water from a neighbouring authority, the water being received into a reservoir at a sufficient height above the village to enable all parts of it to be supplied by gravitation. This Reservoir, which has cost over £3,300, and which holds about 130,000 gallons, or a three days' supply, is now completed, and as the former mains are all that are required for distribution, the supply of water will shortly be completed. During the past year the new water has been temporarily supplied direct from the mains of the neighbouring authority.

The supply from the Doncaster Corporation main to the parishes of *Carrhouse and Elmfield, Warmsworth*, and parts of *Bentley* and *Cantley*, has been satisfactory, except for the fact that there have not been more connections made in the Bentley district. In both Bentley proper and Bentley Road it is very desirable that every house have this supply, as the water from the existing shallow wells is either of polluted or doubtful

quality. This is all the more desirable also, as it is hoped that a complete system of sewerage may before long be laid in the parish. During the year there were only 14 houses connected to the main, making a total of 91. A year ago the Corporation carried a 3-inch water main through the village, and if owners would only connect up their properties, there is every probability that the Doncaster authorities would still further extend the system of supply. All new property in the *Carrhouse* district is supplied by this water.

The bore wells at *Bawtry*, *Rossington*, and *Austerfield* continue to give satisfaction.

The supplies of water to *Loversal*, *Barmborough*, *Adwick-on-Dearne*, *Brodsworth*, *Clayton*, *Skellow*, *Sprotborough*, and *Hooton Pagnell* are satisfactory. The supply at *Barmborough* threatened to fail at the end of autumn, one of the feeders completely drying up. A great improvement could be effected at Hooton Pagnell by having the present water supply arranged so that all houses in the village could have the water by gravitation. A Local Government Board enquiry was held on the 22nd March relative to the supply of water to New Adwick-on-Dearne.

The shallow well supplies at *Askern*, *Armthorpe*, *Awkley*, *Barnby Dun*, *Norton*, *Wadworth*, and *Braithwell*, *Edlington*, and *Micklebring* are of an inferior quality, and in some instances too far from the consumers. In several cases the wells ~~and~~ foul, and require cleaning out. At *Askern*, where the supply is at present limited to the public shallow well of doubtful quality, I have recommended that a spring from the limestone rock be fenced in, and have a pump affixed. The water is exceedingly hard, but otherwise is of good quality. It has been freely used in the past for drinking purposes, but as it it situated close to the highway, it requires protection. If the supply could have been tapped at a point higher up than the houses, it would have been more *permanently* safe, and could

then, perhaps, have been stored and allowed to gravitate to the consumers, but even as it is, the protection of the present outlet and the provision of means for obtaining the water which I have suggested, will be an improvement over existing conditions. Failing this supply, it will be necessary to consider whether water should not be obtained by boring.

DRAINAGE AND SEWERAGE.

The systems of drainage and sewerage at Conisboro', Denaby, and Thurnscoe have been considerably added to throughout the year. The new system at Denaby and New Conisboro' has been completed, and should give satisfaction. At Thurnscoe a length of 150 yards is being temporarily relaid owing to subsidence of the present sewer caused by colliery workings.

Complaints are still made, especially in Conisboro', of unpleasant smells from the open manholes. I have on several occasions pointed out the undesirable and dangerous conditions caused by *ventilation* of the sewers at the street level *in thickly populated districts*, and I suggest that a number of ventilating shafts be erected at Conisboro', as in a town of this nature characterised by its high hills and deep vales, there is bound to be considerable movement of ~~surface~~ Sewer gases towards the outlets, and these are therefore best placed where they will cause no nuisance. All of the vent shafts should be provided with rust pockets, otherwise they soon become blocked at the bottom end by an accumulation of rust scale. To be effective, more ventilating shafts are required than manholes, inasmuch as owing to the length of the former from the sewer, there is a diminished rate of gas extraction, and if only a few are erected, with a long distance between each, their effect is possibly very small. Besides this, there should be frequent *flushing* of the sewers in order to remove putrifying matter as rapidly as possible, and so prevent the formation of troublesome gases.

SEWAGE DISPOSAL.

At *Conisborough* proper the Alumino Ferric system of treatment is still carried out, and beyond some slight alteration in the position of the sludge beds of doubtful benefit, and in the land beds the conditions are much the same as formerly. The digging over of the land has improved its filtering capacity. There has been much trouble during the year in getting the pumps into good working order. The effluents have shown a considerable variation in quality. In my opinion the existing method should be abandoned in favour of one or other of the Bacterial systems, viz., septic tank with either double "contact" or constant "sprinkling" beds.

At *Thurnscoe* the works have only given moderate satisfaction, there having been several complaints as to the character of the effluent, and, as I have before pointed out, "single' contact is not sufficient to purify sewage. There has been great difficulty in dealing with the sludge, and a movable pump on an elevated (rail) platform has been fixed which, it is hoped, will overcome the difficulty of removing the sludge from the tanks. Ashes have been applied to two of the land beds, and will gradually improve their condition.

At *Denaby* (and New Conisboro') the works are now completed, the method adopted consisting in the pumping of sewage from an underground *storage* tank (which receives the sewage by gravitation) into a *receiving* tank, from which the sewage passes at the rate of 24 hours flow into two *liquefying* tanks, having a total capacity equal to one days dry weather flow. From these tanks (where solid matter in the sewage is liquefied by bacteria) the sewage gravitates to two *continuous filters* six feet deep, filled with hard clinker, where it is distributed on the surface by automatically revolving "sprinklers." In these filters another distinct set of

bacteria act and convert the organic matter in solution into other compounds, the effluent passing off clear and free from smell and conveyed by channels to be distributed over *land* where it undergoes the final process of purification The whole work has been well carried out by the engineers (Messrs. Balfour and Son).

At *Bawtry* the whole of the Main and Branch Sewers are completed as well as the storage tank and engine house in which the pumping plant will shortly be fixed. The receiving and liquefying tanks, as well as the continuous sprinkling filter, are also completed, and the land for final treatment has been levelled, underdrained, and all fenced in. The whole works have been most expeditiously carried out, and should shortly be ready for use.

At *Askern* a Local Government Board enquiry was held (on Sept. 30th) as to a Loan for this scheme, the general particulars of which have, I understand, been approved by the Board, who, however, wish the population to be provided for, to be reduced from the original number, viz., 1,800 to 1,000. This will, I suppose, result in some reduction in the cost of the scheme.

At *Bentley-with-Arksey* a Local Government Board enquiry has been held (16th Nov.) for sanction to a Loan for the proposed works. The disposal site in Pipering Lane, over which the Council have compulsory powers, was objected to by the Parish Council, who wish the site for the works to be in a field below Bentley Mill, which was, I understand, the site originally recommended by the engineers, but which could not then be procured from the landowner, who, however, since the enquiry has expressed his willingness to sell this land. The Council have now agreed to purchase the amended site, and when completed, the contracts should soon be arranged and the works commenced.

At *Austerfield*, owing to an accumulation of sludge, the gravel "filtration" bed has been emptied and cleaned, and several points of leakage in the walls made good. This simple arrangement works fairly well in removing the solid part of the sewage.

The small irrigation beds at *Loversal* are in good working order, though greater attention is required in alternating the outflow over the separate beds.

REFUSE REMOVAL.

House refuse is removed by contract in *Conisboro'*, *New Conisboro'*, and *Thurnscoe* once every six weeks; in *Bentley-with-Arksey* once every three months. This latter should be done oftener, say once in two months.

Arrangements have also been made for the emptying of cesspools in the Bentley district when required. This is, of course, only a temporary arrangement until the sewerage of this district is completed, but has become necessary owing to the neglected conditions of the cesspools in some parts of the parish.

Public scavenging is also done at *Carrhouse and Elmfield*, *Clifton*, *New Adwick-on-Dearne*, *and Denaby Main*. In this latter case it is done by the Colliery Company, but it might with advantage be attended to rather oftener, say once in every six weeks.

At *Askern* and *Bawtry* I recommend that this work should be done by contract.

At *New Conisboro'* I am glad to say some of the newer houses are provided with water closets and *dry ash bins*. This latter system should be encouraged as being more cleanly, and easier to manage than in the case of middens.

The "tipper" closets in the Conisboro' district continue to give satisfaction.

It is important to note, with reference to the question of slop throwing into ashpits, that in October a conviction was obtained at the West Riding Court under the Public Health Amendment Act in the case of a woman caught so doing at Denaby, and a fine imposed. Since this case was made public there has been less trouble caused by this habit.

SALE OF FOODS AND DRUGS ACTS.

There was only one sample of milk taken in the district during the year. It was analysed by the County Analyst, and found of fair quality. There should be a large number of milk samples taken in so large a district. There is still no information given as to samples of Foods and Drugs taken in the district by the County Inspectors. I think such information should be supplied.

HOUSING OF THE WORKING CLASSES ACTS.

One block of cottages has been condemned at Conisboro' as unfit for habitation. The question of remedying the defects is still in hand. In the case of two other blocks of property at Conisboro', mentioned in former reports, one has been repaired and the other demolished. There is still much dilapidated property here, though in several instances an improvement has been effected during the year. There is also, unfortunately, many houses which, if not unfit for habitation on account of structural conditions, may be said to be so on account of the dirty habits of the inmates, due either to pure laziness, or to an utter incapacity to keep either their houses or families respectably. In such cases it might be advisable to enforce Clause 46 of the Public Health Act relative to the cleansing or purifying of houses,

OVERCROWDING.

Twelve cases of overcrowding at Conisboro', Denaby, Bentley, and Hooton Pagnell have been discovered and dealt with during the year. In ten cases the nuisances were

abated. The two other cases will, I expect, be remedied shortly. This small number of cases by no means represents the overcrowding in the district which exists to a very extensive scale, especially in the mining centres, where it is chiefly caused by young men who have been attracted to the district for employment. It is also, however, frequent in the purely rural districts, but in this case it is due to the want of cottages suitable for large families. The two bedroomed cottage is chiefly to blame, and should seldom be erected. In most cottages there should be a minimum of three bedrooms, both for the sake of adequate accommodation and air space, and also for the proper separation of children of different sex.

I had hoped to commence a system of regular house to house inspection in the thickly populated parts of the district during this year, but have been unable to do so.

FACTORY AND WORKSHOPS ACT, 1901.

There ars 69 places of business in the district which come under the Workshops Clause of the Act, viz., 19 dressmakers or milliners, 40 joiners or smiths, 3 bakers, and 7 miscellaneous. The premises have been inspected, and found to comply with the requirements of the Act. In only one instance is work given out to be done at home, and the addresses of the workers are supplied.

LODGING HOUSES.

The registered lodging house at Bawtry has been frequently inspected. It has accommodation for 26 lodgers. The premises are kept in good order. It has been to a considerable extent occupied by the navvies working on the new sewage works during the summer.

DAIRIES, COW SHEDS, and MILK SHOPS ORDER.

There are 120 cowkeepers and purveyors of milk on the register as compared with 108 last year, and 78 in the year preceding. I have inspected the premises during the

year, and although in many instances they are still far from being model cowsheds, I am glad to be able to report that in a number of cases much improvement has been made as regards lighting, ventilation, and general cleanliness, but I hope to see a more general improvement effected before long both as regards the premises in which cows are kept, and also in the matter of greater cleanliness in the milkers and in the process of milking. In regard to the matter of *premises*, many landlords are to blame in not showing more interest in the appearance and upkeep of their property, whilst, as regards the question of want of *cleanliness* in the milker and in the operation of milking, the cause lies between utter ignorance on the one hand or a stupid determination to adhere to old-fashioned methods on the other.

SLAUGHTER HOUSES.

The number of slaughter houses on the register is 40, as against 34 last year and 29 in the previous year. Many of the premises are unfit for the purpose of slaughtering either as regards their construction, or on account of their proximity to dwellings, the only excuses for permitting their existence being the smallness of the trade done, and the fact that the premises have for long been used for the purpose.

UNSOUND FOOD.

I have made frequent inspections of the slaughter-houses and meat markets in the district, and have had small portions of diseased or bad meat destroyed. The widely scattered situations of the slaughter-houses however, and the fact that much meat is brought into the district ready for sale, renders efficient inspection a very difficult matter.

NUISANCES.

During the year there have been 64 preliminary and statutory notices regarding nuisances served under the Public Health Acts, and of these *only 28* have been abated,

leaving the large number of 36 where no attention has been paid to the nuisances complained of. These have been brought under the notice of the Sanitary Committee either by myself or by the Sanitary Inspector in the monthly reports.

I have been much indebted to the Registrars, Overseers, and Education authorities in the district for much information and assistance during the year.

The Sanitary Inspector's report and the usual tables of statistics are appended herewith.

I am, Gentlemen,

Your obedient Servant,

C. J. RUSSELL McLEAN, M.D., D.P.H.,
Medical Officer of Health.

Union Offices, Doncaster,
7th January, 1905.

Sanitary Department.

ANNUAL REPORT

OF THE

Surveyor and Inspector of Nuisances

FOR 1904.

C. C. BARRASS,

Surveyor and Inspector

Union Offices,

Doncaster.

TO THE

Doncaster Rural District Council.

GENTLEMEN,

I have pleasure in submitting my (Sixteenth) Annual Report of the works carried out in my Department during the year 1904.

An inspection of the district has been made and premises in course of alterations have received every attention to ensure the effective abatement of nuisances. The paving and drainage of backyards to houses have received attention.

Petroleum.

The Stores have been inspected as required by the Act, and additional Licenses have been granted for stores at Frickley Hall and at Askern Spa Hydro.

Buildings in Course of Erection.

Houses and other buildings in course of erection, alterations, and extensions have been periodically inspected, in order to see that the work is carried out in accordance with plans submitted and approved.

Scavenging.

At Thurnscoe the emptying of Ash Middens and Privies have been let in two contracts. Mr. William Morton, Senior, for Thurnscoe East, and Mr. Walter Haigh for Thurnscoe West, both contractors, have done their work satisfactorily. Complaints have been made as regards the dilatory manner in which the scavenging has been carried out at Clifton, Conisbro', and New Conisbro'. The Contractors have several times been cautioned as to their neglect, and I trust an improvement will be made.

Sewers.

Several lengths of Sewers have been laid at Adwick-on-Dearne Adwick-le Street, Awkley, Cantley, Thurnscoe, and Warmsworth.

Repairs and cleansing of drains have been done at Askern, Bawtry, Bentley, and Braithwell.

Two public urinals have been erected at Conisbro'.

Sewage Outfall Works.

The irrigation and filter bed areas have been dug over at Conisboro'. The quantity of sewage treated for the year ending December 31st, 1894, was 45,428,500 gallons. The number of hours pumping, 559. The quantity of gas consumed was 195,900 cubic feet. The quantity of Alumino-ferric, 39 tons. At Thurnscoe two large irrigation areas and filter beds have been dug over, and a layer of engine ashes laid on 12 inches deep This has been done on account of the clay subsoil, which is unsuitable for irrigation purposes.

A travelling sludge pump on trolley and short length of tramway has been put down, and an iron tumbler cart, capable of holding 200 gallons, has been purchased for the Thurnscoe Sewage Outfall Works.

Sewers have been regularly flushed in the district, and dykes have been cleansed in the different parishes.

The sewerage scheme for Denaby is now practically completed.

Water Supply.

BARMBROUGH.—The supply at Barmbrough is very inadequate, owing to want of rain. Restrictions have been made to prevent waste of water, and not to use more than is really necessary.

CONISBROUGH.—Two and three inch water mains have been extended in Conisbrough to Mr. Taylor's property, Castle Hill, Old Hill, Burcroft, and Station Boad.

THURNSCOE.—The new water scheme for supplying Thurnscoe with Barnsley water through the Hemsworth Rural District Council has now been completed in a satisfactory manner. The water was turned on on the 25th March, 1904. The reservoir was completed at the end of November.

The hydrant, pumps, and water mains in the district have been kept in repair, and provision made to protect same from frost.

Street watering during the summer months has been done at Bentley-with-Arksey, Conisborough, Denaby, and Thurnscoe.

Appended is a statement showing the number of Sanitary Works completed and Nuisances abated during the year 1904.

I am, Gentlemen,

Yours obediently,

CHAS. C. BARRAS,

SURVEYOR AND INSPECTOR.

STATEMENT SHOWING THE NUMBER OF SANITARY WORKS COMPLETED AND NUISANCES ABATED DURING 1904.

		TOTAL.
Number of Notices served		280
Number abated		64
Number of Sinks disconnected over trapped gullies to :		
New Houses		130
Number of Ashpits and Privies provided for : –		
Old Houses	12	
New Houses	65	
	—	77
Water Closets provided for :—		
Old Houses	6	
New Houses	62	
	—	68
Cesspools :—		
New Houses	6	
	—	6
New Trapped Gullies for :—		
Surface Water	130	
	—	130
Number of Ventilators provided for Drains :—		
Old Houses	2	
New Houses	65	
	—	67
Old Manholes repaired		6
New Wells sunk by Private Owners :—		
Askern	1	
Blaxton	4	
	—	5

Pumps repaired	14	
Hydrants repaired	12	
Houses stoved, disinfected, and cleansed after Infectious Diseases	160	
	——	160
Sets of Plans considered	98	
„ „ rejected	20	
These include—		
New Streets	1	
Alterations to Houses	14	
New Chapels and Sunday Schools	1	
Warehouses	6	
Stables	12	
Coach Houses	3	
Shops	8	
Temporary Buildings	1	
Warehouses	2	
Privies and W.C.'s	4	
Drainage	2	
Cowsheds...	2	
Pigstyes	3	
Hospitals...	1	
Bothys	1	
Bedrooms	1	
Building Estates	1	
Slaughter Houses	1	
	—	64

New Houses completed in the following Parishes :—

Adwick-upon-Dearne	3	
Austerfield	1	
Askern	1	
Blaxton	4	
Bawtry	1	
Barnby Dun	1	
Conisborough...	48	
Carr House and Elmfield	3	
Denaby	56	
Hickleton	1	
Thurnscoe	11	
	—	130

New Houses in the following Parishes :—

Adwick-upon-Dearne	7	
Askern	3	
Braithwell	1	
Bawtry	1	
Blaxton	4	
Cantley	1	
Conisborough	59	
Denaby	8	
Melton (High)	4	
Thurnscoe	45	
Wadworth	4	
	—	137

TABLE I.

GENERAL RATES.

	1897.	1898.	1899.	1900	1901	1902.	1903.	Avg.	1904.
Population	29458	30649	33484	30318	27819	29055	30144	30132	30620
Birth rate per 1,000 persons living.....	36·3	37·8	33·8	30·9	35·3	34·8	31·7	34·3	38·2
Death rate (*corrected*).....	19·0	15·6	17·2	16·8	18·3	15·7	17·3	17·1	21·2
Zymotic Death rate	1·9	...	3·0	...	4·3	2·7	3·9	3·1	6·2
Infantile Death rate per 1,000 *births*	175	168	193	183	197	153	195	180	203

TABLE II.

SUB-DISTRICT RATES

	Population.			No. of Deaths.	Death rate per 1000	Infantile Death rate per 1000 *births.*	Epidemic Death rate.	Phthisis Death rate.	No. of Births.	Birth rate per 1000.
	Census 1891.	Census 1901.	1st July 1904							
Barmboro' Sub District.. ...	9141	16505	18897	441	23·3	228·4	9·3	0·84	871	46·0
Bawtry ,, ...	3859	3797	3778	56	14·8	117·0	1·3	·79	94	24·8
Campsall ,, ...	5185	5558	5678	95	16·7	88·0	1·0	1·23	125	22·0
Doncaster ,, ...	...	149	760	12	15·7	259·0	2·6	...	27	35·5
Tickhill ,, ...	1865	1810	1793	33	18·4	185·1	1·1	...	54	30·1
The whole District...	20050	27819	30620	637	20·7	203·2	6·2	·84	1171	38·2

TABLE III.

RESPIRATORY AND CIRCULATORY DEATH RATES.

	1899.	1900.	1901.	1902.	1903.	Avge.	1904
No. of Deaths from Respiratory Diseases.....	70	108	95	90	89	90	86
Death rate per 1000	2·0	3·8	3·4	3·0	2 9	3·2	2 8
No. of Deaths from Diseases of the Heart	25	44	33	30	29	32	30
Death rate per 1000	0·7	1·5	1·2	1·0	0·9	1 0	·97

TABLE IV.

TUBERCULOSIS DEATH RATES.

	1899.	1900.	1901.	1902.	1903.	Avge	1904
No. of Deaths from Consumption of the Lungs	28	26	21	16	21	22	26
Death rate per 1000	0·85	0·7	0·7	0·55	·69	·69	·84
No. of Deaths from other Tubercular Diseases ...	...	6	12	22	22	15	13
Death rate per 1000	...	0·2	·4	·75	·73	·52	·42

TABLE V.

EPIDEMIC DISEASES DEATH RATES.

	1899.	1900.	1901.	1902.	1903.	Avge.	1904.
No. of Deaths from Infectious Diseases	88	104	125	81	120	103	191
Death rate per 1000	3·0	3·7	4·3	2·7	3·9	3·5	6·2

TABLE VI.

CAUSES OF AND AGES AT DEATH DURING THE YEAR 1904.

Causes of Death	Deaths in or belonging to the Whole District at subjoined Ages.							Deaths in or belonging to Localities at all ages.					Deaths in Public Institutions	Rate per 1000
	All ages	Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards	Barmbro'	Bawtry	Campsall	Doncaster	Tickhill		
ZYMOTIC DISEASES (191 = 6·22 per 1000).														
Small-pox	...	...	...	...	...	...	...	...	...	...	..	..	..	..
Measles	37	8	26	3	...	...	...	36	...	1	..	..	..	1·2
Scarlet fever	2	...	1	1	...	...	...	2	...	...	..	..	..	·06
Whooping-cough	42	20	22	...	...	...	...	38	2	1	..	1	..	1·36
Diphtheria and membranous croup	4	...	3	1	...	...	..	4	..	...	..	..	...	·13
Typhoid Fever	16	...	...	2	6	8	...	13	1	2	..	..	...	·52
Epidemic influenza	3	...	...	...	...	2	1	...	1	1	..	1	..	·09
Cholera	...	...	...	...	...	...	...	...	..	...	..	..	..	..
Plague	...	...	...	...	...	...	...	...	.	...	..	..	..	..
Diarrhœa ..... Enteritis	82	57	24	...	...	...	1	78	1	1	2	..	..	2·6
Puerperal fever	4	...	...	...	1	3	...	4	...	...	..	..	..	·12
Erysipelas	...	...	...	...	...	...	...	...	...	...	..	..	..	..
Epidemic Jaundice	1	...	...	...	...	1	...	1	...	...	..	..	..	·03
Total	191	85	76	7	7	14	2	176	5	6	2	2	...	6·22
ORDINARY DISEASES (446 = 14·5 per 1000).														
Phthisis	26	1	1	...	8	15	1	16	3	7	..	..	..	·84
Other tubercular diseases	13	5	4	2	1	1	...	11	...	1	1	..	..	·42
Cancer	20	...	...	...	...	10	10	4	5	8	..	3	..	·65
Bronchitis	44	16	7	...	...	4	17	26	5	10	..	3	..	1·43
Pneumonia	42	11	17	...	1	7	6	26	3	8	1	4	..	1·36
Pleurisy	...	...	...	...	...	...	...	...	...	...	..	..	..	0·0
Other Respiratory diseases	...	...	...	...	...	...	...	...	...	...	...	..	.	0·0
Alcoholism Cirrhosis of liver	...	...	...	...	...	...	...	...	...	...	..	..	..	0·0
Venereal disease	...	...	...	...	...	...	...	...	...	...	..	..	..	0·0
Premature birth	34	34	...	...	...	...	...	26	2	2	2	2	..	1·1
Diseases and accidents of parturition	6	...	...	...	...	6	...	5	...	1	...	..	..	·19
Heart diseases	30	1	...	2	...	9	18	16	6	3	1	4	..	·97
Accidents	18	...	3	2	3	9	1	14	...	2	..	2	..	·58
Suicides	1	...	...	...	...	1	...	1	...	...	.	..	..	·03
Old age	42	...	...	...	...	1	41	10	11	19	1	1	..	1 36
Uncertified	3	1	...	...	1	1	...	2		...	..	1	..	·09
All other causes	167	84	17	4	3	34	25	108	16	29	4	10	..	5·44
All Causes	637	238	25	17	24	112	121	441	56	96	12	3	..	20·7
Zymotic Death Rate	6·2	72·5	2·4	22	·22	·48	06	9.3	1.3	1·0	2·6	1·1		6·2
Ordinary Death Rate	14·5	130 7	1·59	·3	·55	3.1	3·87	14·0	13·5	15·7	13·1	17·3	..	14·5
Total Death Rate	20·7	203 2 Per 1000 Births	3·99	·52	·77	3·58	3 93	23·3	14 8	16·7	15·7	18·4	..	20 7

CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE YEAR 1904.

Notified Diseases.	Cases Notified in Whole District.							Total Cases Notified in each Sub-district.						No. of Cases removed to Hospital from each Sub-District. *				
	At all Ages	At Ages—Years						Barmbro'	Bawtry	Campsall	Doncaster	Tickhill	Total	Barmbro'	Bawtry	Campsall	Doncaster	Tickhill
		under 1 yr.	1—5	5—15	15—25	25—65	65 & upwd											
Small-pox	1	...	...	...	1	...	...	1	...	...	...	...	1	1	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria, Membraneous croup	29	...	9	13	2	5	...	14	...	2	1	12	29	3	...	...	...	1
Erysipelas	15	...	1	1	1	10	2	6	3	2	1	3	15	...	...	...	...	...
Scarlet fever	68	1	13	45	8	1	...	33	1	33	...	1	68	14	...	16	...	...
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric (Typhoid) fever	119	...	5	36	32	45	1	108	1	10	...	...	119	61	...	3	...	...
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	2	...	...	...	2	...	...	2	...	...	...	...	2	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	234	1	28	95	46	16	3	164	5	47	2	16	234	79	...	19	...	1

* Isolation Hospital at Conisbrough.

TABLE VII.

TABLE VIII.

CASES OF INFECTIOUS DISEASES NOTIFIED since 1895.

1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
243	221	304	...	266	125	208	216	160	234

TABLE IX.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1904 AND PREVIOUS YEARS.

Name of District—DONCASTER (RURAL).

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 District.	Deaths of residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
				Deaths under One Year of Age		At all Ages.						
		Number	Rate*	Number	Rate per 1000 Births registered	Number	Rate*				Number	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	...	...	...	...	...	...	...	...	...	...	...	...
1895	32700	1175	36·0	205	172	555	17	...	...	14	569	17·4
1896	28600	998	35·0	153	153	479	16·7	...	...	14	479	16·7
‡1897	29458	1072	36·3	188	175	546	18·4	...	...	15	561	19·0
1898	30649	1161	37·8	195	168	475	15·6	...	...	15	487	16·0
1899	33484	1101	33·8	219	193	552	16·7	...	...	15	567	17·2
1900	30318	930	30·9	172	183	488	16·1	...	...	24	512	16·8
1901	27819	977	35·3	193	197	493	17·8	3	...	15	508	18·3
1902	29055	1013	34·8	156	153	449	15·4	8	6	16	457	15·7
‡1903	30144	957	31·7	187	195	499	16·5	7	4	24	523	17·3
Averages for years 1894-1903	30247	1042	34·6	185	176	501	16·6	...	...	16	518	17·1
19	30620	1171	38·2	238	203 2	637	20·7	16	4	20	653	21·2

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population. ‡ District re-arranged.

TABLE X.

VITAL STATISTICS OF SEPARATE LOCALITIES IN 1904 AND PREVIOUS YEARS.

Names of Localities	BARMBOROUGH				BAWTRY				CAMPSALL				DONCASTER.				TICKHILL			
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	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
1895 ..	5606	202	87	34	5990	160	85	21	5253	138	75	17					15851	675	308	133
1896 ..	6406	232	101	36	6290	166	80	17	5253	128	86	18					10651	472	201	82
1897 ..	16166*	703	340	141	6452	174	81	22	5478	148	89	16					*1362	47	36	9
1898 ..	17143	776	312	158	6552	188	76	19	5590	151	66	14					1362	46	21	4
1899 ..	18430	745	373	176	7384	192	88	25	5805	129	73	15					1865	45	16	3
1900 ..	18939	675	321	135	3684*	86	56	4	5830	119	95	19					1865	50	40	7
1901 ..	16505	727	336	160	3797	73	59	11	5558	120	80	10	149				1810	57	28	12
1902 ..	17302	736	290	122	3790	83	52	4	5598	141	87	18	560	10	5	2	1805	43	15	2
1903 ..	18162	678	339	150	3783	79	53	10	5642	137	76	19	760	16	6	1	1800	47	25	7
Averages of Years 1895 to 1903	14962	608	277	123	5302	933	70	14	5556	134	80	16					4263	164	76	28
1904 ..	18897	871	441	199	3778	94	56	11	5678	125	95	11	760	27	12	7	1793	54	33	10

* Sub-Districts re-arranged.

TABLE XI.

Doncaster Rural District Council.

PARISHES.	Population. Census 1901.	Population. Estimated 1st July, 1904.	Acreage.	Persons per Acre.	Occupied Houses.	Persons per House.	Empty Houses.	Water Supply.	No. of Cowsheds	Number of Slaughter Houses.	Number of Workshops.	Schools.
Adwick-le-Street	307		2065	·14	72	4·38	1	Surface Wells.	...	...	2	1
Adwick-on-Dearne	373	405	1142	·31	90	4·5	...	Spring & Reservoir service.	4	...	...	1
Armthorpe	314		859	·36	90	3·50	4	Surface Wells.	...	...	1	1
Askern	562	680	2923	·19	170	4·0	3	do. & Spring.	6	4	1	1
Austerfield	293		2780	·10	65	4·50	22	2 deep-bore Wells & Surface Wells	2	...	1	1
Awkley	244		2087	·11	64	3·81	3	Surface Wells.	...	1	1	1
Barmbrough	547		2077	·26	116	4·84	...	Spring & Reservoir service	11	1	2	1
Barnby Dun	577	580	2302	·25	145	4·00	4	Surface Wells.	4	1	3	1
Bawtry	934	968	259	3·6	242	4·00	15	6 deep-bore wells.	7	4	7	1
Bentley-with-Arksey	2403	2622	5133	·46	558	4·7	28	Boro' supply and Surface Wells.	20	3	6	2
Bilham	42		536	.07	7	6·00	...	Surface Wells.	...	...	...	...
Blaxton	149		1849	·08	38	3·90	3	do.		...	...	...
Braithwell	345		1948	·16	104	3·31	1	do	3	1	3	1
Brodsworth	338		3170	·10	75	4·52	...	Spring & Reservoir service.	...	...	1	1
Burghwallis	100		804	·12	23	4·34	2	Surface Wells.	...	..	1	1
Cadeby	146		1234	·11	32	4·56	...	do.	3	...	1	1
Campsall	298		1729	·16	51	5·97	4	do.		1	3	1
Cantley	514		5590	·09	119	4·23	...	Boro' Service and Surface Wells.	1	...	1	
Carr House and Elmfield	149	760	237	·62	169	4·5	...	Boro' Service.	3	...	...	...
Clayton-with-Frickley	314		1589	·17	69	4·55	..	Spring Service.	6	2	1	1
Conisbrough	8550	9024	4558	1·87	1920	4·7	18	Deep-bore well and Reservoir service.	12	6	14	3
Denaby	2670	3496	1057	2·50	744	4·7	28	do.	6	3	4	1
Edlington	127		1757	·07	32	3·96	2	Surface Wells.	1	...	1	1
Fenwick	185		2371	·07	45	4·30	2	do.	...	...	...	1
Hampole	142		1301	·10	27	5·35	1	Ground Spring.	1	...	1	1
Hickleton	177		1108	·15	25	7·08	...	Surface Wells.	...	..	...	1
Hooton Pagnell	312		2001	·15	64	4·87	2	Rock Spring.	5	1	1	1
Kirk Bramwith	211		2113	·09	49	4·30	...	Surface Well.	..	..	1	1
Kirk Sandall	281		2288	·12	60	4·78	3	Surface Wells.	5	...	1	1
Loversall	161		2171	·07	22	5·03	2	R'ck spring & serv'e	2	...	1	...
Marr	167		1820	·09	38	4·39	1	Surface Wells.	...	...	1	1
Melton (High)	147		1525	·09	22	6·68	...	do.	1	...	...	...
Moss	241		2467	·09	60	4·00	...	do.	...	...	...	†
Norton	512		2320	·22	130	4·09	2	do.	2	3	2	1
Owston	298		2577	·11	75	3·97	...	do.	1	1	...	1
Rossington	342		3051	·11	80	4·16	...	2 deep-bore Wells.	1	...	1	1
Skellow	143		953	·15	45	3·17	1	Deep Well Service.	...	.	...	*
Sprotbrough	345		2732	·12	78	4·42	6	Sp'ng & S'f'ce W'lls	3	1	1	1
Stainton	224		3294	·06	39	5·74	2	Surface Wells.	...	...	1	1
Stotfold	11		256	·04	1	11·0	...	do.	1	...	...	...
Sutton	85		761	·11	27	3·14	...	do.	...	...	...	...
Thorpe-in-Balne	129		2268	·05	27	4·77	2	do.		...	...	
Thurnscoe	2366	2664	1693	1·30	567	4·7	..	Barnsley Supply and Reservoir Service.	7	5	2	1
Wadworth	566		3896	·14	141	4·00	15 2	Surface Wells.	1	2	1	1
Warmsworth	387		1074	·36	91	4·25		Boro' Service.	1	...	1	1
Totals	27820	30620	91704	·33	6698	4·5	185		120	40	69	37
In all Yorkshire				·92		4·7						

† with Fenwick. * with Owston.

TABLE XII.

METEOROLOGY, 1904 (Centre of District).

	TEMPERATURE. Monthly Average. Degrees. Fahrenheit.	RAINFALL in inches.	GREATEST FALL in 24 hours in inches.	WET DAYS (·01 inch or over).	BAROMETER Monthly Average. Inches.
January	38·2	1·39	·34	17	29·90
February	36·1	4·30	1·62 (Record)	22	29·10
March	38·75	1·65	·48	21	30·00
April	47·85	1·45	·36	15	29·80
May	51·35	2·11	·64	13	30·30
June	56·5	·44	·15	8	29·95
July	61·1	2·87	·72	10	29·86
August	62·05	3·02	1·35	11	29·80
September ...	54·25	1·68	·55	13	29·96
October	48·4	·59	·12	12	30·03
November ...	41·4	·90	·30	18	30·02
December	37·65	1·39	·47	16	29·81
1904.	47·8 Average	21·79 Total.	7·10 inches in 12 days.	176 Wet Days.	29·87 Average.
1903	48·29	31·06	8·67	200	29·73

The Temperature for the year was ·49 degree BELOW that of 1903.
COLDEST day of year, December 22nd. Hottest day, August 1st.
Sunshine equalled 44 per cent., as against 35 per cent. in 1903.
Total Rainfall was 9·27 inches less than in 1903.
Wettest Month of year was February—4·30 inches (6·37 inches, October, 1903).
Rainy days (·01 inch or over), 24 less than in 1903.
Highest Rainfall in 24 hours was 1·62 inches on February 3rd (1·44 inches September 11th, 1903).