[Report 1911] / Medical Officer of Health, Derby County Borough.

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County Borough of Derby.

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PUBLIC HEALTH DEPARTMENT,
FORD STREET, DERBY,
April, 1912.

TO THE

Chairman and Members of the Sanitary Committee of the County Borough of Derby.

GENTLEMEN,

I beg to submit my Fourth Annual Report on the Sanitary Condition of your Borough during the year 1911, this being the 35th Annual Report of your Medical Officer of Health. The vital statistics for the year are not nearly so favourable as those for the year 1910. The dry, hot summer was to a great extent responsible for the comparatively large number of deaths from Infantile Diarrhœa, while in the cold, wet summer of 1910 the deaths from this disorder were few in number. An epidemic of Measles during the early part of the year also tended to swell the mortality figures. This infectious disease is, unfortunately, only to limited extent amenable to general sanitation; some diminution may be expected from careful supervision of school attendances on the one hand, and from greater care on the part of the parents on the other; the latter are still too prone to consider the disease of a trifling nature, and the fatalistic and erroneous idea that every child must necessarily have the disease dies hard.

It is satisfactory to report the continued interest taken by the mothers in our "Welcome." I consider that this is doing very admirable work at a very small cost.

Perhaps the most important event in the year from a sanitary standpoint was the opening of a pavilion on the site adjoining the Infectious Diseases Hospital for the treatment of selected cases of Phthisis. This is, one hopes, only the beginning of a more comprehensive scheme for dealing with this, the most important of our preventable diseases.

The Department suffered during the year from the loss by death of two of its oldest officers—Miss Mould, the Matron of the Isolation Hospital, who had been in the service of the Corporation for over twenty-one years, had established a very high reputation for conscientious ability, tactfulness and economy, as well as for general trustworthiness; her death on April 24th was an almost irreparable loss. A still older servant of the Corporation was Mr. Turner, the Meat Inspector, who died, literally at his post, suddenly on September 13th, in the Health Office; he had been an Inspector of the Corporation for thirty-five years.

In conclusion, I wish again to express my indebtedness to my colleagues in the Public Health Department and to other Corporation Officials for their valuable and ready help, and to you, gentlemen, for your kind and courteous consideration.

I am, Gentlemen,

Yours obediently,

A. E. BRINDLEY,

Medical Officer of Health.

CHART SHOWING PRINCIPAL CAUSES OF DEATH, 1910.

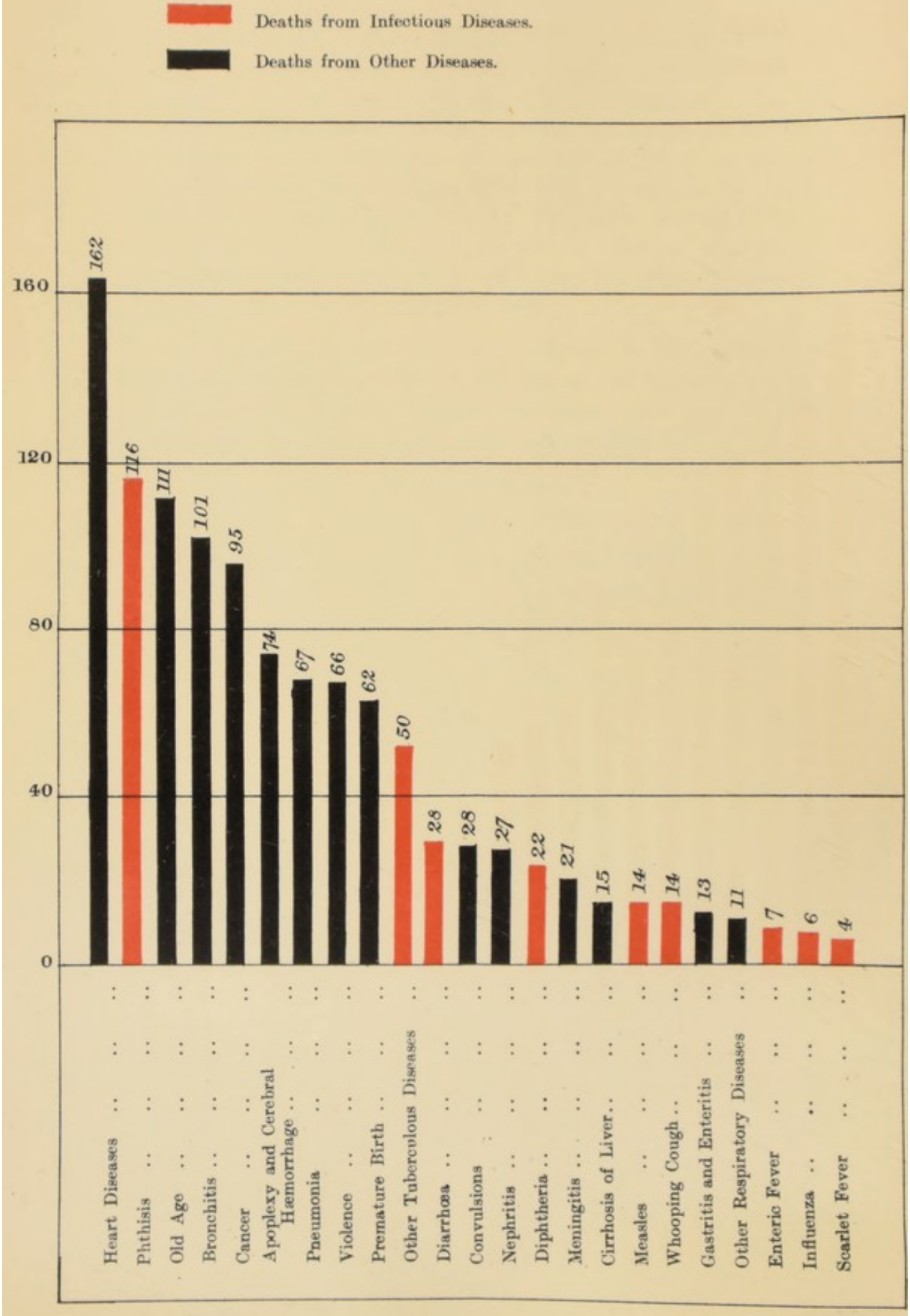


CHART SHOWING PRINCIPAL CAUSES OF DEATH, 1911.

STATISTICAL SUMMARY, 1911.

Population estimated to the middle of 1911	Males ... 60,118	Females ... 63,530	Total ...	123,618
Marriages				917
Annual rate of Persons Married per 1,000 of the population				14·8
Births			Total ...	2,945
Annual rate of Births per 1,000 of the population ...				23·6
Deaths	Males ... 882	Females ... 855	Total ...	1,737
Annual rate of Mortality per 1,000	Males ... 14·7	Females ... 13·5	Total ...	14·04
Excess of Registered Births over Deaths				1,208
Infantile Mortality				122 per 1,000 births.

Area.—The area of the old Borough is 3,445 acres. The acreage of the portions of Normanton, Osmaston, and Alvaston, and Boulton, added to the Borough, Nov., 1901, is 1,815.

Elevation.—The inhabitants of Derby reside at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 feet, and the lowest at "The Siddals," 142 feet. The elevation at the Market Place is 157 feet.

Houses.—At the Census of 1901 there were 26,625 houses, of these, 24,851 were inhabited, and of the remaining 1,774, there were, on Census night, 995 "in occupation," that is, utilised for business or other purposes but without occupants, whilst 779 were not "in occupation." In addition there were 228 houses in course of erection.

Density.—The mean density of the Borough was equal to 24 persons per acre. The density of the various wards was as follows:—Abbey 36, Arboretum 83, Babington 72, Becket 81, Bridge 26, Castle, 80, Dale 21, Derwent 7, Friar Gate 56, King's Mead 89, Litchurch 21, Markeaton 55, Normanton 79, Osmaston 5, Pear Tree 21, and Rowditch 26 persons per acre.

Annual Rateable Value.—The rateable value of the Borough for 1911 was £535,224 10s. for District Rates purposes, and £559,488 15s. for Poor Rate purposes; these being increases of £4,258 10s. and £4,151 15s. respectively as compared with 1910.

LEGAL SUMMARY.

Local Acts (containing Sanitary Provisions).

The Derby Waterworks Acts, 1848, 1868, 1873.

The Derwent Valley Water Acts, 1899, 1901, 1904, and 1909.

The Derby Improvement Act, 1879, Part IV.

The Derby Corporation Tramways Act, 1899, Part III.

The Corporation Acts, 1877 (Sec. 60), 1901.

Acts Adopted.

Public Health Acts Amendment Act, 1890, Part III., came into operation 20th September, 1899.

Infectious Diseases (Prevention) Act, 1890 (Secs. 7 & 13), came into operation 20th February, 1902.

Public Health Acts Amendment Act, 1890, Part II., came into operation 12th December, 1904.

Notification of Births Act, 1907, came into operation 11th January, 1908.

Public Health Acts Amendment Act, 1907 (Secs. 19, 22, 23, 25, 28, 30, 31, 33, 34-37, 46, 50-58), adopted 1st December, 1909.

Byelaws, Regulations and Orders.

1838. Unsound Meat, Nuisances, etc.
1858. Public Baths and Washhouses.
1859. Slaughter-houses.
1859. Nuisances, Snow, Filth, etc.
1877. Water Supply.
1885. New Streets and Buildings.
1890. Common Lodging Houses.
1891. Nuisances (additional).
1859. } Height of Rooms.
1886. }
1892. Street Stop Taps.
1898. Dairies, Cowsheds, and Milkshops.
1899. Houses Let in Lodgings.
1904. Public Baths.
1904. Regulations as to Branch Sewers in Main Drainage Area.
1907. Expectorating in Public Places, etc., Banana Skins, etc.
1908. Factory and Workshop Statutory Rules and Regulations.
1911. Confirming Order of L.G.B. under Sec. 51 P.H.A.A. Act, 1907, declaring certain trades to be offensive.

TABLE I.—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past thirty-four years.

YEAR	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1,000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1878	80,385	1,613	20·1	3,092	38·4	257	3·1	162	2·0	148	296	3·6
1879	80,385	1,970	24·5	3,139	39·4	380	4·7	147	1·8	132	407	5·0
1880	80,385	1,614	20·1	3,050	37·9	233	2·8	140	1·7	145	224	2·7
1881	81,470	1,529	18·9	3,156	38·8	166	2·03	131	1·6	129	287	3·5
1882	82,687	1,533	18·5	2,959	35·7	187	2·2	140	1·6	139	259	3·1
1883	83,922	1,549	18·6	3,074	36·6	144	1·7	146	1·7	146	263	3·1
1884	85,176	1,569	18·4	3,013	35·3	181	2·1	131	1·5	143	259	3·0
1885	86,449	1,591	18·4	3,055	35·3	132	1·5	128	1·3	138	310	3·5
1886	87,741	1,651	18·8	3,069	35·9	166	1·8	154	1·7	148	272	3·1
1887	89,052	1,683	18·9	2,858	32·9	223	2·5	146	1·6	138	247	2·7
1888	90,383	1,550	17·1	2,824	31·2	163	1·8	116	1·2	145	271	2·9
1889	91,733	1,582	17·2	2,906	31·6	133	1·4	99	1·7	147	281	3·0
1890	93,105	1,843	19·8	2,699	28·9	260	2·7	143	1·5	160	326	3·5
1891	94,422	1,765	18·7	2,885	30·6	126	1·4	139	1·5	139	158	1·7
1892	95,528	1,734	18·2	3,038	31·8	174	1·9	140	1·5	171	295	3·1
1893	96,648	1,740	18·1	3,123	32 4	190	2·0	132	1·4	155	281	2·9
1894	97,781	1,468	15·1	2,890	29·6	151	1·6	103	1·1	121	249	2·6
1895	98,927	1,669	16·9	2,909	29·4	178	1·8	105	1·1	158	254	2·6
1896	100,087	1,577	15·8	2,834	28·4	182	1·9	137	1·4	150	240	2·4
1897	101,262	1,656	16·4	2,803	27·7	173	1·8	99	0·98	168	249	2·5
1898	102,448	1,756	17·2	2,860	28·0	235	2·3	133	1·3	169	257	2·6
1899	103,649	1,775	17·2	2,984	28·8	173	1·7	116	1·2	163	244	2·4
1900	104,684	1,854	17·7	2,900	27·7	247	2·4	113	1·1	173	271	2·6
1901	106,076	1,598	15·1	2,939	27·8	189	1·8	99	0·94	155	220	2·8
1902	116,869	1,639	14·1	3,326	28·5	145	1·3	102	0·87	126	264	2·3
1903	118,707	1,596	13·5	3,215	27·1	108	0·9	102	0·86	128	210	1·8
1904	120,449	1,824	15·2	3,282	27·3	167	1·4	121	1·01	143	264	2·2
1905	122,207	1,746	14·3	3,108	25·5	183	1·5	96	0·79	151	254	2·1
1906	123,981	1,733	14·0	3,103	25·1	188	1·6	113	0·92	116	244	2·0
1907	125,774	1,784	14·2	3,152	25·1	219	1·8	121	1·0	120	269	2·2
1908	127,583	1,678	13·2	3,321	26·1	134	1·1	115	0·91	109	223	1·8
1909	129,411	1,712	13·3	3,220	24·9	177	1·4	129	1·0	122	251	2·0
1910	131,256	1,444	11·01	3,163	24·1	89	0·7	116	0·9	85	183	1·4
1911	123,648	1,737	14·04	2,921	23·6	215	1·7	136	1·1	122	261	2·1

Vital Statistics for the Year 1911.

Estimated Population.—The estimated population of the Borough at the middle of 1911 was 123,648.

The Census Population of 1911 was 123,433, an increase of only 7·5% over that for 1901, as compared with an increase of 16·5% between the years 1891 and 1901. The population was over-estimated by about 8,000. The number 123,433 was made up of 60,014 males and 63,419 females. The total number of families or separate occupiers was 27,748.

Marriages.—The number of marriages which were solemnized during 1911 was 917; this represents a rate of persons married equal to 14·8 per 1,000 of the population, which is a decrease of 0·35 compared with the previous year. The folowing table gives information relating to the marriage-rate for the past 14 years:—

Year.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
Number of Marriages.	961	961	1025	943	948	957	973	972	981	1005	982	967	994	917
Rate.	18·8	18·6	19·6	17·8	16·3	16·1	16·17	16·0	15·9	15·9	15·4	14·95	15·15	14·8

BIRTHS.

Birth-Rate.—The births registered during the year numbered 2,945, compared with 3,163 in 1910. Of the 2,945 births, 2,921 were notified and investigated:—

	Males.	Females.	Total.
Legitimate	1,473	1,367	2,840
Illegitimate	42	39	81
Grand Total ...			2,921

From these figures it will be seen that the illegitimate births represent 2·8% of the present total, as compared with 2·0% in the previous year, 2·2% in 1909, 2·8 in 1908, and 3·9 in 1907. In the following table is set out the distribution of all births, both legitimate and illegitimate:—

TABLE II.—Relating to Births, Legitimate and Illegitimate.

WARD	BIRTHS.			Birth Rate per 1,000.	Illegitimate Births per 1,000 Births in 1911.	Total Legitimate and Illegitimate Births registered during the years 1902 to 1911.		
	Legitimate.	Illegitimate	Total			Legitimate.	Illegitimate	Illegitimate per 1,000 Births.
Abbey ...	258	10	268	28·1	37	2844	108	37
Arboretum ...	167	4	171	18·0	23	1896	58	30
Babington ...	120	3	123	13·6	24	1448	46	31
Becket ...	138	6	144	18·6	42	1502	74	47
Bridge ...	133	4	137	25·0	29	1167	45	37
Castle ...	184	9	193	23·1	47	2255	97	41
Dale ...	197	5	202	38·6	25	2016	50	24
Derwent ...	143	5	148	27·8	34	1487	41	27
Friargate ...	205	5	210	22·9	24	2116	60	28
Kingsmead ...	172	4	176	23·4	23	1726	109	59
Litchurch ...	172	2	174	19·2	11	1625	74	43
Markeaton ...	179	6	185	23·9	32	2113	84	38
Normanton ...	184	3	187	23·8	16	2319	45	19
Osmaston ...	161	5	166	28·0	30	1946	61	30
Pear Tree ...	264	1	265	34·9	4	2533	43	17
Rowditch ...	162	6	168	19·5	36	1708	73	41
Totals ...	2839	78	2917	23·6	27	30,701	1,068	34
Others ...	29	...	29	...	...	102	...	...

The births registered during the year numbered 2,945, which represents a birth-rate of 23·6 per 1,000, compared with 24·1 last year, 24·9 in 1909, 26·1 in 1908, and 25·1 in 1907 and 1906. The rate for 1911 is the lowest recorded. For 1905, the rate was 25·6, and in 1904 it was 27·3.

As regards the various wards, the birth-rates, as in previous years, varied between very wide limits, being as low as 13·6 in Babington Ward, and 18·0 in Arboretum Ward, and as high as 38·6 in Dale Ward. Babington Ward had the lowest birth-rate in 1908, 1909 and 1910, and Dale Ward the highest. Almost each

year these wards have respectively the lowest and highest birth-rates. A rate of over 30 was recorded in Pear Tree Ward; Arboretum, Becket, Litchurch and Rowditch Wards have rather low birth-rates, each rate being under 20 per 1,000.

The number of births which have been divided for the purpose of ascertaining facts relating to illegitimacy now exceeds 31,000, and it will be observed that practically one child in every 30 born in Derby is illegitimate. The rate of illegitimacy is highest in King's Mead Ward, not less than one child in 16 being born with that social stigma attached to it. The wards which show the next highest figures are Becket and Litchurch Wards, rather less than one child in 21 being illegitimate. Rowditch and Castle Wards show the next highest rate of one in 24. The credit for the lowest illegitimate rate belongs to Pear Tree Ward, whilst a low rate is also recorded in Normanton Ward; three other wards, Dale, Derwent, and Friargate Wards have also rates below 30. It is interesting to note that two of the wards which have already been mentioned as having high birth-rates have also low illegitimate rates.

Notification of Births Act, 1907.—This Act was adopted by the Council at a meeting held on December 4th, 1907, and came into operation early in January, 1908. The number of births notified during 1911 was 99% of the total registered. Details of work done under this Act will be found on pages 90 and 91.

Still-births.—The number of burials of still-born children in the Derby Cemeteries during 1911 was the lowest recorded.

Appended herewith is the usual table relating to these burials for the past 17 years.

For the particulars contained in the following table, I am indebted to Mr. C. E. Oliver, Clerk to the Derby Burial Board :—

Burials in the Derby Cemeteries during the past 16 years.

Year.	Ordinary Burials.	Burials of Still-born Children.	Total.	Percentage of Burials of Still-born Children to the whole.
1895	1587	210	1797	11·7
1896	1510	218	1728	12·7
1897	1581	182	1763	10·4
1898	1744	178	1922	9·3
1899	1787	193	1980	9·8
1900	1887	195	2082	9·4
1901	1627	246	1873	13·2
1902	1552	217	1769	12·3
1903	1522	184	1706	10·8
1904	1704	154	1858	8·3
1905	1692	161	1853	8·5
1906	1666	171	1837	9·4
1907	1627	155	1782	8·7
1908	1558	163	1721	9·5
1909	1618	152	1770	8·1
1910	1365	130	1495	8·7
1911	1624	112	1736	6·4

DEATHS.

Annual Rate of Mortality.—The total number of deaths registered during the year was 1,831, as against 1,556 in 1910, 1,799 in 1909, 1,773 in 1908, and 1,870 in 1907; of these deaths 111 were of strangers; and there were 17 deaths of Derby residents registered outside the Borough, making a net total of 1,737. The net death-rate, therefore, from all causes was 14·04 per 1,000, as against 11·01 in 1910, 13·3 in 1909, 13·2 in 1908, and 14·2 in 1907.

Principal Causes of Death, 1911.

COMPARISON WITH 1910.

	Deaths in 1911.	*Increase.*	*Decrease.*
Bronchitis	158	57	...
Phthisis	136	20	...
Old Age	133	22	...
Cancer	125	30	...
Heart Diseases	112	...	50
Diarrhœa	99	71	...
Premature Birth	93	31	...
Pneumonia	88	21	...
Apoplexy and Cerebral Hæmorrhage	69	...	5
Other Tuberculous Diseases ...	60	10	...
Measles	55	41	...
Violence Causes	41	...	25
Convulsions	31	3	...
Diphtheria	25	3	...
Whooping Cough	23	9	...
Meningitis	18	...	3
Cirrhosis of Liver	15	...	...
Other Respiratory Diseases ...	15	4	...
Influenza	14	8	...
Gastritis and Enteritis ...	12	...	1
Enteric Fever	11	4	...
Scarlet Fever	2	...	2

Table III.—Infantile Mortality during the Year 1911.

Deaths from stated Causes at various Ages under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total Deaths under One Year.
	Certified	93	15	8	12	128	60	53	41	42	324
	Uncertified	14	1	1	..	16	6	10	4	..	36
i. Common Infectious Diseases.	Small Pox	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	2	1	3	12	18
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..
	Diphtheria : Croup	..	1	..	..	1	..	..	..	..	1
	Whooping Cough	..	..	..	..	..	1	1	1	4	7
ii. Diarrhœal Diseases.	Diarrhœa, all forms ..	..	..	3	2	5	10	24	16	10	65
	Enteritis, Muco-enteritis, Gastro-enteritis ..	..	..	..	..	..	1	2	..	1	4
iii. Wasting Diseases.	Premature Birth	74	5	3	2	84	10	1	..	..	95
	Congenital Defects	7	2	..	1	10	1	..	..	..	11
	Injury at Birth	2	1	..	..	3	..	1	..	..	4
	Atelectasis	1	..	..	..	1	..	..	..	..	1
	Atrophy, Debility, Marasmus	10	4	3	4	21	16	7	8	2	54
iv. Tuberculous Diseases.	Tuberculous Meningitis ..	..	..	..	..	..	..	2	..	..	2
	Tuberculous Peritonitis : Tabes Mesenterica ..	..	..	..	..	..	1	2	2	..	5
	Other Tuberculous Diseases ..	..	..	..	..	..	..	..	..	4	4
v. Other Causes.	Rickets	..	..	..	..	..	..	..	..	1	1
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	2	..	..	2
	Convulsions	9	3	..	..	12	4	5	5	..	26
	Bronchitis	..	..	..	2	2	11	6	7	4	30
	Pneumonia	..	..	..	.	..	8	6	3	3	20
	Suffocation, overlying ..	..	..	..	..	..	..	1	..	..	1
	Other Causes	4	..	..	1	5	1	2	..	1	9
		107	16	9	12	144	66	63	45	42	360

Births Notified { Legitimate 2,840 ; Illegitimate 81

Deaths { Legitimate Infants 334 ; Illegitimate „ 26

Table shewing Infant Deaths from Immaturity since the Year 1905.

Year.	*Total Births.*	*No. of Premature Births.*	*Deaths from Wasting Disease (Marasmus Atrophy & Debility.)*	*Percentage of Immaturity Death.*
1905	3108	76	62	4·5
1906	3103	66	48	4·4
1907	3152	69	70	4·4
1908	3321	73	44	3·6
1909	3220	88	51	4·4
1910	3163	62	27	2·8
1911	2921	93	54	5·0

Mortality in Age Groups.—The diseases from which individuals die at different age periods show marked variation, and a consideration of these varying contributory factors is of interest.

(*a*) Infancy.—In Table III. are set out the causes of death among children under the age of one year. These are further subdivided into the weeks of the first month of life, and figures are given for each month until the age of one year. The deaths of 360 infants were registered during the year, as compared with 266 in the previous year, and 391 in the year 1909. In the sub-division "Wasting Diseases," no fewer than 165 of these deaths are classified; premature births and debilitated conditions contributing respectively 95 and 54. The above table shows the deaths from these two latter conditions (which two are grouped under the heading of Immaturity) during the past six years in Derby. The next highest totals are diarrhœa 65, and bronchitis and pneumonia 50; the allied diseases, enteritis and gastritis, caused 4 deaths, as compared with 17 in the previous year.

The investigation of the relationship between feeding and the mortality of infants which was begun in 1899, has been continued, and the results are recorded below:—

The total number of children which have been under observation is now 27,374. There have been registered 31,609 children between November, 1900, and December, 1910, the last member of this group attained the age of twelve months in December, 1911. From the total the following deductions must be made (*a*) on account of no visit being made, but in respect of whom no death has been registered, or (*b*) on account of no visit being made owing to death occurring before any information could be obtained, or (*c*) for the reason that the death could not have been influenced by the manner of feeding, *e.g.*, some congenital defect incompatible with life, or death taking place owing to debility and no food had been given, or (*d*) in 552 instances the child being prematurely born; a total number of deductions of 4,235. These deductions leave a net total of 27,374 children who had been under the direct observation of the women inspectors. Of this number 69·46% were breast-fed, 16·16% were wholly hand-fed, and the remaining 14·38% were partly reared by hand and partly by natural means. The method of feeding has a very important bearing on the probability of a child surviving to the age of one year, as will be seen from the following table:—

Table **IV.**—*Mortality per 1,000 from Certain Diseases among Children who were Breast-fed or Hand-fed, or who were at first Breast-fed and subsequently Hand-fed (Mixed).*

	Breast-fed.		Mixed.		Hand-fed.		All three classes.	
Number of children.	19014		3937		4423		27374	
Disease.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.
Bronchitis and Pneumonia	218	11.4	60	15.2	122	27.5	400	14.6
Diarrhœa and Epidemic Enteritis	101	5.3	76	19.3	203	45.9	380	13.9
Gastritis and Gastro-Enteritis	19	.99	19	4.8	40	9.04	78	2.8
Marasmus	79	4.2	53	13.4	102	23.06	234	8.5
Atrophy and Debility	115	6.06	28	7.1	118	26.7	261	9.5
Tabes Mesenterica ..	12	0.69	3	0.7	17	3.8	32	1.2
Various Abdominal Tuberculoses ..	15	0.78	9	2.3	19	4.3	43	1.6
All other Tuberculous Diseases	40	2.1	18	4.6	24	5.4	82	2.9
Convulsions	204	10.7	59	14.9	112	25.3	375	13.7
Dentition	15	0.8	11	2.8	12	2.7	38	1.02
Zymotic Diseases other than Diarrhœa ..	80	4.2	47	11 9	43	9.7	170	6.2
All other Diseases ..	177	9.3	35	8.8	113	25.5	325	11.8
Totals	1075	56.6	418	106.2	925	209.1	2418	88.3

The death-rate amongst the breast-fed children is 56·6 per 1,000, as compared with 209·1 per 1,000 among those hand-fed, and 106·2 per 1,000 amongst those only partly breast-fed. It is important also to note that not only is this marked difference to be seen in the general death-rate, but in every classification there is the same result, the death-rate is invariably lower among the breast-fed children.

(*b*) Other Ages.—At all other ages there were registered 1,377 deaths, and of these 177 were of children between the ages of 1 and 5, 74 at the age period 5 and under 15, 83 between 15 and 25 years of age, 557 between 25 and 65, and 486 at all ages over 65. In the first of these age periods, Zymotic Diseases were responsible for a large number of deaths, Measles causing 31 deaths, as compared with 13 in the previous year. Whooping Cough caused 16 deaths, as compared with 8 in 1910. Bronchitis 12, and Pneumonia 16, were likewise very fatal diseases. Tuberculous Diseases other than Phthisis were the cause of 23 deaths, Phthisis accounting for only 5 deaths. The age periods 5 to 15, and 15 to 25, are noted for being the healthiest, and on the former the chief contributing diseases were Diphtheria 14, and Tuberculous Disease affecting other organs than the lungs 12; on the latter, Phthisis was the most dangerous ailment, as no fewer than 26 out of the 83 deaths were assignable to that cause. Phthisis is likewise a dangerous disease at the next age period, 25 to 65, there being no less than 92 deaths, and in addition Heart Diseases contributed 62 deaths, and Cancer 75. In the declining years of life, Chest Ailments 96, Heart Diseases 30, and Cancer 46, are the chief causes of death, whilst the Zymotic Ailments become practically a negligible quantity.

District Mortality Rates.—In Table V. the various mortality rates which have been recorded in the different wards into which the town is divided are set out. The deaths in public institutions have been relegated to the wards to which the persons belonged before they were removed. On the basis of the general death-rate the healthiest wards were Normanton 8·5, Babington 11·1, Derwent 11·3. Dale Ward shows the highest death-rate, viz., 17·9, with Markeaton 17·8, Pear Tree 17·01, and Becket 16·5, the next in order. The high death-rate in each of these wards is in considerable measure contributed to by the high death-rate among children.

The infantile mortality in the town as a whole was 122 per 1,000 births, but in Becket Ward it was 201, and in Castle Ward 171. Dale Ward, which had an infantile mortality of 114 in 1910, had only 84 in 1911. Infantile mortality rates of below 122 (the average of the whole town) are noted in Abbey (97), Arboretum (99), Babington (105), Dale (84), Derwent (94), Friargate (81), Normanton (70). It is satisfactory to note that there is some improvement in the waste of infant life which is taking place in the wards just referred to. The Phthisis death-rate for the whole town was 1·1, slightly higher than the previous year. The following wards had a Phthisis death-rate below the average of the whole town, viz., Abbey, Babington, Becket, Bridge, Derwent, Litchurch, Normanton, and Osmaston Wards. The highest Zymotic rate is recorded in Castle Ward (3·8), whilst Bridge (2·7), Dale and Rowditch (2·3 each) were the next highest.

TABLE V.—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1911.

WARDS.	Population in 1901.	Estimated population in 1911.	Acreage.	Density in persons per acre.	Total Deaths.	Death-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis	Phthisis death rate.	Number of deaths of infants under 1 year.	Deaths of infants under 1 year of age per 1,000 births.
Abbey ...	8,747	9,523	285	33	136	14·3	20	2·1	32	3·3	7	0·7	26	97
Arboretum ...	8,889	9,487	122	78	108	11·4	10	1·05	14	1·5	13	1·4	17	99
Babington .	8,447	9,013	134	67	100	11·1	7	0·77	17	1·9	5	0·55	13	105
Becket ...	7,297	7,749	102	76	128	16·5	16	2·06	16	2·1	8	1·0	29	201
Bridge ...	5,081	5,478	229	24	84	15·3	13	2·3	13	2·4	5	0·9	19	138
Castle ...	7,786	8,369	112	75	134	16·01	32	3·8	25	2·9	12	1·4	33	171
Dale ...	4,785	5,240	269	19	94	17·9	12	2·3	13	2·5	6	1·1	17	84
Derwent ...	4,933	5,327	907	6	60	11·3	12	2·2	13	2·4	3	0·6	14	94
Friargate ...	8,516	9,177	176	52	112	12·2	9	0·98	11	1·2	10	1·1	17	81
King's Mead ...	7,064	7,533	90	84	115	15·3	13	1·7	17	2·2	9	1·2	30	170
Litchurch ..	8,474	9,052	462	20	111	12·2	7	0·77	10	1·1	7	0·8	23	132
Markeaton ...	7,200	7,755	151	51	138	17·8	17	2·2	17	2·2	14	1·8	23	124
Normanton ..	7,225	7,854	106	74	67	8·5	5	0·63	6	0·8	7	0·9	13	70
Osmaston ...	5,429	5,922	1,381	4	90	15·2	12	2·02	18	3·0	5	0·8	27	162
Pear Tree .	6,930	7,583	392	19	129	17·01	12	1·6	26	3·4	10	1·3	35	132
Rowditch ...	8,045	8,586	354	24	126	14·7	18	2·1	12	0·4	14	1·6	24	143
*Institutions ..	...	...	...	...	535	...	41	...	52	...	43	...	...	...
Non-Residents	...	...	...	...	111	...	3	...	7	...	3	...	10	...
Transferred by Reg. Gen. (full address not supplied) ...	...	...	...	...	5	...	...		1	...	1	...	...	...
†Whole Borough	114,848	123,648	5,272	23	1,737	14·04	215	1·7	261	2·1	136	1·1	360	122

*The deaths in Institutions have been relegated to the various Wards.

†Excluding Non-Residents.

Bronchitis and Pneumonia.—These two diseases were responsible for no fewer than 246 of the 1,737 deaths registered during 1911. Bronchitis was ascribed as the cause in 158 instances, and Pneumonia in 88. The corresponding figures for 1910 were 101 and 67 respectively. Of the 158 deaths due to Bronchitis, 30 occurred in children under one year of age, while 77 (nearly 48·7%) occurred in persons of 65 and upwards. The 88 Pneumonia deaths include 20 under one year, 16 between one and five years, 36 between 25 and 65, and only 12 at 65 and upwards. Compared with 1910, there were 78 more deaths from these diseases.

The general direction which preventive measures should take would appear to be in the case of Bronchitis, greater care with regard to exposure and clothing of young children and elderly persons. The education of the public with respect to the possibly infectious nature of Pneumonia, and to the fact that persons with impared constitutions, whether the result of defective home hygiene or pernicious habits, are those upon whom the pneumococcus can most readily exhibit its pathological effects. As a corollary those conditions which tend to improve physique should be encouraged. The ventilation of workrooms and places where people congregate is of great importance. Since dust in excessive amount interferes with the efficient working of the respiratory tract, it would appear desirable that dustless streets should be aimed at, and the least dust-raising methods of scavenging should be adopted. In the case of a person attacked it is obvious that careful disposal of the infected sputum is most desirable.

Influenza.—The only information relating to the prevalence of Influenza is to be gleaned from the death returns, and these shew that there were 14 deaths ascribed to this disease as compared with 6 in the previous year, 14 in 1909, 34 in the year 1908, and 23 in the year 1907. The largest number of deaths (5) was registered in the age period 25-45. There were no deaths of children under one year of age. The Ward allocation of the deaths was: Becket, Castle, Litchurch and Pear Tree, two each; Abbey, Bridge, Friar Gate, King's Mead, Normanton, and Rowditch, one each.

Cancer.—Cancer or some variety of malignant disease was held responsible for 125 deaths, as compared with 95 in 1910, 96 in 1909, 107 in 1908, 114 in 1907, and 92 in 1906. There were 3 deaths

from this disease below the age of 5 years, 1 between 5 and 25, whilst the following three age periods had respectively totals of 10, 65 and 46. Litchurch and Friar Gate Wards, with 16 and 13 respectively, showed the highest ward mortalities. In Derwent and King's Mead Wards there were only 3 and 2 deaths respectively from this disease.

Violence.—There were 41 deaths attributed to violence as compared with 66 in 1910, 55 in 1909, 56 in 1908 and 1907. 35 of these cases were accidents, and 6 were cases of suicide. These totals compare with 57 and 9 respectively in the previous year. 9 of the cases of accident were of children under the age of 5 years, and 14 occurred amongst people aged from 25 to 65; this, of course, being the period of activity when risks, whether occupational or otherwise, are most common. The 6 cases of self-inflicted death occurred over the age of 25.

Other Diseases.—There were 112 deaths from Heart Diseases, compared with 162 in 1910; of these 92 were over the age of 25. The highest number was 12 in Becket Ward, followed by 11 in Babington and Markeaton Wards, and 10 in Arboretum Ward. Of the 17 deaths from alcoholism and cirrhosis of the liver, there were none below the age of 25. Of the 95 deaths registered as due to prematurity, 8 occurred in Osmaston Ward. There were 7 deaths attributable to "accidents of parturition," as compared with 6 in 1910.

Inquests.—I am informed by the Borough Coroner that the number of Inquests held by him during the year ended December 31st, 1911, was 192, being made up of 113 held on males and 79 on females. There were no unregistered deaths in the Borough; the cause of every death was certified either by a medical practitioner or by the Coroner.

Mortuary.—The Coroner's Officer, Mr. John Payne, informs me that the number of dead bodies which were received into the Mortuary during 1911 was 11, and that no post-mortem examinations were conducted in the building during the year.

THE NOTIFICATION OF INFECTIOUS DISEASES.

The total number of cases of infectious diseases notified during 1911, in accordance with the requirements of the Infectious Diseases Notification Acts, was 1,113 as compared with 1,163 in the previous year, 989 in 1909, 960 in 1908, and 1,095 in 1907. The number 1,113 includes 105 cases of Chicken Pox, a disease which was not compulsorily notifiable in previous years. In addition there were 255 cases of Phthisis notified under the Tuberculosis Regulations and voluntarily, the highest number recorded; also 817 cases of Measles, 232 cases of Whooping Cough, 80 cases of Varicella, and 11 cases of Mumps notified by school teachers.

The highest and lowest weekly incidences of notification under the Notification Acts were as follows:—

Week ending		Cases Notified.
7th October, 1911 ...	highest number ...	38
29th April, 1911 ...	lowest number ...	11

Notification to Sunday School Superintendents.—Early in the year arrangements were made for notifying weekly the Superintendents of any Sunday Schools attended by infected children. Formerly instances had occurred of children living in infected houses attending Sunday School while excluded from the Day School. The assent and co-operation of the several Sunday School Superintendents in the Borough were readily given.

The following summary gives particulars of these various diseases : —

Cases of Infectious Disease notified during 1911.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria (including Membranous Croup).	Continued Fever.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Chicken Pox.	Phthisis.
First ...	337	...	90	134	...	16	29	3	...	65
Second	329	...	93	84	...	14	14	3	46	75
Third ...	307	...	113	76	...	7	19	7	37	48
Fourth...	395	...	108	153	...	15	30	0	22	67
Year...	1368	...	404	447	...	52	92	13	105	255

Table VI. gives information respecting the notification of infectious diseases in previous years. It will be observed that the number notified in 1911 was rather less than that for the previous year (1163), although the former includes the cases of Chicken Pox, a disease which was notifiable for six months in 1911.

TABLE of the number of cases of Infectious Disease reported to the Medical Officer of Health during the year 1910, and of deaths from the diseases notified.

	Cases notified in 1911.	*Deaths registered in* 1911.
Small-pox	...	...
Scarlatina or Scarlet Fever	404	2
Diphtheria (including Membranous Croup)	447	25
Typhus Fever	...	...
Enteric or Typhoid Fever	52	11
Continued Fever	...	...
Relapsing Fever	...	...
Puerperal Fever	13	5
Cholera	...	...
Erysipelas	92	2
Plague	...	...
Phthisis	255	136

In dealing with these cases the following action was taken:—

	Quarters.				
	First.	Second.	Third.	Fourth.	Totals.
Number of visits made by Inspectors	789	638	468	952	2847
Cases isolated. Borough Hospital:—					
Scarlet Fever	65	69	86	66	286
Diphtheria	46	48	52	60	206
Cases isolated. Royal Infirmary:—					
Diphtheria	...	...	...	...	...
Enteric Fever	11	12	6	12	41
Puerperal Fever	1	2	2	...	5
Cases isolated. Children's Hospital					
Diphtheria	...	...	...	...	...
Cases willing to be isolated but for which no room could be found ...	12	7	10	17	46
Cases in which isolation was delayed	31	13	34	36	114
Number of rooms disinfected ...	243	228	185	356	1012
,, classrooms ,, at the various schools within the Borough	90	37	60	151	338

In addition 283 rooms were disinfected after verminous conditions, cancer, etc.

Table VI.—Number of Cases of Infectious Disease notified in the Borough of Derby during 1911 and in each year since 1881.

Years.	Small Pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Enteric & Continued Fever.	Typhus Fever.	Cholera.	Puerperal Fever.	Erysipelas	Chick'n Pox.*	Phthisis.†	Total.
1881	46	423	6	..	95	1	..	6	..	..	..	577
1882	15	770	10	..	113	..	..	6	..	..	..	914
1883	2	506	8	..	51	..	..	7	..	..	..	574
1884	7	389	..	..	344	..	..	11	..	..	..	751
1885	..	232	1	..	57	..	..	2	..	..	..	292
1886	..	167	6	..	162	..	..	1	..	..	..	336
1887	..	64	27	..	105	..	..	1	..	..	..	197
1888	20	756	23	..	163	..	..	3	..	..	..	965
1889	..	775	46	..	99	..	..	5	..	..	..	925
1890	5	346	81	..	64	..	..	1	..	..	..	497
1891	..	318	66	..	66	..	..	8	..	..	..	458
1892	11	470	67	..	55	..	..	9	..	..	..	612
1893	52	501	50	..	111	..	2	11	..	..	..	727
1894	3	513	46	..	104	..	..	7	..	..	..	673
1895	94	364	43	..	99	..	..	10	..	..	..	610
1896	1	427	45	..	104	..	..	3	..	..	..	580
1897	1	432	57	..	125	..	..	3	..	..	..	618
1898	..	481	74	..	159	..	..	6	..	..	..	720
1899	..	885	60	..	141	..	..	8	..	..	..	1094
1900	1	602	52	..	125	..	..	7	67	..	..	854
1901	1	616	74	..	114	..	..	10	52	..	..	867
1902	8	332	63	..	85	..	..	13	88	..	56	645
1903	48	185	83	..	64	..	..	14	135	..	105	634
1904	210	638	150	..	64	..	..	16	138	..	103	1319
1905	123	535	271	1	44	..	..	13	89	..	82	1158
1906	..	290	561	3	71	..	..	11	113	..	111	1160
1907	..	181	606	..	74	..	..	7	128	..	99	1095
1908	..	116	670	..	39	..	..	15	120	..	108	1068
1909	..	210	653	..	13	..	..	9	104	..	127	1116
1910	..	673	358	..	29	..	..	8	95	..	131	1294
1911	..	404	447	..	52	..	..	13	92		255	1368

* Notifiable for six months from May 1st, 1911.

In addition to the above, the following cases of Measles were also notified during short periods of voluntary notification :—1884, 513 cases ; 1887, 874 cases ; 1888, 33 cases ; also 34 cases of Scarlet Fever, and 3 cases of Enteric Fever from the annexed areas during 1901.

† Phthisis became a notifiable (voluntarily) disease in July, 1902.

TABLE VII.—Cases of Infectious Diseases notified by the Teachers in the various Schools within the Borough.

SCHOOL.	Scarlet Fever.	Measles.	Chicken pox.	Diphtheria.	Mumps.	Whooping Cough.	Sore Throats	Ring Worm.	Various.
Ashbourne Road..	—	7	1	2	1	22	25	4	9
Brighton Road ..	—	50	5	1	—	—	19	3	8
Firs Estate	—	5	—	—	—	—	—	—	1
Clarence Road ..	13	29	4	6	—	28	17	12	23
Gerard Street ..	7	78	5	2	—	1	13	9	10
Nuns Street ..	—	7	2	1	—	33	1	—	3
Nottingham Road	—	42	25	—	—	—	8	—	3
Orchard Street ..	—	1	1	—	—	—	—	1	—
Osmaston	1	24	—	1	1	—	2	2	—
Pear Tree Council	10	34	20	6	3	8	1	15	12
St. James' Road..	3	3	1	4	1	—	44	11	36
Traffic Street ..	4	92	2	2	1	17	—	3	21
All Saints' ..	—	16	—	—	—	7	2	—	—
Canal Street ..	—	—	—	—	—	—	—	—	—
Christ Church ..	2	61	9	3	—	—	—	—	4
Curzon Street ..	1	11	—	—	—	1	—	—	—
Parliament Street	—	36	—	—	—	8	3	—	3
Pear Tree Mission	—	2	1	—	1	1	—	1	2
Practising ..	1	41	5	—	1	28	4	6	10
St. Alkmund's ..	—	26	4	1	—	16	—	2	6
St. Andrew's ..	1	15	—	—	—	7	2	2	5
St. Anne's ..	—	—	—	—	—	—	—	—	—
St. Chad's ..	—	2	—	8	—	—	1	—	1
St. Dunstan's ..	1	10	1	—	—	—	1	5	5
St. James' Church	1	17	2	—	—	—	—	1	—
St. John's ..	—	3	3	—	1	5	4	2	8
St. Joseph's ..	—	—	—	1	—	—	5	1	—
St. Luke's ..	—	71	2	—	—	10	—	—	11
St. Mary's ..	2	34	2	—	1	14	1	—	3
St. Paul's ..	—	1	2	—	—	12	1	4	11
St. Peter's ..	—	52	6	—	—	—	—	—	3
St. Thomas' ..	—	1	—	—	—	—	—	1	—
Kedleston Road ..	2	15	1	8	—	12	—	1	—
Special	2	4	—	—	—	1	—	2	8
Education Office..	—	27	4	1	—	1	1	—	2
Total ..	54	817	108	47	11	232	155	88	208

School Notification of Infectious Diseases.—The notification of cases of infectious diseases by the Head Masters and Mistresses to the Medical Officer of Health has continued. In the year under review the number of cases so notified was 1,720, as against 1,684 in 1910, 1,451 in 1909, and 638 and 2,256 in 1908 and 1907 respectively. The great difference in these totals is due principally to Measles, and to the aggregates that disease alone contributed 817 cases in 1911, 514 in 1910, and 1,621 in 1907, but only 278 in 1908 and 14 in 1906.

This very fact alone shows the extent to which this disease interferes with school work, and any action, therefore, which can be taken to limit its extension should be taken advantage of. The number of Scarlet Fever cases which have been notified was 54, as against 103 in 1910, 31 in 1909, 15 in 1908, 24 in 1907, and 29 in 1906; the cases of Chicken-pox were fewer, while cases of Diphtheria increased from 35 to 47.

Mortality from Zymotic Diseases.

Zymotic Mortality during the past eight years.

Years.	Ten Years' Average.	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1,000	1·66	1·4	1·5	1·6	1·8	1·1	1·4	0·7	1·7

The total deaths registered as occurring within the Borough from this class of disease was 215, as compared with 89 in 1910, 177 in 1909, 134 in 1908, and 220 in 1907. These 215 deaths are equivalent to a death-rate of 1·7 per 1,000 of the population. The increase in the number of the total deaths from Zymotic Diseases is mainly due to the increased numbers of deaths from Diarrhœa, Whooping Cough and Measles. There was an increase in number of Deaths from Measles of 41, Whooping Cough of 9, and Diarrhœa of 71, as compared with the respective numbers for 1910. The diseases which are included under this total, and which are usually designated the seven principal Zymotic Diseases, are Smallpox, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Enteric Fever, and Diarrhœa. Each of these diseases will receive separate consideration. The comparison of the mortality with previous years is set out in the above tabulation.

SMALLPOX.

Mortality from Small Pox during the past nine years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1.000.	0·01	0·02	0·03	0·02	nil.	nil.	nil.	nil.	nil.	nil.

No case of Smallpox was notified during the year 1911; the last case treated in the wards of the Borough Hospital was discharged on September 25th, 1905.

During the year notifications of three Smallpox "contacts" were received respectively from the Port Sanitary Authorities of Plymouth (1 case) and Southampton (2 cases). Each of these cases had been a passenger on board a ship on which Smallpox had occurred.

Notification of Chicken-pox.—The Sanitary Committee on March 6th resolved to take the necessary steps for including Chicken-pox in the list of notifiable infectious diseases, owing to the somewhat frequent occurrence of Small-pox in different parts of the country and the risk of early cases of this disease being confused with Chicken-pox. The latter consequently became notifiable under the Infectious Diseases Notification Acts for six months, commencing May 1st. 105 cases were notified and all of them were visited either by a Medical Member of the Health Staff or by the School Nurse or Health Visitor. Of these cases it was found that no fewer than 76 were unvaccinated.

Age Periods.—The respective numbers of cases at the various ages were as follows:—

Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.
8	48	46	1	2

The oldest cases was 38 years of age and the youngest 2 weeks.

Sex.—There were 38 males and 67 females.

School Notifications.—In addition to the above there were notified by the School Authorities between January 1st and April 30th, and between November 1st and December 31st, 80 cases of Chicken-pox in school children.

Vaccination.—I am indebted to Mr. A. E. Morgan, the Vaccination Officer of the Derby Union, for the following particulars relating to Vaccination for the year 1911, and also for the six preceding years:—

	1904	1905	1906	1907	1908	1909	1910	1911
Births	3318	3129	3143	3188	3309	3145	3184	2935
Deaths of Unvaccinated Children ..	483	380	309	383	264	294	213	268
Insusceptible and Postponed Cases	1	24	25	47	48	27	20	15
Successfully Vaccinated ..	1394	856	407	497	445	326	250	248
Conscientious Objection Certificates ..	218	439	284	363	971	956	908	669

The above table, showing the small proportion of successfully vaccinated children to the total, reveals a very unsatisfactory state of things, and one calculated to cause very considerable anxiety as to the results of the next invasion of Smallpox, especially in the absence of special hospital accommodation for Smallpox in the Borough.

SCARLET FEVER.

Cases Notified	404
Deaths	2
Case Mortality	0·44

Mortality rate from Scarlet Fever during each of the past nine years (per 1000 living).

Years.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1,000.	0·07	0·07	0·03	0·09	0·04	0·03	0·015	0·03	0·03	0·016

Mortality-rate from Scarlet Fever, 1911 (per 1,000 living):—

England and Wales	= 0·05
77 Great Towns	= 0·06
136 Smaller Towns	= 0·06

The number of cases of Scarlet Fever notified during 1911 was 404, a decrease of 269 upon the number for 1910. As regards the distribution of the disease, it was most prevalent in Arboretum and Normanton Wards, with 36 and 37 cases respectively, and least prevalent in Bridge Ward (6 cases) and Derwent Ward (8 cases). The number of deaths from Scarlet Fever was 2 only, giving a mortality rate of 0·016; the two fatal cases occurred in persons resident in Rowditch and Osmaston Wards. The extreme mildness of the type of the disease is proved by the low case fatality, and the general mortality compares, as would be expected, most favourably wih the 10 years' average in Derby. Two cases had Chicken-pox as well as Scarlet Fever.

As regards age incidence, the great proportion, 276 out of 404, were of children at school age, viz., 5 to 15, whilst of the remaining 128 cases, 88 were children between the ages of 1 and 5. There were 286 of the cases removed to the Borough Isolation Hospital for treatment. The ages of the two fatal cases were respectively 13 years and 18 years. Both the fatal cases were females, one aged 13 years had Pneumonia as a complication. In the second case Scarlet Fever arose during puerperium, and the patient died in spite of treatment by anti-streptococcic serum, transfusion, etc.

In addition, two fatal cases notified as Scarlet Fever were ultimately found to be Diphtheria; the cause of death was certified as due to the latter in each case.

Sex.—187 of the 404 cases were males, and 217 females.

Infected Households.—

In	268	instances	1	case	only	in	house	... 268
,,	34	,,	2	cases	in	house	...	... 68
,,	14	,,	3	,,	,,	...	...	42
,,	4	,,	4	,,	,,	...	...	16
,,	2	,,	5	,,	,,	...	...	10
	322	Infected Households.						404

It may be mentioned also that six cases were notified by the Resident Medical Staff at the Infirmary, each case being referred to

the home address for classification purposes. One case notified early in the year was the third case in the house, two other cases having been notified in the autumn of 1910 in the same family.

Schools and Scarlet Fever.—Table VIII. shews the incidence of Scarlet Fever upon the respective scholars of the Elementary Schools in the Borough. It will be noticed each school was more or less affected during the year with the exceptions of All Saints' and St. Joseph's Schools.

The importance of enquiry as to absentees from illness on the occurrence of several cases of Scarlet Fever in the scholars of a school was illustrated during the year at Gerard Street School. Four cases of Scarlet Fever were notified within a week among the girls attending this school. Enquiry at the school as to the absentees from illness and visits paid to these led to the discovery of four more cases of this disease.

Concealed Case of Scarlet Fever.—M.A.P. (12) visited by Dr. Sharpe on 26th September, 1911, as result of information received while visiting 50, Thorn Street, for swabbing. M.A.P. was last at school on Monday, September 12th, in bed 13th September, rash on Wednesday (Mother thought it was Measles), now desquamating properly. Enquiry at the Education Offices elicited that the School Attendance Officer denied that the mother told him it was Measles. The case was reported to the Sanitary Committee on October 2nd and referred to the Chairman, who interviewed the mother and admonished her.

Exposure of Infected Person.—E.B., Scarlet Fever case, exposed herself publicly by leaving her brother's house, where she had developed Scarlet Fever, and going home. Both mother and patient were severely censured by the Chairman of the Sanitary Committee.

Spread of Infection through Infected Clothing.—The following case seems to point to an infected article of clothing conveying the infection. G.N., aged three years, was brought by her aunt from Bristol at Easter (middle of April). The sister of G.N. developed Scarlet Fever at Bristol about May 20th. The father brought a parcel of clothing from Bristol to Derby about June 24th, the

parcel of clothing including a flannelette petticoat belonging to G.N.'s sister. This latter was soon worn by G.N., who developed a rash on July 2nd. No other source of infection could be found.

Case of Prolonged Infection in an Adult.—B.Y., domestic servant, aged 25, had been to her married sister's, in Derby, on June 3rd, returned to service (in Derby) on the 7th, feeling ill. She vomited on the same evening, developing the rash on June 8th. It was elicited that her sister, a nurse at an Infectious Hospital, had had Scarlet Fever and been isolated for 10 weeks and discharged on May 31st, coming to her married sister in Derby the same day. On examination the latter was found to have a nasal discharge and was doubtless the cause of the infection in the case of her sister.

TABLE VIII.—SCHOOLS AND SCARLET FEVER.

	Average Attendance.	Scarlet Fever Cases.	Incidence per 1000 Attendances.
Ashbourne Road	1404	9	6·41
Brighton Road	774	9	11·6
Clarence Road	723	26	35·96
Firs Estate	1429	17	11·9
Gerard Street	811	38	46·85
Nottingham Road	261	2	7·66
Nun Street	628	5	7·96
Orchard Street	336	1	2·98
Osmaston	426	6	14·08
Pear Tree	1010	19	18·81
St. James' Road	1421	28	19·7
Traffic Street	957	9	9·4
Hastings Street H. G.	351	1	2·85
Kedleston Road	626	4	6·39
All Saints'	350	0	..
Canal Street	284	2	7·04
Christ Church	447	2	4·47
Curzon Street	311	2	6·43
Parliament Street	189	2	10·6
Pear Tree Mission	234	2	8·55
Practising	347	2	5·76
St. Alkmund's	193	5	25·9
St. Andrew's	514	5	9·73
St. Anne's	358	4	11·17
St. Chad's	503	4	7·95
St. Dunstan's	523	20	38·24
St. James' H. G.	798	24	30·07
St. John's	464	1	2·15
St. Joseph's	272	..	..
St. Luke's	545	3	5·50
St. Mary's	408	5	12·25
St. Paul's	500	2	4
St. Peter's	386	5	12·95
St. Thomas'	143	11	76·92
Special	70	1	14·28
Private Schools	..	13	..
Elementary Schools outside Borough	..	9	..

DIPHTHERIA.

Cases Notified	447
Deaths	24
Case Mortality	5·36

Mortality rate from Diphtheria during the past nine years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1,000.	0·23	0·07	0·25	0·19	0·52	0·42	0·28	0·25	0·16	0·19

Mortality-rate from Diphtheria, 1911 (per 1,000 living):—

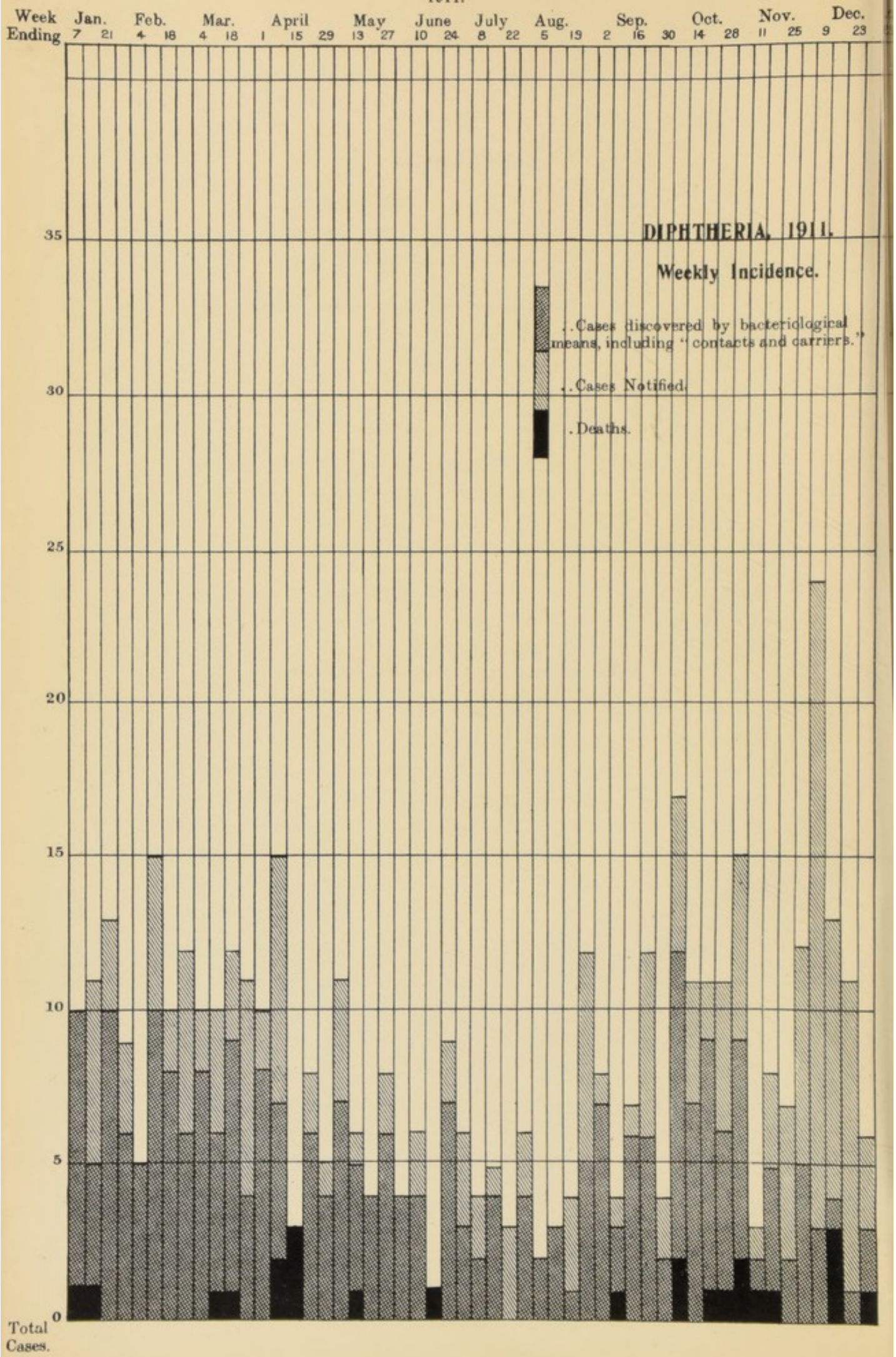
England and Wales	= 0·13
77 Great Towns	= 0·15
136 Smaller Towns	= 0·12

Diphtheria was again prevalent within the Borough during 1911; the number of cases (447) is an increase of 89 compared with the number notified in 1910 (358), and the number of deaths (24) is two more than the number of fatal cases in 1910.

Included in the 447 cases are (*a*) 268 cases notified by Medical men in the town on clinical symptoms only; (*b*) 137 cases notified on the results of bacteriological examinations of throat swabs of suspicious cases of throat illness and of cases with nasal discharge; and (*c*) 42 cases discovered in school or in the homes of the people, chiefly the "close contacts" of notified cases. The number of cases discovered by bacteriological examinations is an increase of 55 over the number in 1910.

Quarterly Incidence.	Cases.	Deaths.
First Quarter	134 ...	4
Second ,, ...	84 ...	7
Third ,, ...	76 ...	2
Fourth ,, ...	153 ...	12

Monthly Incidence.	Cases.	Deaths.
January	43 ...	2
February	45 ...	0
March	46 ...	2


1911.
Week Ending
Jan. 7 21
Feb. 4 18
Mar. 4 18
April 1 15 29
May 13 27
June 10 24
July 8 22
Aug. 5 19
Sep. 2 16 30
Oct. 14 28
Nov. 11 25
Dec. 9 23
DIPHTHERIA, 1911.
Weekly Incidence.
..Cases discovered by bacteriological means, including "contacts and carriers."
..Cases Notified.
.Deaths.
35
30
25
20
15
10
5
0
Total Cases.

Monthly Incidence—continued.	Cases.	Deaths.
April	31 ...	5
May	32 ...	1
June	21 ...	1
July	20 ...	0
August	29 ...	0
September	27 ...	2
October	58 ...	4
November	37 ...	4
December	58 ...	4
Totals ...	447	25

Weekly Incidence.—This is indicated in the accompanying chart. The highest number of cases notified in one week was 24, in the week ending December 9th; and the greatest number of deaths in one week was three, in the weeks ending April 15th and December 16th respectively.

Ward Distribution.—

Ward.	Cases.	No. removed to Isolation Hospital.	Total Deaths.
Abbey	24 ...	15 ...	0
Arboretum	31 ...	6 ...	1
Babington	20 ...	8 ...	3
Becket	15 ...	7 ...	1
Bridge	18 ...	4 ...	0
Castle	16 ...	9 ...	1
Dale	56 ...	21 ...	6*
Derwent	15 ...	9 ...	0
Friar Gate	35 ...	5 ...	1
King's Mead ...	19 ...	14 ...	1
Litchurch	33 ...	21 ...	0
Markeaton	10 ...	5 ...	0
Normanton ...	46 ...	30 ...	1
Osmaston	33 ...	9 ...	5
Pear Tree	54 ...	29 ...	3
Rowditch	22 ...	13 ...	2
	447	205	25

* Including one fatal case at Scarboro'.

It will be noted then that all the wards were affected, the greatest number of cases occurring in Pear Tree Ward, and the greatest number of deaths in Dale and Osmaston Wards

Fatality.—The 24 deaths among the 447 notified cases gives a case-mortality of 5·36, which is rather less than that for 1910. If, however, we exclude the 42 "contact" or "carrier" cases, the case-mortality is 5·9. Thirteen of the deaths took place at the Isolation Hospital. In addition to the 24 deaths one case died at Scarborough from Nasal and Pharyngeal Diphtheria. The mortality per 1,000 of the population is 0·19, as compared with a rate of 0·12 for the seventy-six great towns.

Age and Sex.—Sixteen of the 25 fatal cases were females, and 9 males. The age periods were as follows:—

1 to 2	years	0 death.
2 to 3	,, ...	4 deaths.
3 to 4	,, ...	3 ,,
4 to 5	,, ...	3 ,,
5 to 6	,, ...	7 ,,
6 to 7	,, ...	2 ,,
7 to 8	,, ...	2 ,,
8 to 9	,, ...	2 ,,
12 to 13	,, ...	1 death.
35	,, ...	1 ,,

In two of the fatal cases tracheotomy had been previously performed; in one case at the Children's Hospital, and in the other case at the Borough Isolation Hospital. In one instance a girl two years old died in the Children's Hospital, the cause of death being certified as Post Diphtheritic Paralysis.

Schools Attended by the Fatal Cases.—Ten of the fatal cases were not attending school, the remainder (15) attended school as follows:—Clarence Road and Osmaston Schools (three each), Brighton Road (two), Firs Estate, Pear Tree, St. Dunstan's, St. James' Road, St. Joseph's, St. Peter's, and St. Alkmund's (one each).

Antitoxin.—In the case of 14 of the fatal cases no Antitoxin had been administered, while in 11 was Antitoxin given—to one seven

days before death, to 3 four days before, to one three days before, and to one two days before death, and to 5 of them one day before death.

There were 22 deaths from Diphtheria in 1910, 33 in 1909, 36 in 1908, 52 in 1907 and 64 in 1906. There is, therefore, a satisfactory tendency to reduction in the number of deaths from this disease in the town, although there is a slight increase in the past year.

Age Periods (all cases).—

Under 1 year	...	3 Cases	... 1 Death.
1 to 5 years	...	83 ,,	... 9 Deaths.
5 to 15 ,,	...	300 ,,	... 14 ,,
15 to 25 ,,	...	25 ,,	... 0 ,,
25 to 65 ,,	...	36 ,,	... 1 Death.

It will be seen then that the most susceptible age of attack is between 5 and 15 years, but most deaths at one age occurred between the ages of 5 and 6 years, viz., seven.

Sex Distribution.—The numbers shew a preponderance of females, the total, 447, including 200 males and 247 females.

Infected Households.—

In 288 instances	one case only occurred in a house...		288
54 ,,	two cases ,, ,, ...		108
7 ,,	three cases ,, ,, ...		21
1 instance	four cases ,, ,, ...		4
1 ,,	five cases ,, ,, ...		5
1 ,,	five cases occurred in the Deaf and Dumb Institution		5
1 ,,	sixteen cases occurred in the Railway Servants' Orphanage ...		16
Totals 353 houses.		Cases ...	447

Second Attacks.—In five instances the cases had suffered from Diphtheria previously. One of the cases had suffered from Diphtheria 18 months previously, one 2 years, another 4 years, and two 5 years ago respectively.

Previous Cases in Household.—In 29 families previous cases of Diphtheria had occurred within periods of 2-3 months to six years.

(1)	In two households cases had occurred			2-3	months	previously.
(2)	,,	,,	,,	3-4	,,	,,
(3)	In one household a case	,,	,,	4	,,	,,
(4)	,,	,,	,,	7-8	,,	,,
(5)	In four households cases	,,	,,	12	,,	,,
(6)	In two ,,	,,	,,	18	,,	,,
(7)	In one household a case	,,	,,	21	,,	,,
(8)	,,	,,	,,	22	,,	,,
(9)	In three households cases	,,	,,	2	years	,,
(10)	In two ,,	,,	,,	3	,,	,,
(11)	,,	,,	,,	4	,,	,,
(12)	In one household a case	,,	,,	5	,,	,,
(13)	,,	,,	,,	6	,,	,,
(14)	In six households cases	,,	,,	at times not recorded.		

Occupation.—318 of the 447 cases were school children, *i.e.*, 71·1%; 65 were either children below school age or children not attending school. Among the remaining 64 cases there was no special indication that any particular occupation was a factor in the spread of the disease; but four of the cases were teachers in Public Elementary Schools, two were Hospital nurses, one a maternity nurse, and one a nurse girl. It is interesting to note that none of the men employed in the ashpit department (the number of these, including carters and depôt men, is over 100) suffered from Diphtheria, and in no instance did Diphtheria occur in the household of a man employed in this department. Similarly none of the men employed in cleansing the sewer manholes were attacked by this disease. The father of one of the patients, however, had had a sore throat, which he attributed to a choked drain which he had cleansed, but bacteriologically his throat was negative.

School Influence.—The 318 school children attended respectively 34 Public Elementary Schools, the Derby School, Deaf and Dumb Institution and Private Schools within the Borough, and two Public Elementary Schools outside the Borough. The following table gives the number of cases of Diphtheria attending each of the Public Elementary Schools, with the incidence per 1,000 attendances. With the exception of the Special School every Public Elementary School had one or more cases of Diphtheria among its scholars during 1911.

TABLE IX.—SCHOOLS AND DIPHTHERIA.

	Average Attendance.	Diphtheria Cases.	Incidence per 1,000 attendances.
Ashbourne Road	1404	17	12·1
Brighton Road	774	11	14·21
Clarence Road	723	28	38·72
Firs Estate	1429	10	6·99
Gerard Street	811	6	7·39
Nottingham Road	261	1	3·83
Nun Street	628	2	3·18
Orchard Street	336	3	8·92
Osmaston	426	19	44·6
Pear Tree Council	1010	18	17·82
St. James' Road	1421	38	26·74
Traffic Street	957	6	6·27
Hastings Street	351	3	8·55
Kedleston Road	626	14	22·36
All Saints'	350	3	8·57
Canal Street	284	1	3·52
Christ Church	447	6	13·42
Curzon Street	311	1	3·21
Parliament Street	189	10	52·91
Pear Tree Mission	234	5	21·36
Practising	347	6	17·29
St. Alkmund's	193	3	15·54
St. Andrew's	514	17	33·07
St. Anne's	358	1	2·79
St. Chad's	503	12	23·85
St. Dunstan's	523	9	17·2
St. James' H. G.	798	15	18·79
St. John's	464	4	8·62
St. Joseph's	272	4	14·7
St. Luke's	545	3	5·5
St. Mary's	408	6	14·7
St. Paul's	500	8	16
St. Peter's	386	4	10·36
St. Thomas'	143	3	20·98
Special	70	—	—
Private	—	10	—
Deaf & Dumb Institution ..	—	5	—
Derby School	—	2	—
Schools outside Borough ..	—	4	—

Defective Drains and other Nuisances.—Obvious nuisances were discovered in 21 houses only. In 2 instances the drains were found to be either defective or choked. Insanitary conveniences were found in 13 cases, 2 houses were damp, and 1 was dirty. A foul soft-water pump was found in one house, defective paving round gulley in the yard of another, while in one house the soil-pipe was placed inside the house.

Milk Supply.—In no case could the attack of Diphtheria be traced to the milk supply.

Type of the Disease.—Generally speaking, the disease was of a mild type, but in a few instances it took an insidious and toxic character. In some cases the parents had treated the patients as suffering from Mumps.

Cases of the laryngeal, or "croupy" type, were more common than in the last two years. A few cases were of the "nasal" type.

History of Diphtheria in Derby.—The following table shews that Diphtheria has been very prevalent in Derby during the past six years, 1906-11; it was moderately prevalent in 1905, while the year 1904 shewed a number of cases considerably in excess of the preceding year. The average number of cases notified during the five years 1907-11 was 546·8; while the average number notified during the preceding five years was 227·0. The numbers of notifications for the years 1909-11 are not comparable, however, with the numbers of notifications for previous years, since, in the latter three years, all cases discovered by bacteriological means (contacts and others) to have Diphtheria bacilli in the fauces are included. The average annual number of deaths for the last six years was 38·6, and for the preceding six years it was only 15·6.

The four years 1889-1892 shew an average of 19 deaths annually, and the high case-mortality would seem to suggest that many true cases of Diphtheria were not recognised at that time. Nevertheless, it will be observed that at no five yearly period has Diphtheria been so prevalent as during the years 1907-11.

DIPHTHERIA IN DERBY, 1881-1911 (inclusive).

Year.	*Cases of Diphtheria Notified.*	*Case Incidence per 1,000 of the Population.*	*Deaths.*	*Case Mortality per cent.*
1881	6	0·08	2	33·3
1882	10	0·13	3	30·0
1883	8	0·10	1	15·5
1884	1	0·02	1	..
1885	1	0·02	0	nil.
1886	6	0·07	2	33·3
1887	27	0·31	7	26·0
1888	23	0·26	7	30·5
1889	46	0·51	19	41·4
1890	81	0·87	20	24·7
1891	66	0·71	17	25·8
1892	67	0·71	20	29·9
1893	50	0·52	6	10·8
1894	46	0·47	5	10·9
1895	43	0·44	6	14·0
1896	45	0·45	10	22·2
1897	57	0·57	9	15·8
1898	74	0·73	9	12·2
1899	60	0·58	8	13·3
1900	52	0·41	7	13·5
1901	74	0·70	20	27·0
1902	63	0·54	12	19·0
1903	83	0·70	3	3·6
1904	150	1·25	29	19·4
1905	277	2·27	23	8·3
1906	562	4·50	64	11·3
1907	606	4·81	52	8·8
1908	670	5·25	36	5·5
1909	653	5·04	33	5·0
1910	358	2·72	22	6·1
1911	447	3·61	25	5·3

Measures taken for Checking the Spread of the Disease.—The routine measures adopted for dealing with Diphtheria cases have been fully dealt with in former annual reports, and there is no need to repeat them. It may be mentioned, however, that during the year 1911 much use was again made of—

(1) Hospital Isolation, and of
(2) Bacteriology.

(1) In 1911 the number of cases of Diphtheria removed to Hospital was 206, as compared with 204 in 1910, 376 in 1909, and 216 in 1908.

(2) Bacteriology was very largely used for the diagnosis of Diphtheria during the year, and for the purpose of releasing a Diphtheria patient from isolation. The number of throat swabbings examined bacteriologically in 1911 was 2,388, as compared with 4,990 in 1910, 5,310 in 1909, and 538 in 1908. A detailed summary of the work done in the Hospital Laboratory is given in the Hospital report.

The father of a notified case of Diphtheria was found to have Klebs-Lœffler bacilli in his throat; he discontinued work and had his wages paid by the Health Department until his throat was found to be free from these germs.

Schools.—Special attention was paid to the condition of the throats of school children, and no child from an infected household was allowed to return to school until bactericlogical examination of the throat swab shewed the absence of the Klebs-Lœfiler bacillus. After the notification of Diphtheria in a school child, the school last attended by the patient was at once visited, and all members of the class examined for suspicious symptoms; throat swabbings were taken of all shewing these symptoms, and usually of a dozen or so of the children who sat nearest to the patient, and also of any special playmate. Careful enquiry was made as to the absentees from illness, and these visited if thought advisable, and throat swabs taken unless a doctor were in attendance.

School Notification.—The Head Teachers of all the Public Elementary Schools in the town were notified of the arrangements for excluding the "close contacts" of Diphtheria patients (children living in infected households) from attending school until certified free from infection. The teachers also gave considerable assistance in notifying the Health Department of the existence in school children of cases with suspicious throat symptoms, either attending school or absent from this alleged cause. 155 cases of sore throat were notified by the school teachers during 1911; each of these was visited by a Medical Member of the Staff of the Health Department and a swabbing taken of the throat in most instances.

Antitoxin.—Antitoxin was supplied gratuitously to the medical men practising in Derby. 199 phials, each containing 2,000 units, were supplied in Derby in 1911, as compared with 64 in 1910. In many of the cases admitted to the Hospital in 1911, Antitoxin had not been previously given; but the use of Antitoxin is obviously increasing in Derby.

Removal of Sanitary Defects.—As far as possible all the sanitary defects mentioned above were remedied.

Persistence and Spread of the Disease.—As mentioned in previous reports, the chief factors in the spread of Diphtheria in Derby have been the many mild and unrecognised cases which have occurred. The disease has tended to disappear completely from some portions of the Borough for several months and then to again appear. In these latter instances it is usually found that some unrecognised case of Diphtheria had occurred, with slight symptoms, and with no medical attendance. If this case happened to a school child further spread of infection readily took place.

A case of Diphtheria was notified in a house in which a fatal case of Measles had recently occurred, the cause of death being attributed to "Measles, Croup"; it is possible that the latter was an instance of Diphtheria complicating Measles and was the source of infection of the former case. In another instance the brother of the Diphtheria case had been treated a fortnight previously for "Septic Throat."

One case of Nasal Diphtheria occurred in a girl suffering from Acute Poliomyelitis.

ENTERIC FEVER.

Cases Notified	52
Deaths	11

There were 57 cases of Enteric Fever notified during the year, but one notification was subsequently withdrawn, as compared with 28 cases of Enteric Fever notified in 1910. Four of the cases were admitted to the Derby Infirmary from districts outside the Borough. There were 12 deaths, including one fatal case admitted to the Infirmary from an outside district.

One case notified as Enteric Fever proved fatal, death being certified as due to Septic Inflammation of Kidneys as the result of *post-mortem* examination.

Mortality.—

Percentage Case Mortality	21·15
Mortality per 1,000 of Population ...	0·088
,, ,, (77 great towns)	0·06
,, ,, (England & Wales)	0·07

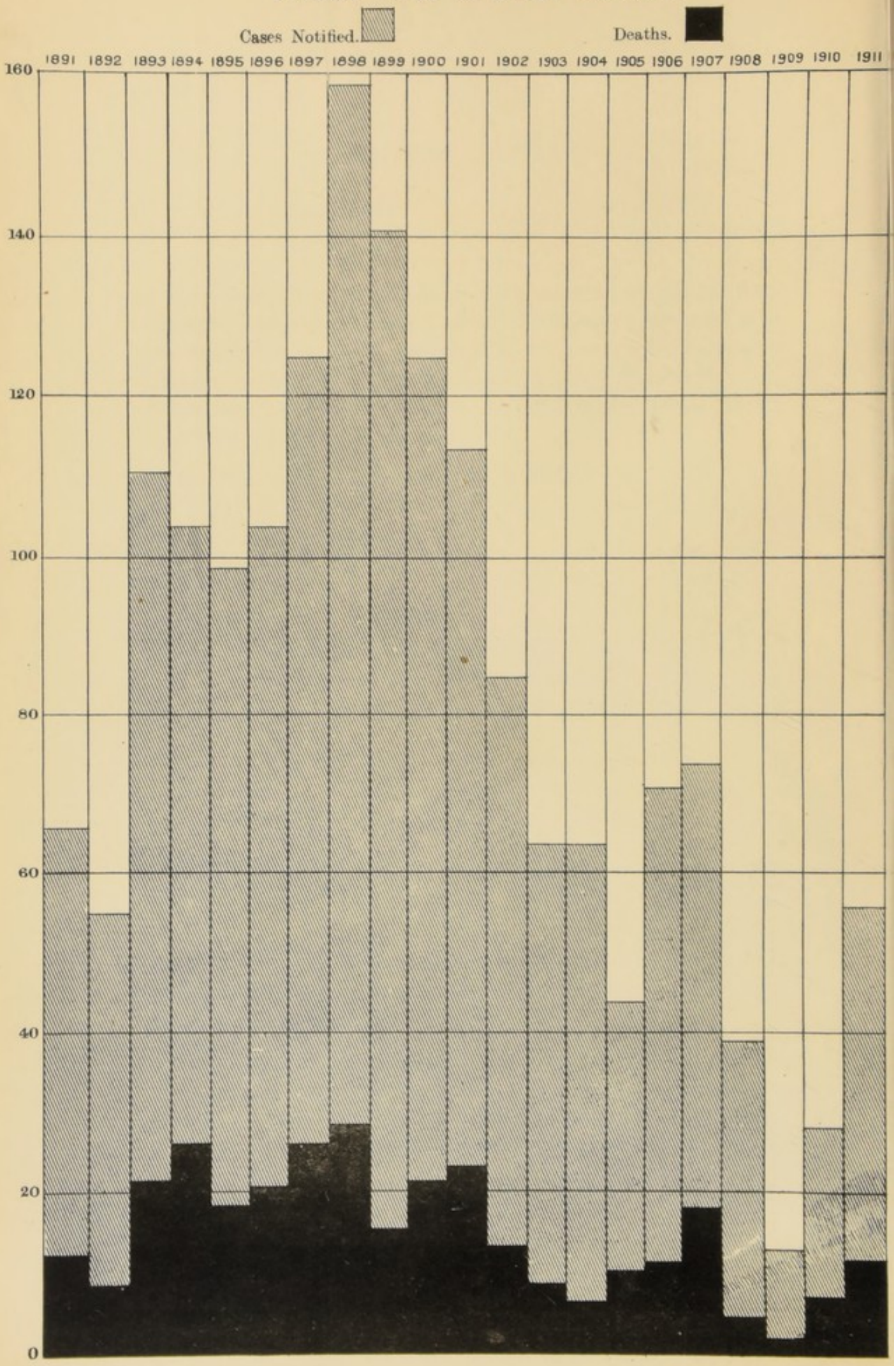
Mortality from Enteric Fever during the past nine years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1,000.	0·08	0·06	0·05	0·08	0·10	0·15	0·031	0·015	0·054	0·088

Forty-one of the cases were treated in the Derbyshire Royal Infirmary, one in the Workhouse Infirmary, two in the Children's Hospital, and 12 cases were treated at home; one of the latter died before investigation.

The number of cases notified is an increase of 27 compared with the preceding year. In 1910 there were 7 deaths (case-mortality 25%). In 1909 there were 13 cases notified with 2 deaths (case-mortality 10·3); in 1908 there were 39 cases notified with 4 deaths (case-mortality 10·3); in 1907, 74 cases notified with 18 deaths (case-mortality 24·3); in 1906 there were 70 cases, deaths 11, and case-mortality 15·7%.

ENTERIC FEVER IN DERBY 1891-1911.



Mussels and Enteric Fever, 1911.—In the early part of the year the suspicion that some of the cases of Enteric Fever which were notified were due to the ingestion of mussels gained ground. One case was definitely ascribed to this cause, and on enquiry it was found that the mussels were derived from the Lympstone beds in Devon. These beds are situated in close proximity to the sewer outfall, the sewage being untreated. All the mussels from this source were consequently banned, several bags on arrival being confiscated and destroyed, and compensation paid for them. One or two sample mussels from each of these bags was taken and sent to Professor Delépine, who reported:—

> "The examination made consisted in an estimation of the number of bacteria present and a search for the Bacillus Coli. For this purpose the entire contents of five shells were mixed together with suitable precautions and quantities of material removed corresponding to 1/10, 1/100, 1/1,000, 1/10,000, 1/100,000, 1/1,000,000 part of a mussel. With these various quantities gelatine plates were prepared, and also suitable tests made for evidence of the presence of the Bacillus Coli. The results obtained were as follows:—
>
> Bacteria per mussel ... ... 380,000.
>
> Bacillus Coli ... ... Found in 1/100 (and smaller quantities).
>
> Not found in 1/1,000.
>
> There is therefore evidence of contamination."

Communication was made to the County Medical Officer of Health of Devon on the matter.

The "mussel season" was nearing its end (at the end of April) when these investigations were completed. It was thought desirable, however, in the autumn to warn the wholesale dealers again concerning mussels from the suspected source, and a copy of the following letter was sent to the four chief dealers in mussels in Derby:—

> "Dear Sir,
>
> "I learn that it is your custom to purchase mussels from the Lympstone beds, which are on the estuary of the Exe. We

have had several cases of Typhoid Fever in this town, apparently attributable to mussels derived from this source.

"Would you, therefore, kindly discontinue purchase of these mussels until such time as the Lympstone Sanitary Authorities take steps to treat their sewage (which is now discharged in a crude state in close proximity to the mussel beds), so as to render the same innocuous. I need perhaps hardly say that should you, especially after this notice, offer mussels for sale which are polluted, you would render yourself liable to heavy penalties; but I am sure you will not wish to so act.

"I am, yours very truly,

"A. E. BRINDLEY,

"Medical Officer of Health."

Age and Sex Distribution (Derby cases):—

There were 28 males and 24 females.

Age periods.	Cases.	Removed to Hospital.	Deaths.
0-1 ...	0 ...	0 ...	0
1-5 ...	4 ...	0 ...	0
5-15 ...	6 ...	5 ...	0
15-25 ...	12 ...	8 ...	5
25-45 ...	20 ...	16 ...	5
45-65 ...	9 ...	8 ...	1
65 upwards	1 ...	0 ...	1

The fatal cases occurred in the following wards:—2 each in King's Mead and Markeaton Wards, and 1 each in Abbey, Babington, Becket, Bridge, Castle, Derwent, and Friar Gate Wards. One case was the occupant of a small fish shop; the stock of fish was confiscated and compensation paid for the same.

Ward Distribution.—There were 8 cases each notified in Castle Ward and in Derwent Ward, 7 in Markeaton Ward, 6 in King's Mead Ward, 5 in Bridge Ward, 3 each in Babington, Friar Gate, and Normanton Wards, 2 each in Becket, Litchurch, and Rowditch Wards, and 1 each in Arboretum, Dale and Osmaston Wards. No cases were notified in Abbey and Pear Tree Wards.

Houses.—In two houses 3 cases occurred in each, and in two houses 2 cases occurred in each.

Causation.—As in previous years, the cases have been classified in groups according to probable cause or the absence of any ascertained source of infection. It will be noticed that in 21 cases the source of infection was doubtful, 16 cases were probably due to personal infection, whilst 13 cases were possibly associated with some article of diet. Cases due to mussels, 1911 (see preceding pages).

In two instances only were there obvious sanitary defects found, although complaints of nuisance from the sewer manhole were made in another case.

Blood Examination.—The blood of seven of the notified cases was examined for Widal's reaction. One of these was negative, while six of them were positive.

Special Precautions.—A "Typhoid Pail" is provided for the reception of the excreta of patients treated at houses where no water closet is provided. These are periodically removed, their contents cremated at the Destructor, and cleansed. When a case occurs in a house provided with a tub closet the latter is removed and burnt in the Destructor, a new tub being substituted. The seats of all sanitary conveniences connected with Typhoid infected houses are cleansed and disinfected with Chloros. Gulleys are cleaned out and the drains flushed in the more populous centres, also courts and alleys in the immediate proximity are cleansed and washed by members of the Borough Surveyor's staff.

Sanitary Conveniences.—The 56 notified cases occurred in 49 houses, of which number 35 were provided with w.c.'s, one had a trough closet, 10 had pail closets, 5 had privy ash-pits, while 1 house had a w.c. inside and a privy ash-pit outside. The types of conveniences attached to the houses situated outside the Borough from which the four cases were removed to the Infirmary were not enquired into.

Table X.—An analysis of the Enteric Fever cases notified in 1911 (Derby cases):—

Source of Infection doubtful.

Progressive No.	Age	Sex	Sanitary Conveniences.				Nuisances.	Remarks.
			W.C.	Pail.	Privy.	Privy Cesspool.		
22	20	M.	..	..	1	..	.. ..	Had been working outside Boro'.
109	67	M.	1	..	..	..	.. ..	Widal's reaction negative.
118	31	M.	1	..	..	..	.. ..	4-roomed house. No through ventilation.
179	30	M.	1	..	..	..	.. ..	.. ..
257	26	F.	1	..	..	..	.. ..	.. ..
262	?	M.	1	..	..	..	.. ..	.. ..
273	9	M.	1	..	..	..	.. ..	.. ..
337	26	M.	1	..	..	..	.. ..	On visit to a neighbouring town up to a week before notification.
340	26	F.	..	1	..	..	.. ..	Husband ill with Pneumonia immediately before illness of wife.
474	29	F.	..	1	..	..	.. ..	Subsequently notified as Puerperal Fever.
504	49	F.	1	..	..	..	.. ..	.. ..
615	34	M.	..	1	..	..	.. ..	.. ..
626	61	F.	..	..	1	..	.. ..	As result of P.M. death certified as due to Septic Inflammation of Kidneys.
633	33	F.	..	..	1	..	.. ..	.. ..
723	9	M.	1	..	..	..	.. ..	.. ..
750	49	M.	..	1	..	..	.. ..	.. ..
928	25	F.	..	..	1	..	.. ..	.. ..
953	54	M.	1	..	..	..	.. ..	.. ..
954	48	F.	1	..	..	..	.. ..	.. ..
980	55	F.	1	..	..	..	.. ..	.. ..

Cases associated with a previous case.

6	35	F.	1	..	..	..	..	..	..	..	Brother notified Sept. 3rd, 1910.
12	9	M.	1	..	..	..	..	..	..	..	Father notified Dec. 3rd, 1910.
21	2	F.	1	..	..	..	..	..	..	..	Sister of previous case.
26	26	M.	1	..	..	..	..	..	..	..	Slept with man in adjacent town said to have the disease subsequently.
98	4	F.	1	..	..	..	..	..	..	..	Sister of cases 12 and 21.
400	22	F.	..	1	..	..	..	..	..	..	Husband, also patient's child had severe diarrhœal illness recently.
406	24	F.	1	..	..	..	..	..	..	..	Nursed husband through long illness, doctor doubtful as to nature, finally treated as Influenza.
419	35	M.	..	1	..	..	..	..	..	..	Husband of case 400, father of case 422.
422	3	F.	..	1	..	..	..	..	..	..	Daughter of case 400 and 419.
586	15	F.	1	..	..	..	..	..	..	..	Sister of case 473, helped to nurse.
903	13	F.	..	1	..	..	..	..	..	..	Daugher of case 750.
918	35	F.	1	..	..	..	..	..	..	..	Lodger living at same address had diarrhœa, subsequently notified.
431	28	F.	..	1	..	..	..	..	..	..	Diarrhœal illness of sister and children.
447	15/12	F.	1	..	..	..	..	..	..	..	Niece of case 340.
1047	15	F.	1	..	..	..	..	..	..	..	Sister of case 1043; also ate mussels frequently.
1110	18	F.	1	..	..	..	..	..	..	..	Sister of cases 1043 and 1047; also ate mussels frequently.

Cases associated with Sanitary Defect.

473	13	M.	1	..	..	..	..	..	..	..	W.C. choked.
656	22	M.	1	..	1	..	..	..	..	..	Insanitary privy. Vault.
963	36	M.	1	..	..	..	..	..	..	..	Complained of persistent offensive smell from sewer manhole

See also case 346.

Cases possibly associated with some Article of Diet.

Progressive No.	Age	Sex	Sanitary Conveniences. W.C.	Pail.	Privy.	Privy Cesspool.	Nuisances.	Remarks.
7	22	F.	..	1	..	..	.. ..	Raw mussels a month before notification.
10	25	M.	1	..	..	..	.. ..	Mussels 3 or 4 weeks before notification.
113	32	M.	1	..	..	..	.. ..	Big eater of shell-fish; had mussels regularly.
123	12	M.	1	..	..	..	.. ..	Winkles 3 weeks before notification.
305	33	F.	1	..	..	..	.. ..	Ate mussels, raw and cooked.
346	52	M.	1	..	..	..	Joints of union with fall-pipe leaky; birds kept in house, fowls and pigeons in yard.	Partook of mussels prior to illness commencing.
351	49	M.	1	..	..	..	.. ..	Ate mussels.
840	22	M.	1	..	..	..	.. ..	Drank water from stream in a Rural District 3 weeks before notification.
929	34	M.	1	..	..	..	.. ..	Habitually eats shell-fish.
936	24	M.	1	..	..	..	.. ..	„ „ mussels.
1043	23	M.	1	..	..	..	.. ..	Had mussels 3 weeks before notification.
1057	64	F.	..	..	1	..	.. ..	Had mussels recently.
1078	21	F.	1	..	..	..	.. ..	Had mussels recently.

PUERPERAL FEVER.

Cases Notified	13
Deaths	5

There were 5 deaths registered as due to this disease, compared with 4 deaths in 8 cases notified in 1910, and 7 deaths in 9 cases in 1909, 7 deaths in 15 cases in 1908, 1 death in 7 cases in 1907, 3 deaths among 11 notified cases in 1906, and 4 deaths among 13 cases in 1905. A case of Scarlet Fever occurred in a young puerperal woman with a fatal termination (see Scarlet Fever). The cases notified were 3 in Pear Tree Ward, 2 each in Abbey, Babington and Becket Wards, and 1 each in Arboretum, Friar Gate, Litchurch and Rowditch Wards. Of these cases 4 were removed to the Derby Infirmary, 3 of which terminated fatally; the other 2 fatal cases were treated at home. The age of the youngest notified case was 22, and of the oldest 42 years. The midwife in

attendance on each case of Puerperal Fever was interviewed by the Medical Officer of Health, who advised on precautionary measures. These include disinfection of the clothing of the midwife in attendance on the case, and also disinfection of the midwife's residence. In cases of Puerperal Fever a note of enquiry is usually forwarded to the medical man in charge, asking for particulars relating to the case, and in accordance with the reply received the midwife was instructed to refrain from attending other cases for varying periods.

Midwives Act, 1902.—In accordance with the requirements of the Midwives Act, 81 women, who were registered as midwives, gave notice of their intention to practise within the boundaries of the Borough. Thirty of these were women who were admitted to the roll on account of their having been in *bona-fide* practice for 12 months prior to July 31st, 1902. The remainder (51) include 28 connected with the Royal Nursing Institution, six working as maternity nurses only and the four members of the Sanitary staff; the rest being the certificated women practising privately.

One hundred and seventy-three notices were received from midwives stating that they had had to send for medical assistance, as compared with 159 in 1910 and 157 in 1909.

Ninety-five notifications of still-births were received, and most of them visited by women inspectors.

New Rules.—A meeting with the midwives in the Borough was arranged in the large Committee Room of the Corporation. All the midwives were invited and most of them attended. The new rules were explained by the Medical Officer of Health, and questions invited and answered. The chief difficulty experienced by some of the older midwives was that of recording the temperature and pulse of the patient (Rule E. 13).

A small book of "Instructions to Midwives," incorporating the new rules, was in course of preparation at the end of the year.

All the midwives in the Borough have been regularly inspected by Miss Davies. The record books and outfits were examined, and such failures to comply with the rules of the Midwives' Board as were discovered were reported to the Medical Officer of Health. In the case of minor defects, a letter was forwarded to the midwife concerned, specifically stating the rules which had not been observed.

and requesting future compliance. In cases of failure at the next visit, or in the case of more gross negligence, the midwife was requested to attend at the Health Office for personal interview. Three midwives in all were thus interviewed, as compared with nine in 1910. The Midwives Sub-Committee met twice during 1911, nine midwives were interviewed and cautioned. One midwife who had been previously cautioned, and whose work had been generally unsatisfactory, was reported to the Central Midwives' Board, who censured her and requested a further report of her conduct in three months' time. Her delinquencies included (*a*) making wrong entries in case book, (*b*) failure to send for medical help until the eighth day when portion of placenta retained, (*c*) keeping two bags, one solely for inspection, etc. Difficulty has again been experienced with regard to the attendance of some midwives when summoned to appear before the Midwives' Committee. Some of them do not attend, and give no satisfactory reason for their failure to do so when special enquiry is made.

MEASLES.

School Notifications	817
Deaths	55

This disease was epidemic during the early months of 1911, and caused a comparatively large number of deaths in the first half of the year. The number of Measles cases notified by school teachers is considerably higher than in 1910 (502), and the number of deaths is much greater than the number in 1910, when 14 deaths were recorded from this disease. The total number of deaths certified as due to Measles was 56, but one of these was a non-resident, being admitted to the Children's Hospital from Kirk Langley.

Of the 55 fatal cases (31 were males and 24 females), the ages were as follows:—

Under 1 year	18
Over 1 year and under 2 years	14
Over 2 years and under 5 years	17
Over 5 years	6

Ward Distribution.—One or more deaths occurred in each ward of the Borough, with the single exception of Friar Gate Ward. Nine deaths occurred in Castle Ward, 8 in Rowditch Ward, 6 each

in Abbey and Markeaton Wards, 4 each in Arboretum, Becket and King's Mead Wards, 3 each in Derwent and Pear Tree Wards, 2 each in Bridge and Osmaston Wards, and 1 each in Babington, Dale, Litchurch and Normanton Wards.

Season.—The seasonal incidence was as follows:—

1st quarter	... ...	34 deaths.
2nd ,,	... ...	18 ,,
3rd ,,	... ...	3 ,,
4th ,,	... ...	0 ,,

Monthly Incidence of Deaths.—

January	9
February	9
March	17
April	11
May	2
June	4
July	2
August	1
	55

Housing.—The 55 fatal cases occurred in 51 houses, two deaths occurring from Measles in each of 4 houses. These houses had the following accommodation:—

No. of Houses.	Accommodation.	Fatal cases of Measles.
2 ...	2 rooms (weekly rentals 2/-—2/6) ...	2
3 ...	3 ,, (,, ,, 2/6—3/-) ...	4
12 ...	4 ,, (,, ,, 3/-—4/6) ...	13
4 ...	5 ,, (,, ,, 3/10—5/-) ...	5
23 ...	6 ,, (,, ,, 4/-—7/-) ...	24
4 ...	7 ,, (,, ,, 4/6—5/9) ...	4
1 ...	Furnished Rooms	1
2 ...	Accommodation not ascertained ...	2
51		55

Occupants of Each House.—The respective numbers of the occupants of the 49 houses investigated were respectively as follows:

Seven-roomed houses ...	14, 8, 9, 7.
Six-roomed houses ...	9, 5, 4, 9, 5, 6, 5, 5, 5, 4, 8, 5, 8, 11, 5, 4, 6, 10, 7, 4, 7, 6, 4.
Five-roomed houses ...	5, 4, 3, 7.
Four-roomed houses ...	6, 11, 5, 6, 4, 6, 5, 5, 3, 7, 5, 7.
Three-roomed houses ...	6, 3, 9.
Two-roomed houses ...	4, 4.
Furnished apartments...	6.

Source of Infection.—

(1) *From children living in adjoining houses* (15). The infection was traced to cases of Measles living near in 15 instances.

(2) *School Infection* (29). Although none of the children who died from Measles were of school age, yet in 29 instances a brother or sister attending school was first affected. The latter recovered after fatally infecting the younger brother or sister.

(3) *Source of Infection doutful.* In 11 instances no definite evidence of the sources of infection was obtained outside the household, but in several cases elder brothers or sisters were first attacked.

School Closure.—The Infants' Department of three Public Elementary Schools were closed for periods of about a fortnight:—

Osmaston Infants' School from Jan. 30th to Feb. 13th.
Gerard Street Infants' School from Feb. 17th to Mar. 6th.
St. Mary's Infants' School from Feb. 17th to Mar. 1st.

Placards.—In addition to the handbills distributed and explained by the School Nurse or Health Visitor, placards were posted in the more crowded parts of the Borough in February, 1911, calling attention to the serious nature of the disease, and advising as to the precautions to be taken.

WHOOPING COUGH.

School Notifications	232
Deaths	23

As in the case of Measles, all children notified by school teachers as suffering from Whooping Cough are visited by the School Nurse

or Health Visitor, advice given as to isolation (when possible), exclusion from school, precautions, etc., when no doctor is in attendance. A special enquiry is made in each fatal case on lines similar to those of the notifiable infectious diseases.

Twenty-three deaths from Whooping Cough were registered in 1911, as compared with 14, 23, 29 and 43 respectively in the four previous years. All the deaths were of children under five years of age, the youngest was a baby one month old.

Ages—23 Fatal Cases.—

Under 1 year of age	7
1—2 years	13
2—3 ,, ...	1
3—4 ,, ...	2

One of the 23 cases was complicated with Measles, another with Rickets, one with Dentition, while two had suffered severely from Diarrhœa in August, shortly before the onset of Whooping Cough. One of them was a " nursed-out " child.

The number of cases notified by the school teachers is, of course, only a proportion of the total; taking the average case-mortality of Whooping Cough as 4·7, the 23 deaths would represent approximately 490 cases of the disease.

Sex.—Thirteen of the fatal cases were males and 10 females.

Season.—Quarterly incidence.

1st quarter	3 deaths.
2nd ,, ...	3 ,,
3rd ,, ...	4 ,,
4th ,, ...	13 ,,

Ward Distribution.—Five of the fatal cases lived in Abbey Ward, 3 in Rowditch Ward, while Arboretum, Becket, Bridge, Markeaton and Osmaston Wards had 2 deaths each, and Babington, Castle, Dale, Friar Gate and Pear Tree Wards 1 each.

Housing.—Particulars were obtained of the homes of fatal cases. In one house 2 cases occurred. Of the 22 houses, 14 had six rooms, the rentals varying from 3/11 to 6/6 per week. Two of the houses had five rooms, the rentals about 5/6 per week. Three houses had

four rooms at rentals of 4/-, 4/2 and 5/6, the latter having a shop attached. Two houses had seven rooms, rentals 6/6 and 7/6 per week, and one had only two rooms, with rental of 2/6 weekly.

Cleanliness.—Personal and domestic cleanliness was reported as "good" in 14 instances and "fair" in 9 cases. One house had an offensive midden ashpit attached to it, and ducks and fowls were kept in the yard, causing the same to be wet and offensive. These nuisances were dealt with.

Source of Infection.—

(*a*) From children in adjacent houses 4
(*b*) From brothers or sisters attending school ... 12
(*c*) From brothers or sisters not attending school 3
(*d*) Doubtful 4

School Closure.—The Infants' Departments of Kedleston Road School was closed from November 1st to November 20th, with the view of checking the further spread of the disease in this department. There was a large percentage of susceptible children who had not had the disease.

The main factors in the spread of the infection of Whooping Cough were apparently (1) Infection at School, (2) Visits to adjacent house.

(1) The usual sequence of events in these cases is for a brother or sister or other inmate of the same house to contract Whooping Cough at school and to recover, while the baby of the household becoming infected, dies.

(2) With regard to the second chief mode of infection, attention may be called to the gross carelessness which is often observed by parents in taking young children into houses in which Whooping Cough exists.

DIARRHŒA.

Number of Deaths 99

Mortality rate from Diarrhœa during the past nine years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910	1911
Rate per 1,000.	0·53	0·38	0·68	0·61	0·63	0·34	0·45	0·38	0·21	0·80

The deaths from Diarrhœa, which includes the various epidemic disorders of the intestinal tract in infants, numbered 99, as compared with 28, 50, 57, 42 and 78 respectively in the five preceding years. The mortality-rate (per 1,000 of the population) is 0·80, which is much higher than the rate for 1910, and is the highest recorded for the last decade. Sixty-nine of these deaths were of children under the age of 1 year, 15 between 1 and 2 years, 2 between 2 and 5 years, 2 between 25 and 65 years, and 11 over 65 years of age. This disease is most fatal to infants. In addition to the Diarrhœa deaths, there were 10 deaths registered due to Enteritis. The preventive measures have been fully discussed in previous reports, and these have been continued during the year under review.

Sex.—Fifty-two of the fatal cases were males and 47 females.

Ward Distribution.—Each ward had one or more deaths from Diarrhœa in 1911. Castle Ward had more than double the number of deaths in any other ward. The numbers in each respective ward were:—Abbey 8, Arboretum 3, Babington 1, Becket 8, Bridge 8, Castle 20, Dale 4, Derwent 8, Friar Gate 6, King's Mead 6, Litchurch 6, Markeaton 7, Normanton 3, Osmaston 2, Pear Tree 5, and Rowditch 4.

Feeding.—Of the 69 children under one year of age 4 were breast-fed, 31 were hand-fed, 34 were partly breast-fed and partly fed by hand.

Season.—The monthly occurrence of the Diarrhœa deaths (all ages) was:—January 0, February 2, March 1, April 2, May 1, June 1, July 13, August 47, September 22, October 7, November 3, December 0. The monthly incidence of Diarrhœa shews that August and September had the highest numbers (47 and 22 respectively), while January and December had none. The summer of 1911 was exceptionally warm and dry, the mean earth temperature at Greenwich at a depth of 3 ft. 2 in. being 64 deg. Fahrenheit, this being (except in 1899, when it was also 64 deg. Fahrenheit) the highest earth temperaure recorded since 1868, when it was 64·1 deg. F. The total rainfall was only three inches during the third or summer quarter, this being less than half of the mean for 50 years, viz., 6·6.

Annual Death-rate per 1,000.—From Diarrhœa and Enteritis among children under two years of age in each week of the third quarter of 1911 (Registrar-General's Return):—July 8th, 0; July 15th, 0·4; July 22nd, 0·4; July 29th, 1·3; August 5th, 4·2; August 12th, 4·6; August 19th, 4·6; August 26th, 4·6; September 2nd, 3·0; September 9th, 2·1; September 16th, 4·2; September 23rd, 0·4; September 30th, 0·8. Annual rate in 13 weeks = 2·4. Of the 77 great towns, 7 had a lower rate than this 2·4, while 69 had higher rates, 5 towns having rates above 7 per 1,000 living.

TUBERCULOUS DISEASES.

Total Number of Phthisis Notifications... ..	288
No. of Notifications of Derby Cases of Phthisis	255
,, Re-notifications ,, ,, ,,	87
,, New Cases of Phthisis Notified in Derby	168
Deaths from Phthisis	136
Deaths from other Tuberculous Diseases ...	60

These diseases are classified under two headings, namely:—(1) Phthisis, or Tuberculosis of the Lungs, and (2) "Other Tuberculous Diseases," which include tabes mesenterica, tuberculous meningitis, scrofula, etc. The total number of deaths from Tuberculous Diseases is therefore 196. In the Report for 1906, the importance of Phthisis in the annual statistical survey was fully discussed, as well as the measures which have been adopted in this Borough for its prevention.

The deaths from Phthisis numbered 136, as against 116 in 1910, 129 in 1909, 115 in 1908, 121 in 1907, and 113 in 1906; compared as death-rates, these figures represent respectively 1·09, 0·88, 0·99, 0·90, 0·96, and 0·89 per 1,000 of the population.

The table on page 63, shewing ages at death of these Phthisis cases demonstrates the fact, as in former years, that most of the deaths occur between the ages of 15 and 45, ninety or 66% occurring within these age periods. Six cases under 5 years of age were registered, 8 between 5 and 15, 26 between 15 and 25, whilst between 25 and 65 there were 92 deaths; there were only 4 deaths at ages over 65.

As regards "Other Tuberculous Diseases," the heaviest mortality is observed among children under the age of 5 years, who contributed 33 out of the 60 deaths (10 of the 33 were under 1 year of age), whilst at all ages over 5 there were 27 deaths. Of the 60 deaths due to Other Tuberculous Diseases, "Tuberculous Peritonitis" caused 17 and "Tuberculous Meningitis" caused 12.

PHTHISIS.

Notification.—The total number of notifications of Phthisis received at the Health Office during 1911 was 288, but of this number 33 were cases belonging to outside districts. The number notified in 1910 was 131 (the highest number notified in one year prior to 1911). The notifications of Derby cases (255) therefore shew an increase of no fewer than 124 over the previous number notified in one year. The total 288 includes 119 cases (4 strangers) notified under the 1908 Phthisis Regulations, 94 cases (29 strangers) notified under the 1911 Phthisis (Hospital) Regulations, 75 cases notified under Voluntary system of notification. Of the 255 notifications of cases living in Derby 87 were re-notifications, hence the new cases notified in 1911 totalled 168. At the end of the year 93 of this number were under observation at their own homes, 22 were inmates of institutions, 45 had died, while 8 had been lost sight of.

The number of cases of Phthisis notified by the Poor Law Medical Officers under the new Tuberculosis Order (referred to in the Annual Report for 1908), was 115. 24 notifications of changes of address were received from the Master of the Workhouse and from the Relieving Officers. There were 236 notified cases of Phthisis under observation at the end of the year. Of the 136 fatal cases of Phthisis 62 only had been previously notified.

Phthisis Notifications.

Year.	Private Practitioners.	Institutions.	PoorLaw Cases.	Others.	Total.
July 1st to Dec. 31st, 1902	35	16	5	..	56
1903	35	62	8	..	105
1904	37	56	10	..	103
1905	32	41	9	..	82
1906	43	62	6	..	111
1907	46	33	19	1	99
1908	49	22	37	..	108
1909	50	27	50	..	127
1910	62	29	38	2 (Reported by C.O.S.)	131
1911	74	65	115	1	255

The number reported by private practitioners is higher than in any previous year. The ward distribution of the new cases was as follows:—

	Cases Notified.	Deaths.		Cases Notified.	Deaths
Abbey ..	13	7	King's Mead ..	21	9
Arboretum ..	8	13	Litchurch ..	8	6
Babington ..	6	5	Markeaton ..	19	14
Becket ..	12	8	Normanton ..	9	7
Bridge ..	9	5	Osmaston ..	4	5
Castle ..	13	12	Pear Tree ..	6	10
Dale ..	11	6	Rowditch ..	6	14
Derwent ..	9	3	Not ascertained	1	2
Friargate ..	13	10		—	—
			Totals ..	168	136

The largest number of cases was thus reported from King's Mead Ward, as in 1910. The deaths were highest in Markeaton, Rowditch, Castle, and Arboretum Wards. There is a constant varia-

tion in the actual totals as observed from year to year; but Markeaton, Castle and Arboretum Wards had the highest number of deaths in 1910, and practically the only constant feature—as has been previously observed—is the unenviable position which King's Mead Ward occupies.

The age incidence of persons attacked and notified in 1911 is shown in the subjoined table, the deaths registered at the same age period are inserted for comparison.

	All ages.	0-15	15-25	25-45	45-65	65 upwards.
Males ...	86	15	14	39	17	1
Females ...	82	13	21	40	7	1
Total ...	168	28	35	79	24	2
Deaths ...	136	14	26	64	28	4

The relative number of females notified shews an increase as compared with previous years.

The number of specimens of sputum sent for bacteriological examination was 64, as compared with 34 in 1910.

Enquiries have been made into the *occupations* followed by the patients, and the information thus obtained has been tabulated in the subjoined table. The totals vary from year to year, and they shew no striking incidence on any particular trade. The textile workers contributed 17 cases as against 12 last year, labourers 18 as against 32, and the various workers in wood, stone, and metal 14 as against 15 in the previous tabulation. Children and persons engaged in domestic work contributed 26 and 43 respectively, as compared with 16 and 30 in the previous report. It should be mentioned that five of the cases had formerly been in the Army, but when notified were following one or other of the occupations enumerated.

Textile Workers.

In Hosiery and Tape Works	4
Cotton or Silk Winders ...	3
Net Menders	3
Upholsterers	2
Tailors and Dressmakers ...	5
Total ...	17

Labourers.

General	12
Railway Work	3
Others	3
Total ...	18

Indoor Occupations.

Printers	2
Clerks	3
Various	1
Total ...	6

Workers in Wood, Stone, Metal, &c.

Fitters	3
Bricklayers	3
Brick Maker	1
Engineers	2
Moulders	2
Boiler Smith	1
Tinsmith	1
Total ...	14

Domestic Duties.

Housewives ... ...) Domestic Servants, etc. ...)	43

Children.

School	19
Others	7
Total ...	26

Various Occupations.

Packers	3
Hawkers	3
Tram Conductors	2
Draymen	2
Greengrocers	2
Painters	2
Plumber	1
Umbrella Maker	1
Hairdresser	1
School Nurse	1
School Teacher	1
Window Cleaner	1
Butcher	1
Laundress	1
Cattle Drover	1
Insurance Agent	1
Cooper	1
Storekeeper	1
Solution Girl in Boot Factory	1
Sailor	1
Total ...	28
No record	17
Grand Total ...	168

Schools.—The schools attended by the 19 notified school cases were as follows:—

School.	Cases.
Christ Church	3
Ashbourne Road	2
Firs Estate	2
Nun Street	2
All Saints'	1
Gerard Street	1
Orchard Street	1
Pear Tree Mission...	1
St. Anne's	1
St. Chad's	1
St. Joseph's	1
St. James' H.G.	1
Not ascertained	2
Total ...	19 cases.

In addition to school children there was one teacher notified and one school nurse.

Causation.—Enquiries by the Health Visitors elicited the following particulars:—

(*a*) *Family History.*—A history of consumption in one or more near relatives was obtained in 71 cases. In one instance both husband and wife were suffering from the disease.

(*b*) *Alcoholism.*—A definite history or "admission" was obtained in 17 instances; many of these were said to have been "heavy drinkers."

(*c*) *Previous Illnesses.*—It was considered by the patients or relatives that the signs of consumption followed various illnesses as follows:—

	Cases.
Pleurisy	11
Pneumonia	9
Pleurisy and Pneumonia ...	2
"Bronchitis"	5
Whooping Cough	3
Influenza	3
Rheumatic Fever	4
"Abscesses"	2
"Hip-joint Disease"	2
Measles	1
Tabes Mesenterica	1
Typhoid Fever	1
Insanity	1

It might be added that in two cases the symptoms started after confinements and in one case after miscarriage.

In the case of one of the Phthisis patients (a boy of 7) the Health Visitor was informed that the mother had had 17 children, of whom only 4 were then living.

(*d*) *Poverty.*—No complete figures can be given relating to the effects of poverty in predisposing to Phthisis, but a very considerable proportion, especially of the Institution cases, are recorded as having been "out of work" not only since the onset of the illness, but also in many of these cases before this.

Housing.—The Health Visitor (Nurse Walls) was able to obtain information about the housing accommodation in 155 instances. The results are as follows:—

Houses.	Cases.
Two-roomed	1
Three-roomed	5
Four-roomed	34
Five-roomed	14
Six-roomed	70
Seven-roomed	14
Eight (and over) -roomed	5
Common Lodging-houses	9
Houses let in Lodgings	2
Guardian Home	1
Total ...	155

Sanitary Conveniences.—The character of the convenience was recorded in 130 instances, 97 of the houses were provided with water closets, 22 with tub closets, and 11 with privy ashpits.

Sleeping Accommodation.—The home accommodation was found to be as follows in 131 cases:—

(*a*) Patients with separate bed and separate bedroom...	43
(*b*) Patients with separate bed, no separate bedroom ...	24
(*c*) Patients with no separate bed	64

Two of the patients in group (*a*) slept in open-air shelters in back gardens.

Administrative Procedures.—These have been detailed in previous reports, and it is not necessary to again record them. Cautionary handbills against spitting were distributed during the year, each public-house in the Borough receiving a copy.

The Health Department again received valuable help from the Local Charity Organisation Society in dealing with Phthisis cases.

Institutional Treatment.—

(*a*) *Borough Isolation Pavilion.*—The Phthisis Wards were opened on May 11, and 4 males were admitted. In all 47 cases were admitted between May 11th and December 31st: 24 males and 23 females. Details are given in the Hospital Report on p.p. —.

(*b*) *Cases Treated at the Derby Royal Infirmary.*—A certain number of cases are treated on open-air principles (on balconies, etc.) at the Royal Infirmary, the number admitted during the year ending September 28th, 1911, was 75, as compared with 70 treated in the preceding twelve months. The results were as follows:—

Cured	1
Relieved	53
(One discharged at own request.)	
Unrelieved	6
Died	8
In Hospital	7
Total	75

(c) *Cases Treated in the Victoria Home of Rest during the year 1911:—*

In Home on January 1st ...	...	1
Admitted during the year	...	11
Total	...	12

Of these 7 died, 2 returned home, 3 still in Home on December 31st.

HOSPITAL FOR INFECTIOUS DISEASES.

The staff consisted during the first four months of the year of a resident Medical Officer, a Matron, two Sisters in Charge, two Assistant Nurses, and nine Probationers; in addition there were Cook, Kitchen-maid, two House-maids, Between-maid, Laundress, Laundry-maid, four Ward-maids, and Caretaker and his Wife. After the opening of the Phthisis Wards and Home the additional staff consisted of a Cook-General, a Wardmaid-Housemaid, and two Probationers. Additional help was given by two men who attended daily for work in the boiler-house and grounds. The Hospital and the whole Health Department of the Corporation experienced an almost irreparable loss by the death of the Matron (Miss E. Mould) on April 24th, 1911, at the comparatively early age of 49 years. Although for several years past she had suffered from heart trouble she had shewn such wonderful recuperative power that one hoped that she might have lived for many years longer. Miss Mould had been in the Corporation service for a period of 21 years, and shewn great ability in the management of the Hospital, which resulted in a very high degree of efficiency and economy. Her loyalty, tactfulness and great devotion, both to the patients and the staff, and to the Corporation generally, were indeed incomparable.

The Senior Sister (Miss K. Jenkins) was appointed to the post of Matron, and I have much pleasure in testifying to the zeal and ability with which she has carried out the arduous and exacting duties of her post after Miss Mould's death.

The admission of Diphtheria cases, commenced in 1907, was continued throughout the year, and 206 cases were admitted, as

compared with 201 in 1910, 376 in 1909, and 218 in 1908. The number of cases of Scarlet Fever admitted was less than that of the preceding year.

The Bacteriological Laboratory was utilised fairly extensively, the number of examinations being as follows:—Throat swabs, 3,522, and sputum examinations 170; compared with 2,705 throat swabs and 39 sputum examinations in 1910. The increase in number of examinations of sputa is noticeable. A feature noticed in the total swabs examined is the increased number of these sent in by local practitioners. Details of these examinations are given on pages 74 and 75.

As a preliminary to the discharge of Diphtheria patients from Hospital, swabbings of the throat were taken in each case, showing the absence of the Klebs-Lœffler bacilli; two successive negative swabs taken from both throat and nose were required before discharge of the patient was sanctioned.

No case of Smallpox has been admitted during the past year. Fortunately the town has been free from the disease. The need for some special provision for the isolation of Smallpox is again emphasized.

The following statistics have reference to the patients under treatment during the past year:—

	Scarlet Fever.	Diphtheria.
Remaining in Hospital, December 31st, 1910 ...	57	13
Admitted during 1911	286	206*
Number discharged during 1911	303	174*
Number who have died in Hospital during 1911...	1	14
Remaining under treatment on Dec. 31st, 1911...	37	31*

* These figures include "contact" or "carrier" cases.

One case of Measles was admitted from the Royal Infirmary and a case of German Measles from a large business establishment in the town.

SCARLET FEVER.

Number of Cases	286
Number of Deaths...	1
Case Mortality	0·35%

An analysis of the cases of Scarlet Fever shows that—

At ages of 0-5 there were 62 cases admitted.
,, 5-10 ,, 140 ,,
,, 10-15 ,, 63 ,,
,, 15 and over 23 ,,

Type of Case.— 280 were of the ordinary type, 6 were of the septic type. There were no severe toxic cases.

Thirteen cases admitted as Scarlet Fever were found not to be suffering from that disease (9 of them showed no disease except simple sore throat, the other 4 cases proved to be German Measles); 3 cases admitted were found also to be suffering from Diphtheria.

DIPHTHERIA.

Number of Cases	206
Number of Deaths...	14
Case Mortality	6·7%

This number includes 17 "contact" or "carrier" cases, *i.e.*, cases shewing the presence of Diphtheria bacilli in the throat, but no clinical symptoms of the disease. There were therefore 189 cases of true Diphtheria among the 206 cases admitted.

(*A*) *"Contact" or "Carrier" Cases* (17)—

Age periods.

0- 5	...	1 case.
5-10	...	14 cases.
10-15	...	2 ,,
15-20	...	0 case.
over 20	...	0 ,,

It will thus be seen that this precautionary detention in Hospital applied mainly to children, in no cases were wage-earners detained in Hospital.

Every "carrier" or "contact" case was given a prophylactic dose of 2,000 units of Antitoxin.

Duration of Stay.—The average duration of stay in Hospital for these cases was 31·3 days.

(B) Clinical Cases (189).—

Age.	Cases.	Deaths.	Case Mortality.
0-5 ...	46 ...	7 ...	15·2%
5-10 ...	84 ...	7 ...	8·3%
10-15 ...	36 ...	0 ...	0%
15 and over...	23 ...	0 ...	0%
	189	14	

Type of the Disease.—Seven of the cases were of the laryngeal type, in the remainder (182) the disease primarily affected the fauces. It will be noticed that the disease was most prevalent and most fatal in children under 5 years of age.

Approximate time of admission of Diphtheria cases—

On 1st day of illness ...	... 3 cases.
,, 2nd ,, ,, ...	... 24 ,,
,, 3rd ,, ,, ...	... 35 ,,
,, 4th ,, ,, ...	... 33 ,,
,, 5th ,, ,, ...	... 28 ,,
Between 6th and 10th day	... 48 ,,
After 10th day of illness ...	... 11 ,,
Day of illness not known ...	... 7 ,,

Antitoxin.—In 99 cases small doses of Antitoxin had been administered before admission. In Hospital an average of 4,000 units was administered to the 189 patients.

Causes of Death.—

	Cases.
Toxæmia	2
Heart Failure	9
Diaphragmatic Paralysis	2
Broncho-Pneumonia	1

Paralysis.—

Soft Palate	16
Eye	1
Diaphragm	3
Pharynx	2
Larynx	1

Laryngeal Obstruction.—

Cases	7
Tracheotomy	6
Deaths	4

In one case Tracheotomy was performed outside, and the child removed to the Infectious Diseases Hospital later. Tracheotomy was performed in five cases admitted directly to the Diphtheria wards, one of these recovered and the other four died from Heart Failure (3) and Broncho-Pneumonia (1). One of the cases of Tracheotomy which died was complicated with severe Septic Scarlet Fever.

Duration of Stay (189) Diphtheria cases.—Average stay in Hospital, 37·8 days.

Other Complications.—

	Cases.
Enlarged Glands	12
Antitoxin Rashes	16
Nasal Discharge	2
Albuminuria (severe)	4
Chicken-pox	1
Otorrhœa	3

Thirty-seven cases sent in as Diphtheria were found not to be suffering from that disease; of these 11 had Follicular Tonsillitis, 18 simple Sore Throat, while 8 proved to be Scarlet Fever. In these 37 cases no Diphtheria bacilli were found on bacteriological examination.

The Laboratory.

The following is a summary of the work done at the Hospital Laboratory during 1911 :—

I.—*Throat Swabs.* 3,522 swabs were examined for the presence of Diphtheria bacilli, as compared with 2,705 in 1910.

School Swabs :—

	+ (Positive.)	– (Negative.)
January	0 ...	28
February	4 ...	36
March	3 ...	76
April	0 ...	30
May	1 ...	32
June	0 ...	9
July	1 ...	21
August	1 ...	16
September	4 ...	64
October	9 ...	130
November	4 ...	75
December	12 ...	65
Total ...	39	582

The above table shews the great value of the bacteriological examination of the throats of school "contacts" (children who have been in close proximity to recognised cases). By means of these examinations 39 infective cases were recognised and isolated.

ANALYSIS OF SWABS.

1911.	HOSPITAL. Diagnosis. +	−	Discharge. +	−	Total	DEPARTMENT. Diagnosis. +	−	Contacts. +	−	Disinfecti'n +	−	Total	DOCTORS. Diagnosis. +	−	Contacts. +	−	Disinfecti'n +	−	Total	Grand M'thly Total.
January ..	10	14	5	51	**80**	1	14	2	106	1	16	**140**	13	29	0	5	0	13	**60**	**280**
February ..	7	13	18	40	**78**	3	10	1	72	1	7	**94**	15	32	0	3	3	11	**64**	**236**
March ..	5	11	3	54	**73**	8	24	8	157	5	27	**229**	11	46	0	2	2	5	**66**	**368**
April ..	12	26	1	58	**97**	1	14	2	105	6	5	**133**	10	25	0	0	1	3	**39**	**269**
May ..	5	11	4	69	**89**	1	13	5	74	4	12	**109**	2	39	0	4	0	2	**47**	**245**
June ..	12	7	0	22	**41**	1	9	3	31	0	11	**55**	5	19	0	1	0	6	**31**	**127**
July ..	4	23	3	60	**90**	0	15	4	55	1	2	**77**	4	29	0	3	0	0	**36**	**203**
August ..	9	5	18	67	**99**	0	3	9	35	5	8	**60**	4	17	0	0	0	0	**21**	**180**
September ..	9	26	16	111	**162**	0	58	4	85	2	17	**166**	6	36	2	1	1	0	**46**	**374**
October	9	22	15	97	**143**	4	44	11	155	2	14	**230**	8	50	1	2	1	6	**68**	**441**
November ..	11	33	21	91	**156**	8	61	6	121	2	13	**211**	5	31	0	11	0	2	**49**	**416**
December ..	8	11	35	53	**107**	5	17	20	104	5	19	**170**	26	51	4	8	8	9	**106**	**383**
Yearly Totals	**101**	**202**	**139**	**773**	1215	**32**	**282**	**75**	**1100**	**34**	**151**	1674	**109**	**404**	**7**	**40**	**16**	**57**	633	**3522**

II.—*Sputum Examination.* The number of sputum specimens examined in 1911 for the presence of tubercle bacilli was 170, and 77 of these gave positive results, while 93 were negative. The specimens were obtained from the following sources:—

(*a*) from General Practitioners 60

(*b*) from School Medical Officer 4

(*c*) from Sanatorium 106

III.—One sample of Milk was examined for tubercle bacilli. Result—negative. A sample of Milk was also examined for Diphtheria bacilli with negative result.

IV.—*Preparation of Media, etc.* The blood serum and other media were prepared in the Laboratory, the swab outfits were also prepared and sterilised.

Hospital Provisioning, 1911.

1911.	Days of treatment.	Average Patients per day.	Cost of Provisioning.	Average Cost per Patient per day.*
			£ s. d.	s. d.
1st Quarter	5181	57·57	277 9 1	1 0·85
2nd ,,	4523	49·70	243 15 5	1 0·93
3rd ,,	5531	60·1	240 5 5	0 10·42
4th ,,	6356	69·1	260 18 9	0 9·85
Totals 1911	21591	59·12	1022 8 8	0 11·36
Totals for 1910	23,939	65·6	1103 10 3	0 11·06

*This includes cost of provisioning staff.

Sanatorium Provisioning, 1911.

1911.	Days of treatment.	Average Patients per day.	Cost of Provisioning.	Average Cost per Patient per day.*
			£ s. d.	s. d.
13th May to 30th June	244	4·8	32 10 4¾	2 7·98
3rd Quarter	1264	13·7	85 19 6½	1 4·3
4th ,,	1362	14·8	103 18 9¼	1 6·3
Totals 1911	2870	11·7	222 8 8½	1 6·6

*This includes cost of provisioning staff.

WATER SUPPLY.

Private Supplies.—Continued supervision was exercised over the water suppiy from the wells which still exist in some parts of the town, especially in the Alvaston district. Water samples were taken from seven of these wells and carefully examined, no evidence of pollution being found in any of them.

Public Water Supply.—As mentioned in the Annual Report for 1908, the principal sources of the water supply of Derby are obtained from filter tunnels alongside the River Derwent, and from a few springs in the Valley of the "Bottle Brook," between Little Eaton and Coxbench, the water supply from the Derwent Valley Joint Board not being available. (This latter supply is expected to be ready sometime in 1912.) The pumping station at Little Eaton and adjoining filter beds are situate about three miles from the centre of Derby. The above-mentioned supply was supplemented by water taken from the adjacent Carr Brook (the waters of which are comparatively pure during dry weather) from July 10th to October 1st, 1911. The maximum daily flow of Carr Brook hardly reaches 250,000 gallons, and this was filtered separately, then mixed with the usual supply and again filtered. It is satisfactory to report that Derby suffered in no way from a water famine

during the hot and dry season of 1911. There was some curtailment of the street watering for a short period, but, fortunately, there was no restriction of court flushing during the Diarrhœa season.

MILK SUPPLY.

Milk Samples.—Two samples of Milk were sent to Professor Delépine's Laboratory during 1911 and tested by inoculation; they were found *not* to cause Tuberculosis. One sample of Milk was examined for the presence of Diphtheria bacilli, with negative results.

Milk Contract for Isolation Hospital.—The forms of tender for the supply of Milk to this Institution (including Isolation and Phthisis wards) contained the following conditions:—

> "(1) That the Contractor allow a Veterinary Surgeon, appointed by the Corporation, in company with the Medical Officer of Health or deputy appointed by the Corporation, to apply the tuberculin test to any or all of the milch cows on his premises, and in the event of any such cow or cows reacting to the test, to cease to supply milk from such cow or cows if thought desirable by the Medical Officer of Health or Veterinary Surgeon appointed as aforesaid.
>
> "(2) That during the period covered by the contract the Contractor shall maintain the cowshed, dairy or milkshop in such a satisfactory condition as regards cleanliness, ventilation, water supply, etc., as may be deemed necessary by the Medical Officer of Health, Veterinary Surgeon appointed by the Corporation, or Deputy, and to afford every facility to such official."

HOUSING.

During the year 1911 a census was taken of the back-to-back houses, and those without through ventilation, in the Borough. The following summary gives the number of these houses in the respective wards, and the approximate percentage in each. The list does not include (*a*) houses with angular ventilation (*e.g.*, such

as have side windows or doors), nor (*b*) houses with fixed back windows (such as could not be opened at the time of visit, but, of course, capable of being altered); (*c*) a number of houses without through ventilation in the lower storey or storeys, but with through ventilation in the upper storeys are also not included; nor (*d*) houses now used for other purposes than as dwellings. Included in the list, however, are houses with skylight ventilators and others with small gratings in the back, or side walls, but have neither side windows, side doors, back windows, nor back doors. Most of the houses are built in courts, and are in good structural condition with plenty of air space in front. It would not be practicable in many instances to convert these houses into "through" houses. The houses situated in streets, however, some of which are three storeys in height, could be so converted in most cases; but these latter would make houses too large and too costly for the tenants of the neighbourhood.

Back-to-Back Houses (B.B.) and Houses without Through Ventilation (N.T.V.), 1911.

Ward.	No. of Houses (Census, 1901).	Houses B.B. or N.T.V.	Percentage.
Abbey ...	1,832	2	0·11
Arboretum ...	1,979	0	—
Babington ...	1,908	13	0·68
Becket ...	1,737	101	5·81
Bridge ...	1,089	110	10·1
Castle ...	1,741	188	10·8
Dale ...	1,025	0	—
Derwent ...	1,038	21	2·02
Friar Gate ...	1,710	1	0·06
King's Mead ...	1,574	387	24·6
Litchurch ...	1,951	81	4·15
Markeaton ...	1,680	89	5·3
Normanton ...	1,596	0	—
Osmaston ...	1,187	0	—
Pear Tree ...	1,385	12	0·87
Rowditch ...	1,640	14	0·85
Totals	25,072	1,019	4·06

From this table it will be noted that King's Mead Ward has far the greatest number and highest percentage of these houses. This ward includes Walker Lane, Willow Row, Goodwin Street, Bridge Street and part of Brook Street. It is hoped that many of this type of house in the above streets will be gradually closed, or satisfactorily altered, in the next few years.

A special report was presented to the Sanitary Committee on September 4th, 1911, by the Medical Officer of Health concerning the housing conditions of the districts in the neighbourhood of East Street, Brook Street, and Willow Row. In this report it was stated that in the streets East Street, Albion Street, Bloom Street, Eagle Street, Earl Street, Willow Row, and Brook Street, there were no fewer than 176 houses either back-to-back or with no through ventilation. These houses are situated chiefly in courts or yards, of which there are 30 in connection with these seven streets.

Empty Houses within the Borough.—The following list shews that there was no lack of housing accommodation during 1911 in Derby, the total number of empty houses in June, 1910, being 1,184.

List of empty houses within the Borough, June, 1911:—

Abbey Ward... ...	120	King's Mead Ward ...	123
Arboretum ,, ...	68	Litchurch ,, ...	58
Babington ,, ...	120	Markeaton ,, ...	75
Becket ,, ...	93	Normanton ,, ...	37
Bridge ,, ...	42	Osmaston ,, ...	52
Castle ,, ...	135	Pear Tree ,, ...	55
Dale ,, ...	65	Rowditch ,, ...	45
Derwent ,, ...	20		
Friar Gate ,, ...	61		1,169

Empty Houses in June in the various Wards in each of the past Five Years:—

Ward.	No. of Houses. 1907.	1908.	1909.	1910.	1911.
Abbey	136	128	120	152	120
Arboretum	38	35	39	54	68
Babington	90	85	92	134	120
Becket	81	84	77	97	93
Bridge	56	59	53	54	42
Castle	126	117	109	107	135
Dale	89	95	85	72	65
Derwent	32	29	27	30	20
Friar Gate	69	65	62	50	61
King's Mead	172	167	161	122	123
Litchurch	51	47	45	72	58
Markeaton	92	94	96	51	75
Normanton	36	30	27	41	37
Osmaston	39	35	32	49	52
Pear Tree	45	48	63	44	55
Rowditch	68	69	63	55	45
	1,220	1,187	1,151	1,184	1,169

MEAT INSPECTION.

Details of the articles of food condemned and destroyed during 1911 will be found in Mr. Wilkinson's Report. The relative number of animals intended for food which were inspected and found to be infected with Tuberculosis was as follows:—Bulls, 2; Bullocks, 2; Heifers, 15; Cows, 80; Pigs, 19. In very few cases was it found necessary to condemn the carcase or portions of it for Tuberculosis, except in the case of Pigs. No prosecution was undertaken for Tuberculosis during the year; a Magistrate's order was deemed necessary in one case only, no difficulty in obtaining voluntary surrender being usually experienced.

FOOD POISONING.

Two small outbreaks of illness said to be due to special articles of food occurred during the year. Only one household was affected in one outbreak, and the duration of illness comparatively short, while eight households were affected in the other case. The suspected articles of food were (*a*) a piece of pickled pork in the one case, and (*b*) a piece of " chawl " (pickled pig's cheek) in the other. The premises on which these foods were prepared were visited and examined, but no source of pollution was discovered in either case. It might be stated that special attention has been paid to food preparation premises in Derby in recent years. Many of these places are very well equipped and carefully kept. The premises upon which the pickled pork had been prepared are among the very best as regards equipment and management in the Borough. Specimens of the suspected foods were sent to Professor Delépine's Laboratory, and the reports respectively of his examinations follow the reports of the outbreaks:—

A.—Illnesses attributed to Pickled Pork.

Eight households were affected and 21 persons were attacked; details as follows:—

Information was received on 20/5/11 from Dr. D. and Dr. S. that they were attending the following cases, who presented symptoms of food poisoning, and that each had eaten " pressed pork " obtained from . . . . Derby:—

Mr. and Mrs. M., Stanhope Street.
Mr. and Mrs. W., Darby Street.
Mrs. H. and Son, Becher Street.
Mr. P. and Mrs. R., Whiston Street.
Mrs. B., Bainbrigge Street.
Mr. and Mrs. G. and family, Whitaker Street.
Mrs. P., Upper Dale Road.
Mr. and Mrs. H., Stanton Street.

Mrs. H., STANTON STREET.

Half-pound pressed pork, on Thursday, May 18th. Mrs. H., was ill after eating pork (Friday, mid-day). Mr. H. was the worst. The symptoms were: diarrhœa, sickness, and pains in the stomach.

	Pork.	Illness.	
Mrs.	+	+	(Mother states that child has been fed on artificial foods and has had diarrhœa and vomiting for some time.)
Mr.	+	+	
F/17	–	–	
F/$\frac{7}{12}$	–	+	

STANHOPE STREET.

Mrs. M. purchased $\frac{1}{4}$-lb. pressed pork Saturday night, which Mr. and Mrs. M. ate for supper. On Sunday, about tea time, both Mr. and Mrs. M. commenced with a chill, followed by stomach pains and severe diarrhœa (stools and vomit green). In this case the illness of Mr. M. was most severe, and had to be away from work the whole week. Dr. ordered up Saturday. Now looks very "seedy."

The relationship between the consumption of the pork and illness is as follows:—

	Pork.	Illness.	
Mr.	+	+	
Mrs.	+	+	
G/6	—	—	
B/3	—	—	
B/$\frac{6}{12}$	—	—	Diarrhœa (at breast).

Mrs. P., UPPER DALE ROAD.

Half-pound pressed pork was bought on May 13th (Saturday), and was eaten by the family on Saturday mid-day. Mrs. P. finished the meat on Sunday mid-day. On Sunday evening she was ill, suffering from stomach pains, sickness, diarrhœa (stools green and frothy), and pains in the head.

	Pork.	Illness.
Mrs.	+	+
Mr.	+	—
M/20	+	—
F/12	+	—

39, DARBY STREET.

Mrs. W. purchased $\frac{1}{2}$-lb. pressed pork from . . . . , Derby, at about 11 a.m., Saturday, 13th May. Mr. and Mrs. W. had some for dinner mid-day. On Sunday, 14th May, stomach pains

commenced, followed by severe diarrhœa (stools green and frothy), vomiting, head pains, lost use of limbs. Tuesday, diarrhœa, recommenced. Dr. called in Wednesday. Patient now improving. Mr. W. had similar illness, but in a lesser degree.

	Pork.	Illness.
Mr.	+	+
Mrs.	+	+
Dog	+	—

(The dog, a small terrier, ate a small portion.)

Mrs. H. & SON, BECHER STREET.

Pressed pork (½-lb.) purchased on Thursday, 18th May, and eaten on Thursday. The son ate the pork on Thursday night and Friday mid-day at his place (Messrs. R., Derby). He gave part to A.J., who works at R. The illness was of a precisely similar nature.

	Pork.	Illness.
Mrs.	+	+
Son/16	+	+
A. J.	+	+
Fowl	+	—

The remainder was thrown to the fowls who did not appear affected.

Mrs. B., BAINBRIGGE STREET.

Mrs. B., on recommendation of Mrs. W., bought ½-lb. pressed pork on Saturday, May 13th. This was eaten at 4 p.m. Diarrhœa and sickness Sunday, May 14th. Husband slightly ill.

	Pork.	Illness.
Mr.	+	+
Mrs.	+	+
F/8	—	—

WHISTON STREET.

On Thursday, May 18th, Mrs. R. purchased ¼-lb. pressed pork which Mrs. R. and a relative (Mr. P.) ate for supper on the same day. Friday noon illness (both cases) commenced stomach pains, diarrhœa; no vomiting; now feeling weak. Mrs. R. still in bed, but improving; diarrhœa abating. P. improving; looks "seedy."

	Pork.	Illness.
Mrs. R.	+	+
W. P.	+	+
Mr. R.	—	—

WHITAKER STREET.

Pork (¼-lb.) from . . . . on Thursday, May 18th. Eaten on Thursday night and Friday morning. Illness of Mrs. G. commenced on Friday afternoon. The rest at same time.

	Pork.	Illness.	
Mrs.	+	+	Severe.
Mr.	+	+	
M/17	+	+	Slight.
F/18	+	+	
F/16	—	—	

The shop where the meat was purchased (. . . . .) is of a modern construction, and scrupulously clean. The pork is only kept one day before being sent from the factory in the Market Place to the shop where it is stored in a refrigerator (temperature at time of observation, 40 deg. Fahrenheit).

The meat is cooked on	and comes to shop on
Tuesday	Wednesday
Thursday	Friday
Friday	Saturday.

The main factors to be noted are that—

(1) Out of 21 persons who ate the meat, 18 were ill with a disease of about 24 hours' incubation period characterised by abdominal pains, vomiting, diarrhœa, and collapse of a few days' duration, and a slow convalesence. Of the three persons who escaped, two were male adults and one a girl 12 years of age. A dog and some fowls who also ate the meat were unaffected.

(2) There was nothing wrong about the meat as regards appearance and taste; indeed all the sufferers emphasized the point that the meat was particularly good.

(3) The conditions under which the meat was prepared and sold differed in no way from other tins of pressed pork sold at the same time and similar conditions.

(4) The weather of the past few days has been hot, bright sunshine, and no wind.

REPORT ON EXAMINATION OF PIECE OF PORK.

The specimen on arrival was somewhat decomposed, and on bacteriological examination by means of cultures of various kinds was found to contain a very large number of bacteria. Many of them were putrefactive organisms; but a bacillus was present in considerable numbers, having certain characters when tested in pure culture indicating that it belonged to the Enteritidis or Gärtner group (Bacillus A).

Sufficient material was not available for feeding experiments. Two animals were inoculated subcutaneously with an emulsion of the pork in sterile water:—

Guinea-pig 96A.—Inoculated with about one-fifth gram, chiefly lean pork. Dead in four days. The lesions present were those of a septic infection, and a bacillus having the same characters as Bacillus A was isolated by cultures from the local lesion and also from the spleen and blood.

Guinea-pig 96B.—Inoculated with about one-fifth gram, chiefly fat. The animal was living seven days after inoculation but had a fairly extensive abscess, from which Bacillus A was isolated by cultures.

A pure culture of Bacillus A, isolated from the pork, was tested with two guinea-pigs:—

Guinea-pig 98A.—Inoculated subcutaneously with one large drop of a 24 hours' old culture in peptone bouillon. Very transient lesions were produced, and the animal had quite recovered in five days.

Guinea-pig 98B.—Inoculated subcutaneously with 1 c.c. of the same culture as that used for 98A. Died in two days. The lesions found were those of a septic infection, and the bacillus was recovered by cultures from the local exudation, spleen, and blood.

Two guinea-pigs were fed on two successive days with gelatine cultures of Bacillus A. Each animal received a little oats contaminated with 10 c.c. of culture. Neither of them showed any sign of illness.

It is therefore possible that Bacillus A was the cause of illness in those persons who consumed the pork; but the evidence is necessarily incomplete, nor is there any indication as to when and how the pork became contaminated.

B.—Illness attributed to "Chawl."

One household only was known to be affected, six people being attacked with illness. The following are the details (the chawl was purchased 31st May, 1911, and eaten the same evening):—

	Food partaken of at supper 31/5/11.				
	Chawl.	H.P. Sauce.	Porridge.	Ill 1/6/11.	Ill 3/6/11.
Mr. R.	−	−	+	−	−
Mrs. R.	+	+	−	+	+
Daughter (16)	+	−	−	+	+
Son (12)	+	−	−	+	+
Lodger (1)	+	+	−	+	+
,, (2)	+ (small quantity)	+	−	+	−
,, (3)	−	−	+	−	−
,, (4)	−	−	+	−	−
Mrs. Y (charwoman)	+	+	−	+	+

From the above it is seen that only those members of the household who partook of chawl were ill, and the lodger who ate only a small quantity was not so ill as the rest.

The following is Professor Delépine's report upon the examination of a portion of the chawl (received June 3rd, 1911):—

> "The specimen, on arrival, had a somewhat offensive odour of commencing decomposition. On bacteriological examination by means of plate cultures, no bacteria were found resembling the kinds usually associated with 'Food Poisoning.'
>
> "Two guinea-pigs were inoculated with an emulsion of the 'chawl' in sterile water. No lesions were produced.
>
> "Two guinea-pigs were fed with the 'chawl,' each receiving 4 grams in two days and 2 grams on the third day. No illness was produced. Two mice were given 1 gram of 'chawl' in

three days. No illness was produced. There is therefore no bacteriological evidence that the 'chawl' was infected with dangerous bacteria."

SEWAGE DISPOSAL WORKS.

Special Drainage Committee:—

Alderman Robotham (Chairman).
,, Laurie.
,, Newbold.
,, Sir Thomas Roe, M.P.
Councillor Antliff.
,, Druitt.
,, Hill.
,, Russell, L.
,, Surtees.
,, Walker.
,, Young.

The Sewage Works at Spondon were under the constant supervision not only of the Resident Foreman, but also of the Borough Surveyor and staff, and of the Medical Officer of Health and his staff. The number of samples examined in the Chemical Laboratory at the Works by Mr. G. E. Pool, B.Sc., was 2,839, as compared with 1,362 in the previous year. The following is a summary of the samples examined chemically during the year 1911:—

Raw Sewage	57
General Septic Tank Effluent	238
Individual Septic Tank Effluents	1,046
General Filter Effluent	237
Individual Filter Effluents	937
General Filter Effluents, after passing through humus tanks	238
Midland Railway Works Effluent	1
Drinking Water	7
Bramble Brook	5
Flood Culverts	55
Mill Fleam	13
Deadman's Lane (Sewer)	2
Boiler Feed Water	1
Water for Lead	2
	2,839

Bacteriological Examinations were made as follows:—

	Samples.
Crude Sewage	7
General Septic Tank Effluent	9
General Filter Tank Effluent	7
River Derwent	2
Drinking Water	1
Total ...	26

All the media for the examination of the above were made in the Laboratory.

TABLE XI.—Showing the means of the Meteorological Observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1911.

1911.	Thermometers.				Rainfall in inches.		Greatest fall in 24 hours.		No. of Rainy days, 1911.
	Dry Bulb.	Wet Bulb.	Shade Temperature. Maximum.	Shade Temperature. Minimum.	Infirmary Grounds 1911.	1910.	Amount in inches.	Date.	
January ...	38·4	37·0	43·7	35·2	0·75	2·09	·25	6th.	11
February...	40·3	38·3	46·6	35·9	1·54	1·96	·27	21st.	17
March ..	41·2	38·9	47·0	36·5	1·34	0·48	·36	12th.	18
April ...	46·7	43·1	53·6	39·6	1·33	1·66	·27	26th.	14
May ...	57·1	52·4	65·1	47·5	0·64	2·34	·15	3rd & 25th.	8
June ...	60·9	55·6	67·6	49·9	2·19	1·447	·80	24th.	12
July ...	67·8	60·3	76·6	54·5	0·06	2·54	·03	1st.	4
August ..	65·6	60·4	75·0	56·1	1·50	3·21	·41	27th.	14
September	57·7	53·5	67·4	47·7	1·39	0·56	·44	23rd.	10
October ...	48·4	46·5	55·5	42·2	1·77	2·13	·29	22nd.	18
November	41·8	40·2	48·1	38·0	1·83	4·05	·28	11th.	22
December	42·2	41·2	47·7	37·5	3·63	3·84	·60	14th.	24

The highest mean shade temperatures were registered during the month of July. The greatest variation between the maximum and minimum temperature was observed during the months of July and September. January was the coldest month, and most rain fell during the months of June and December. The greatest number of rainy days was observed in November and December. The heaviest amount of rainfall in twenty-four hours was on the 24th June, when 0·80 inches fell. The nearest approach to this was on 14th December, when ·60 inches fell.

SUMMARY OF VISITS PAID BY HEALTH VISITOR AND WOMEN INSPECTORS.

Visits *re* Births	2,586
Re-visits *re* Births	1,494
Visits *re* Still Births	87
,, Deaths of Infants under 1 year	242
,, Phthisis	744
,, Disinfections	76
,, Whooping Cough (Deaths)	17
,, Measles (Deaths)	42
,, Diarrhœa (Deaths)	73
,, Cases of Puerperal Fever	22
,, Midwives	128
,, Measles	6
,, Whooping Cough	33
,, Chicken Pox	139
,, Impetigo	2
,, Special Visits	139
,, Enquiries	241
,, Enquiries for Central Midwives Board ...	6
,, Out-workers	397
,, Workrooms	388
Unsuccessful Visits (outs, removals, etc.)	978

Eighteen Enteric Fever cases removed to Derby Infirmary.

Mothers' Welcome held 43 afternoons.

REPORT ON WOMEN INSPECTORS' AND HEALTH VISITORS' WORK.

Miss Davies, Senior Woman Inspector, reports as follows:—

Notification of Births Act.

"By far the most important of our work consists in preventive measures, 'Inspecting,' so-called, being a secondary consideration so far as the Women Sanitary Inspectors are concerned. When visiting homes under the Notification of Births Act, we visit as friends of the mothers, and we believe that our visits are welcome in the majority of cases. We have repeatedly found this to be the case when visiting homes again after former visits in connection with previous births. It is a great advantage to get to know the mothers personally, and to gain their confidence. Many are still woefully ignorant of some of the most elementary hygienic principles. The most difficult ones to deal with are those who do not want to improve. There are others, however, who are persevering and proudly inform us that they have kept the book of instructions given to them at the last visit, and have been following its instructions. I am sorry I cannot report favourably upon the discontinuance of the use of the 'dummy' or 'comforter,' as mothers who are most reasonable from other points, are very difficult to convince in regard to this one. Although so much of our work is done in a friendly manner, our status as Inspectors is particularly helpful in dealing with cases of wilful neglect, over-crowding and dirty conditions generally.

"It was only necessary on one occasion in 1911 to shew one's authorization in order to inspect the sleeping accommodation of the family, which, needless to say, was not all that could be desired. Unsatisfactory conditions are usually remedied by personal persuasion; cases of persistent neglect of children are notified to the proper authorities. It is satisfactory to report the diminution of the number of cases of ophthalmia among infants. During the year 137 cases were discovered, 17 of them of a serious nature. These received medical attention and, so far, no bad results have occurred. In 1910 164 cases were reported, 29 of them serious; while in 1909 there were 174 cases, 30 of them serious. As the new rules of the Central Midwives Board are very stringent in this

matter, we are hoping for a still further decrease. While visiting we frequently come across instances where medical attention is needed, and we urge that this should be sought on behalf of either the mother, or infant, or other member of the family. We came across 209 such cases in 1911.

"The prevention of infantile mortality is one of the most important branches of our work. It is by educating as to the proper care and feeding of infants that we hope for a still further decrease in the number of deaths in the early years of life. One of the most discouraging features in our experience is the comparative frequency with which mothers will supplement their own milk with some patent food, although the former is quite adequate in quantity and quality. On one occasion I visited a mother whose baby was breast-fed, also having a particular patent food. The mother appeared well, so I enquired the reason for giving the patent food. The mother's account was: 'Baby had been cross, so she consulted a chemist, who recommended this particular food.' On enquiry as to the reason for the child being cross, I was informed that the mother gave the child the breast every ten minutes during the day and 'off and on' during the night. Another instance was a case I visited shortly after birth, and the child was well and being fed solely on the breast. A short time afterwards, however, the child died, and on visiting to make the usual enquiries, I learned that this mother had been also advised to try some patent food. One might go on multiplying similar cases."

Miss Davies suggests the desirability of legislation on the lines of the following resolution, passed at the National Conference on Infantile Mortality, held in March, 1908:—

> "That all preparations offered or sold as food or drugs for infants should be certified by a Government Analyst as not injurious, and that each packet should contain its analysis; and that the provisions of the Fertilisers and Food Stuffs Act should be applied to drugs and foods sold purporting to be for the use of infants."

Feeding.

"Among the children under observation during 1911

2,447 were entirely breast-fed,
316 were breast-fed and had other food in addition,
296 were entirely hand-fed.

"Of the deaths of these children under observation

86 were entirely breast-fed,
90 were breast-fed with the addition of other food.
68 were entirely hand-fed.

"This information is most valuable, for it points conclusively to the dangers of artificial food, especially during such a summer as we experienced during 1911.

"The possibilities of the contamination of artificial food by dust, flies, etc., is always greater, while breast milk is practically a sterile food.

INSPECTIONS OF WORKROOMS.

"A good feature of the workrooms of Derby where women are employed is the fact that none of them are underground. The rooms used are well-lighted and satisfactorily ventilated, and out of 214 rooms it was only necessary to give two notices for defective ventilation. The warming of some of the rooms is at present not altogether satisfactory, and is receiving consideration. Of the 214 workrooms on the register where women are employed, 35 were notified during 1911. All have been inspected; 29 were found to require cleansing, 5 were over-crowded, 2 insufficiently ventilated, in 5 gas irons were improperly fixed or defective, in 4 instances sanitary accommodation was found to be insufficient for the number of workers employed, and in one instance not separate for the sexes. Fifty-three verbal notices were given, and 8 official notices served. It might be added that verbal notice was always given to the occupier in the first instance."

INSPECTION OF OUT-WORKERS OR HOME-WORKERS.

"Pursuant to Section 107 Factory and Workshops Act, 53 lists of out-workers have been received from the various firms in Derby. Of the out-workers 347 were engaged in net-mending, 185 in altering making or finishing wearing apparel, and 3 making paper bags. Eight lists have been received from other councils of out-workers employed by firms in their district who reside in Derby, and 11 lists have been forwarded to councils in whose district out-workers employed by Derby firms reside. The homes of the out-workers

continue to show a fair standard of cleanliness, though some require frequent visits. This is often the case where the work done constitutes the whole or principal means of the livelihood of the family, and frequently the most difficult to deal with. During 1911 70 verbal notices and 16 official notices were served with regard to unwholesome premises."

INSPECTIONS OF MIDWIVES.

"Eighty-one midwives notified their intention to practice during 1911, as compared with 73 in 1910. The number of trained certified women notifying is increasing. Six of these are working as maternity nurses solely, a certain number also working for a short time in connection with the Derbyshire Royal Nursing Institution before removing to other districts. The qualifications of the 81 midwives was as follows:—

Certified by Central Midwives Board	38
,, ,, London Obstetrical Society	11
,, ,, City of London Lying-in Hospital...	1
,, ,, Rotunda Hospital, Dublin	1
In bona-fide practice prior to 1902	30

123 visits were paid to midwives practising outside public institutions. The number of visits paid during the year varies between two or three to the more competent women to seven or eight (or more) to the more careless and neglectful ones. It is satisfactory to record that the number of these latter is diminishing. Most of the bona-fide women are anxious to improve themselves, and attend any lectures, etc., connected with their work, as far as they are able. The Medical Officer of Health convened a meeting of the midwives during the year to explain the new rules of the Central Midwives Board. 89% of the midwives who were invited attended. At this meeting the rules were explained, and questions invited and answered. About 75% of the births in Derby are attended by midwives. During the year, in accordance with the rules of the Central Midwives Board, 173 reports were sent to the Medical Officer of Health, stating that a midwife had to send for medical aid. The reasons for sending were as follows:—

Difficult labour, instrumental assistance required	42
Feebleness or prematurity of infant	48
Lacerated perineum	14
Breech presentation	9
Transverse presentation	8
Placenta prævia	6
Weak condition of mother	6
Rise of temperature...	7
Adherent placenta	8
Abortions	8
Ophthalmia Neonatorum	6
Face presentation	2
Retained membranes	2
Prolapse	2
Abnormalities	2
Post-partum hæmorrhage	1
Uterine Inertia	1
Eclampsia	1

"The Midwives Sub-Committee met twice during the year. Nine midwives were interviewed and cautioned, one midwife who had previously been cautioned by the Committee was reported to the Central Midwives Board and censured by the latter, who also requested the Local Supervising Authority to report to them at the end of three months. The charges against the midwife were:—

(1) Wrong entries in case book.
(2) Not sending for Doctor till eighth day. (Portion of placenta retained.)
(3) Bag not kept in readiness.
(4) Failing to notify instance of sending for medical help.
(5) Cases not entered in case book.
(6) Keeping two bags; one obviously kept for use and the other for inspection.
(7) Failure to visit patients daily.
(8) Failure to take a patient's pulse and temperature.

"Three midwives were interviewed by the Medical Officer of Health for various infringements of the rules. Nine letters were forwarded to the Central Midwives Board notifying changes of midwives' addresses. Nine letters were sent to midwives *re* notifying wrong addresses. Four letters were sent for not notifying births within 36 hours."

STILL-BIRTHS.

"Ninety-five still-births were notified during 1911. Seventy-four of these attended by midwives were visited and enquiries made. In some cases where the still-birth was a breech presentation, one is at times tempted to think that with better management a life might have been saved."

MOTHERS' AND BABIES' WELCOME.

"I have pleasure in reporting that the number of attendances at the Mothers' and Babies' Welcome continues to increase. The number of babies on the register at the end of the year was 180. The mothers are invited when we pay our first visit and many accept the invitation who live a considerable distance from the Centre. Three mothers on one occasion came during a heavy snowstorm. The average attendance has been about 18, and when one remembers that these women have plenty of household duties to attend to one cannot help but feel gratified at the self-sacrifice and genuineness shewn by them. At the Welcome the mothers spend a certain part of their time in making woollen vests for their own children and also for others. One woman for whom I offered to do the most difficult part declined, saying she would rather be shewn how to do it so that she could then help a neighbour who was unable to come herself. I may add that when first visited this same woman was so rough and independent that to try and get her to come seemed an impossibility. She came first out of curiosity, and then became one of the most regular attendants. The improvement in the cleanliness of both mother and baby after one or two visits is at times most noticeable. We are greatly indebted to Miss Longdon for her kindness in using her influence in providing the use of rooms at the Friends' Meeting House. The latter are conveniently situated, have good arrangements for making tea, and are always nicely heated. The infantile mortality among babies attending the Welcome was only 30 in 1911.. This low rate can partly be explained as due to the fact that only the most striving mothers will take the trouble to come, while those who have anything to conceal are most anxious to give us a wide berth. It is among the babies of the latter class that the rate of infantile mortality is highest. At Christmas time the annual tea-party was held, the use of a large room for the purpose being kindly granted by Mrs. Boden. Vocal and instrumental music was provided for the entertainment of the mothers, all of whom seem to have appreciated the entertainment very greatly."

The following are the tables of action taken and work done, which are required to be forwarded to Secretary of State.

1.—INSPECTIONS.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of			
	Inspections.	Written Notices.	Verbal Notices.	Prosecutions.
Factories (including Factory Laundries)	121	4	7	0
Workshops (including Workshop Laundries)	841	24	128½	0
Work Places (other than out-workers' premises)	0	0	0	0
Total	962	28	135	0

2.—DEFECTS FOUND.

Particulars.	Number of Defects			Number of Prosecutions.
	Found	Remedied.	Referred to H.M. Inspector	
Nuisances under the P.H. Acts—				
Want of Cleanliness ..	35	34	0	0
Want of Ventilation ..	6	7	0	0
Overcrowding	2	2	0	0
Want of Drainage of floors	2	2	0	0
Other Nuisances	22	26	0	0
Sanitary Accommodation—				
Insufficient	12	9	0	0
Unsuitable or Defective ..	10	9	0	0
Not separate for sexes ..	0	0	0	0
Offences under the F. & W. Act—				
Illegal occupation of underground bakehouse (S. 101)	0	0	0	0
Breach of Special Sanitary requirements for Bakehouses (SS. 97 to 100)	108	109	0	0
Other Offences	0	0	0	0
Total	197	198	0	0

3.—HOME WORK.

	Nature of Work.		
	Making Wearing Apparel.	Making Lace and Net.	Total.
Twice a year—			
Lists	60	8	68
Contractor's Outworkers ..	0	6	6
Workmen	370	694	1064
Once a year— ..			
Lists	22	0	22
Workmen	79	0	79
Addresses of Out-workers—			
Received from other Councils	5	29	34
Forwarded to other Councils	2	26	28
Outwork in Unwholesome Premises—			
Instances	27	60	87
Notices Served	4	14	18
Inspection of Premises ..	—	—	397
Notices served to remedy Defects	0	0	0
Outwork in Infected Premises	1	0	1

4.—REGISTERED WORKSHOPS.

Total number of workshops on Register	450	A District 161
		B ,, 81
		C ,, 90
		Bakehouse 101
		Offensive Trades 17

5.—OTHER MATTERS.

Notified to H.M. Inspector of Factories :—		
Failure to affix Abstract (S. 133)		0
Action taken in matters referred to H.M. Inspector as remediable under the Public Health Acts but not under the Factory & Workshops Act (S. 5)	Notified by H.M. Inspector	59
	Reports sent to H.M. Inspector	60
Other		0
Underground Bakehouses (S.101)		
Certificates granted during the year		0
In use at the end of the year		1

Sanitary Inspector's Report, 1911.

GENTLEMEN,

I beg to submit particulars of operations carried out in the Department under my supervision for the year 1911; but, in doing so, desire to supplement bare facts and figures with explanatory remarks upon special features and incidents, under the various headings as they arise.

BAKEHOUSES.

The supervision of these important places in connection with our chief item of food supply has received the usual careful attention, and it is a pleasure to record the fact that bakers are alive to the necessity of strict cleanliness and the observance of every sanitary precaution. Considerable attention has also been given to these places by His Majesty's Inspector of Factories, which is regarded in some quarters as an unnecessary duplication when the duty is already discharged by the officers of the Corporation. Eight complaints were received under the Factory and Workshop Acts from His Majesty's Inspector, seven of which were only reminders of the necessity for limewashing; but when it is remembered that an occupier is at liberty to suit himself with regard to time, so long as this work is done sufficiently often, and at periods not longer than six months, it will be noted that there was no serious ground for complaint. One complaint related to provision of refuse receptacle. Each item had prompt attention, and in one instance only was the work uncompleted at the end of the year.

The occupancy of bakehouses is constantly changing, as will be seen from the following table:—

Bakehouses in occupation		100
New Bakehouse	1	
Empty Bakehouses re-occupied	2	
	—	103
Vacated during the year	2	
		101

Unoccupied at commencement of year ...	45	
Add places since vacated	2	
Total		47
Deduct re-occupied	2	
Deduct demolished	1	
Total unoccupied at end of year		44
Visits to unoccupied Bakehouses		104
Visits to occupied Bakehouses		279
Written notice served		1
Verbal notices given		113
Sanitary Work—		
Defects found		114
Remedied (including 3 from previous year) ...		116

Canal Boats.

The inspection of these floating dwellings has been made during the year by Inspector Hanson, and the appended tabular report under Sec. 3 of the Canal Boats Act, 1884, was supplied to the Town Clerk on 3rd January for submission to the Local Government Board.

Periodical visits are paid to the town by His Majesty's Chief Inspector of Canal Boats, who has on each occasion expressed himself quite satisfied with the supervision exercised.

1. Inspector and salary. Chief Inspector and Assistant (no salary allocated). Address: 16, Ford Street, Derby.

2. Boats Inspected, 65. Visits to Canal, 103.

3. Infringement of Acts and Regulations:—

(*a*) Registration	0	(*i*) Painting	0
(*b*) Change of Master ...	0	(*j*) Provision of Water Cask	1
(*c*) No Certificate on Board	0	(*k*) Removal of Bilge Water	0
(*d*) Absence of Marking ...	0	(*l*) Notification of Infectious Disease	0
(*e*) Over-crowding ...	3	(*m*) Admittance of Inspector	0
(*f*) Separation of Sexes ...	2	(*n*) Boats found in bad repair	4
(*g*) Cleanliness	1		
(*h*) Ventilation	0		

4. Legal Proceedings: None.

5. Other steps taken: 7 caution forms sent, each complaint cleared.

6. Cases of infectious disease dealt with: None.

7. Detention of boats for cleansing and disinfection: None.

8. Number of boats on Derby register at end of year: 18.

9. Number of boats registered during year 1911: None.

Number of Derby boats believed to be in use: 9.

Boats taken off the register during 1911: None.

Number of boats which cannot be traced: 9.

Common Lodging Houses.

On register at beginning of year	20	
Added during 1911	1	
On register at end of year	—	21

Total number of sleeping rooms 136, having convenience for 682 adults and 28 children.

Notices given (verbal and written) for various breaches of bye-laws, etc., 169, all of which have received attention, and 165 have been remedied.

Visits of Inspection, 787.

Dairies, Cowsheds, and Milkshops.

Registered Purveyors (residing within the Borough) at beginning of year	457	
Added during year...	61	
	—	518
Removed from register	87	
On register at end of year		431

Inspector's Visits	1,182
Notices served	198
Complied with	177

Registered Purveyors (residing outside the Borough) on January 1st, 1911	169	
New registrations	5	
On register at end of year	—	174
Cowkeepers (within the Borough) on register January 1st, 1911	23	
Removed from register	2	
Total on register at close of year...		21

In connection with the question of "Milk Supply," I would call especial attention to note following table recording destruction of unsound food.

Diseases of Animals Acts.

(Administered under the direction of the Markets Committee.)

A larger amount of work than usual has had to be undertaken during the year.

Anthrax.

A new Order containing fuller instructions and closer restrictions came into force on 1st January, 1911.

A suspected outbreak of Anthrax was reported on the Corporation Farm, Little Chester, two animals dying suddenly with every indication of the disease. The case was notified to the Board of Agriculture, and blood specimens submitted for examination.

In accordance with the Anthrax Order, every precaution was taken to prevent spread of the disease, and the carcases were removed under my personal supervision and destroyed in the Refuse Destructor the same day.

Fortunately the report of the Board's Officers did not confirm Anthrax; but, unfortunately, this was not received until after the destruction of the carcases, when more extended examination was impossible.

No further case of disease broke out in the other animals which had been promptly removed from contact.

Foot and Mouth Disease.

For the first time during a quarter of a century, we have been troubled with this disease, an outbreak occurring near West Hallam, in the County of Derby. The case was confirmed on 25th August, and every movement of animals prohibited within a considerable area, comprising nearly the whole of the County of Derby, and portions of the Counties of Nottingham and Leicester. This meant the entire closing of our Cattle Markets, and the infliction of great inconvenience on butchers, dealers, consumers of meat products, and also on cowkeepers within the Borough, many of whom were unable to move animals to or from their cowsheds for a time.

The public generally gave loyal assistance in carrying out the Order; but it was found necessary to prosecute for illegal movement by a cattle dealer and butcher, and by a farmer and his employee, particulars of which are given in table of Police Court proceedings.

By careful co-operation with the Government Officials in charge of the outbreak we were enabled to get an early relaxation of the *entire* prohibition, and on 30th August certain movements were possible by licence and strict supervision.

On the 1st day of September a further Order was in force, dividing the original area into three, with different and still restricted movement in each, under which we were able to hold a fat stock market, wherein every animal had to be licenced, and further identified by the clipping, marking and branding specified, and supervision exercised over movement. Under these conditions we had to work for over a fortnight, and it was not until the 22nd September that the Markets could be opened again free from all restriction.

It is not possible to give even the faintest idea of the amount of special work entailed by this outbreak, and I can only gratefully acknowledge the loyal and continual help of the members of my own staff, of the Superintendent of the Markets and his staff, and of the Chief Constable and the Borough Police, in the execution of difficult duties, which, I venture to say, were throughout dis-

charged in such a manner as to inflict the least possible loss and inconvenience upon those who had to submit to vexatious and irritating personal restrictions in the Nation's interest.

After normal conditions were resumed it was a pleasure to receive a personal letter of thanks from the Master Butchers' Association.

Parasitic Mange.

The County of Derbyshire, and the Boroughs therein, was placed under a Special Order relating to this disease in 1910, when Special Regulations were made as to cleansing and disinfection.

Under this Order one outbreak was discovered in the County, the animal belonging to the Borough, into which it was removed.

Upon inspection by Mr. Abell, Veterinary Surgeon appointed under the Order, the disease was confirmed. The horse was not a valuable one, and the ailment a difficult one to cure, the owner was advised to have the horse destroyed, which he agreed to. I supervised the destruction, and had the premises, harness, etc., thoroughly cleansed and disinfected, after which no further extension of the disease occurred.

Before the end of the year an extended General Order, No. 8244, applicable to England and Wales, was issued, to come into force on 1st January, 1912.

Sheep Scab.

The Order of 1908 relating to this disease still remains in force, necessitating a considerable amount of work during the special dipping period, the issue and collection of hundreds of licences, and a supervision over the sheep in the Borough, whether temporarily or permanently, for the detection of any disease. Apparently the enforcement of the Dipping Order is having a beneficial effect, and no outbreak has been reported within our jurisdiction.

Swine Fever.

This disease has been very active during the year. Two outbreaks occurred in the County in pigs which had passed through

the Borough Cattle Market. Exhaustive inquiry was made, and all pigs said to have been in contact traced, but no satisfactory explanation of the County outbreaks could be formed.

On the other hand, we had to place restrictions upon a cattle yard in the town, and keep animals under observation for a time, owing to removal thither of a pig from the County, said to have been in contact with Swine Fever. This animal was eventually slaughtered, the premises disinfected and declared free, and no extension of the disease occurred.

Seven outbreaks were reported in the town, with 91 pigs in contact. Each case was kept under constant observation; 13 animals died, and 8 were slaughtered.

Four of the reported outbreaks I did not consider to be Swine Fever; but, as a precaution, seeing the disease was in the district, *post-mortems* were made by the Veterinary Surgeon on five swine at my request. In one instance he reported Swine Fever, which was not confirmed on the matter being submitted to the Board of Agriculture and investigated by them; but in another instance Swine Fever was found to exist and was confirmed on notification to the Board. In this instance, included in above figures, there were nine pigs in contact: six died after reporting, two were killed by the owner, and one killed by order of the Board, compensation being paid for this one only. This case came under notice on 19th June, but, through leaving ailing animals on the premises, it was not until 26th August, after the death of the last pig, that the premises could be cleansed and disinfected, thereby entailing a large amount of attention, reporting, and many removals of dead animals and infected matter and materials.

For several years now we have been working under the restrictions of the Swine Movement Order, licences having to be issued for all movement from outside into our area, and from our Market and licenced sale yards for all pigs sent into other areas; moreover, the slaughter of all fat pigs within the Borough which have been subject to licence has to be followed up, and this is taken by the Inspector of Meat and Slaughter-houses on his ordinary and special visitations. All licences for outside the area have to be in triplicate, and copies sent to the receiving authority, quite 700 licences issued during the year being of this class.

The Siddals Allotment Gardens still remain subject to the powers of a Special Swine Fever Order under which all movement has to take place by licence, but since the old dilapidated wooden sties have been practically all demolished and new brick sties erected in their stead, with improved drainage arrangements, I have been able to allow greater freedom of movement, but the removal of this Order cannot be tolerated if it is to mean a return to the old insanitary conditions which formerly existed here.

Two prosecutions had to be taken for illegally moving swine to the gardens, but the tenants now realise that the restrictions are for their benefit, and that a compliance with the requirements, which are made as little irksome as possible, is the best course to take.

Pig dealers' yards, conveyances used by removers of swine, with all pens, implements, etc., are regularly cleansed and disinfected under an Order which has now been made permanent; but constant supervision is required to secure the observance of the Order. Carts, crates, implements, etc., used in removals to the Cattle Market are attended to by the Superintendent of Markets at the cost of the Committee, the rest of this work being done by the various occupiers and owners.

The new Swine Fever Order (8184) which came into operation on 1st October, 1911, revokes a considerable portion of Article V. of the 1908 Movement Order, dispenses with compulsory movement of fat swine in a float, cart, or van, and extends the time for slaughter from 6 to 8 days. Every pig dealer is to keep particulars of purchases, sales, deliveries, deaths, etc.

Castrators are to carefully cleanse and disinfect their instruments and keep a register of their operations, and owners of boars to register services rendered by their animals, all of which is intended to facilitate the tracing of outbreaks, the definite fixing of dates and responsibilities, and the prevention of disease.

As usual, the Derby and Derbyshire Agricultural Show was held, by licence from the Markets Committee, and all movements of swine to and from controlled by licences as required by the Board of Agriculture.

Food and Drugs Acts.

Samples submitted to the Borough Analyst (Mr. Otto Hehner).

Samples.	Article.	Genuine.	Adulterated.
36	Butter	36	—
2	Cheese	2	—
70	Milk	60	10
108		98	10

9·25% of Samples tested were adulterated, and five prosecutions were taken thereon.

Houses Let in Lodgings.

This class of house is the least satisfactory of any we have to deal with, as each room is generally let as a separate furnished dwelling to be used by the occupants for living and sleeping. Under such conditions, of practically continuous occupation, in spite of constant supervision and the application of such regulations as are allowed, a worse state of things exists than can be found in the majority of back-to-back dwellings or houses without through ventilation, and it is to be feared that any abolition of small self-contained houses at low rentals will lead to an extension of these undesirable conditions.

On register at beginning of year	35	
Closed during year	2	
On register at end of year	—	33
Visits of Inspection	1,329	
Notices served	159	
Contraventions remedied ...	148	

Ice Cream Dealers

On the register at beginning of year	...	272
Added during year	73	
Struck off	67	
		— 278
Notices served	9	
Nuisances abated	9	
Inspectors visits	396	

The shops where ice cream is sold have, with few exceptions, been kept in a satisfactory condition. Some cause for complaint has arisen in those places where ice cream is manufactured in dwelling-houses, to be afterwards sold from carts in the streets. These places have required constant supervision as regards cleanliness of premises and utensils, but improvement has been made in each case where caution has been given.

Nuisances.

As in previous years, the bulk of the work done in sanitary reconstruction and abatement of nuisances has been carried out on preliminary notices, which have been given to the number of 2,520, resulting in attention and satisfactory remedies being applied to 7,833 contraventions and insanitary items, as set out in table "Nuisances Abated."

In 15 instances only, included in above, was it necessary to resort to legal notices, 12 of which were for the provision of proper dust-bins, and 3 for the remedy of defective drains, and in no case was Police Court proceedings necessary.

A distinct advance has been made this year in the provision of moveable, covered, galvanized dustbins in substitution for other, less sanitary, refuse containers. The Sanitary Committee has sanctioned my stocking for sale, at cost price, a bin of 20 inches high, 16 inches internal diameter, covered with what I term a "hat lid" fitting over the top and effectually keeping out rain, enabling the bin to be kept in the open without the contents getting wet, messy and offensive. The taking of this step has established a recognised standard bin, caused a considerable reduction in price to owners of property, and, what is most important, has lead to a considerable increase in their use.

Particulars of work in connection with Factories and Workshops have been handed to the Medical Officer of Health.

NUISANCES ABATED.

		A	B	C	X	Total.
Ashpits	Demolished	39	35	49	...	123
Drains	Cleansed and Repaired (or Soil Pipes)	521	232	270	...	1023
	Disconnected from Sinks	1	7	2	...	10
	Provided (or Soil Pipes)	124	73	292	...	489
	Re-laid and New	521	128	180	...	829
	Removed from Inside Houses	36	12	19	...	67
	Waste Pipes Repaired, Renewed, Provided, &c.	11	70	7	...	88
	Soil Pipes Removed from inside Houses	3	7	4	...	14
	Brick Replaced by Salt-glazed Earthenware Sanitary Pipes	1	20	8	...	29
	Inlets Trapped and Inspection Chambers Provided or Repaired	462	414	401	..	1277
	Soil Pipes and Drains Ventilated	83	85	84	...	252
Houses	Cleansed	19	7	15	...	41
	Cellars Cleansed and Limewashed	47	4	5	...	56
	Damp-Coursed and made Dry	24	10	13	...	47
	New Sinks Provided	...	38	5	...	43
	Overcrowding Prevented	4	1	1	...	6
	Ash Bins provided	112	71	304	...	487
	Cellar Coverings repaired	...	2	...	...	2
	Dangerous Walls or Buildings Repaired	..	2	...	...	2
	Paving of Yards and Passages ,,	184	105	192		481
	Roofs, Floors, &c. ,,	36	14	29	...	79
	Spouting Repaired, Disconnected or Provided	67	97	89	...	253
	Rooms Ventilated	...	...	4	...	4
Privies	Cleansed and Repaired, or new Tubs Provided	293	173	170	...	636
	Converted to W.C.'s	70	75	127	...	272
	Demolished	2	1	...	...	3
Urinals	Erected	...	6	4	...	10
	Removed	1	...	..	..	1
	Repaired or Cleansed	3	2	1	...	6
Water	Soft Water Tanks Cleansed or Repaired and Pumps Repaired	32	40	7	...	79
	Disused Wells Filled in	2	14	20	..	36
	Provided with Town Water	...	1	11	...	12
	Covers of Tanks or Wells Repaired	...	9	...	...	9
W.C.'s	Cleansed or Repaired	46	10	10	..	66
	Flushing Water Laid on	2	5	5	...	12
	Flushing Tank provided	...	1	..	...	1
	Additional Provided	7	5	21	..	33
	Lead Safes provided	...	10	...	...	10
	Fittings Repaired	30	28	25	...	83
	Ventilated	1	...	...	..	1
Bakehouses	(Contraventions)	..	...	...	116	116
Common Lodging-houses	do.	...	...	...	165	165
Dairies, Cowsheds and Milkshops	do.	...	...	...	177	177
Factories and Workshops		35	14	10	...	59
Houses Let in Lodgings		...	...	...	148	148
Offensive Trades		..	...	...	8	8
Smoke Nuisances		5	...	1	...	6
Slaughter-houses		1	..	...	...	1
Fowls or Animals removed		13	12	7	...	32
Manure Pits or Cesspools removed or repaired		5	3	8	..	16
Accumulations of Manure, &c., removed, and Premises Cleansed		15	4	7	...	26
Stagnant Water or Sewage removed from Cellars		50	6	11	...	67
Stables Drained, Paved, Drains removed from inside, &c.		5	12	2		19
Swill Boiling discontinued		12	...	...	...	12
Ice Cream Premises		...	...	...	9	9
		2925	1865	2420	623	7833

Offensive Trades.

The following are the offensive trades carried on within the Borough under periodical inspection:—

Bone Boiling	1
Gut Scraping	1
Hide and Skin Markets	2
Skin Curing	2
Soap Boiling	1
Tallow Melting	1
Tripe Boiling	7
Varnish Making	1
Marine Stores	2
	18

Visits, 120. Notices, 8. Defects remedied, 8, the latter being chiefly limewashing and cleansing of premises.

Under an Order, dated and sealed by the Local Government Board the 29th July, 1911, the following are declared to be offensive trades within the County Borough of Derby, in addition to those mentioned in Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, viz.:—

Blood-drier,
Fat-melter,
Size-maker,
Tanner,
Fat-extractor,
Gut-scraper,
Leather-dresser,
Glue-maker,
Bone-burner,
Dealer in rags, bones or skins.

POLICE COURT PROCEEDINGS.

No. of Cases	Complaint.	Result.	Total Cost. £ s. d.
1	Moving Pigs contrary to Siddals Allotment's Order ...	Pay Costs	0 5 0
1	Moving Pigs contrary to Siddals Allotment's Order ...	Pay Costs	0 5 0
1	Selling Adulterated Milk— Added Water 8·9 parts ...	Fined 1s. and Costs	1 0 0
1	Selling Adulterated Milk— Added Water 9·3 parts ...	Fined 1s. and Costs	1 0 0
1	Selling Adulterated Milk— Added Water 6·6 parts ...	Pay Costs	1 3 6
1	Selling Adulterated Milk— Added Water 4·0 parts ...	Pay towards Costs ...	0 10 6
1	Selling Adulterated Milk— Added Water 10·6 parts ...	Fined 2/6 and Costs	1 3 6
1	Contravention under Diseases of Animals Acts. Moving Animals contrary to Foot and Mouth Disease Order.	Fined 40s. and Costs	2 8 6
1	Do. do.	Fined 40s. and Costs	2 8 6
1	Do. do.	Fined 10s. and Costs	0 18 6
1	Do. do.	Fined 10s. and Costs	0 18 6
1	Do. do.	Fined 20s. and Costs	1 8 6
1	Do. do.	Fined 5s. towards Costs	0 5 0

Privy and Ashpit Cleansing.

Night-work—Privies cleansed	3,623
,, Ashpits cleansed	2,143
,, Privy cesspools cleansed	303
Day-work—Dry Ashpits cleansed	610

Refuse Collected.

Night-work—Loads, Excreta only	3,613
,, Ashes and Excreta	1,915
,, Ashes only	1,561
Day-work—Ashes, etc.	26,937
Offal and Trade Refuse carted by Producers—Loads ...	999
Total Loads ...	35,025

Refuse Disposal.

Disposed of as Manure—By Boats, 364 loads.
By Customers' own carts, 756 tons 8 cwts.
Delivered to Farmers from pits, 1,792 cart loads.

Deposited on Tips, 6,243 cart loads.

Burned in the Destructors, 20,894 tons, 6 cwts.

Extracted from Refuse and sold, 20 tons, 10 cwts, scrap iron.
,, ,, ,, 53 tons, 14 cwts., old tins.

Land has been purchased at Alvaston for a Tip and site for a Refuse Destructor.

Cost, calculated on Wages only.

		Average No. of Men, including hired.	Loads.	Wages only, including hired men.
Collection	Day ..	49·29	26,937 @ 2/4·46	£3,194 13 1
	Night ..	19·71	7,069 @ 3/8·73	£1,321 8 2
Disposal—Chester Depot		39·65	26,990 @ 1/10·15	£2,491 1 9

Slaughter-houses.

In use at end of 1911 :—

In hands of private holders	41
Corporation houses let to private tenants	15
Corporation houses used as public	2
Corporation houses standing empty	3
Private house standing empty	1

The following private slaughter-houses have not been used as such during the year, but turned to other purposes, and their licences have consequently lapsed, viz.:—

1, Wildsmith Street;
8, Mill Street;
16, Rugby Street.

Visits of Inspection 6,734

Stables (Ford Street).

(Administered under the direction of the Plant & Stores Committee)

The following table signifies the actual disposition of horses:—

Number at beginning of year	59	
Bought during the year	8	
	—	67
Disposed of		8
		—
		59
		—
Inspector's Department	38	
Surveyor's Department	17	
Police and Fire Department	4	
	—	59

From the above it will be observed that eight horses have been disposed of.

Two horses died—one from stoppage, and the other from double pneumonia; a third was destroyed on account of old age; three sold, and two handed over to the Farm Committee were fit for further work.

UNSOUND FOOD.

Condemned and Destroyed.

7 lbs. Cat Fish.	896 lbs. Sprats.
84 lbs. Halibut.	8868 lbs. Mussels.
308 lbs. Whiting.	648½lbs. Pork.
1008 lbs. Mackerel.	6161 lbs. Beef.
350 lbs. Dry Codling.	280 lbs. Veal.
1025 lbs. Cod Fish.	576½lbs. Mutton.
35 lbs. Lemon Sole.	2091 lbs. Lungs, Liver, &c.
162 lbs. Smelts.	514 Rabbits.
112 lbs. Fish Fillets.	198 lbs. Tripe.
52 lbs. Prawns.	756 lbs. Tomatoes.
48 lbs. Damsons.	34 lbs. Yeast.

Tubercular meat and milk are closely allied. From the above particulars it will be seen that a considerable quantity of beef has been destroyed, and of this 2,628 lbs. was from tubercular cows, and the item designated lungs, liver, etc., also indicates organs and strippings from tuberculous animals.

For some years an attempt has been made to get at the animals producing tubercular milk, the common idea being that it was produced only from cows with tubercular udders, but many well authenticated cases are on record of cows selected, whilst alive, as having tubercular udders, yet samples of milk taken therefrom have proved to be non-tubercular, and, consequently, the cause of mischief has not been discovered. There is no question about the widespread distribution of this disease, but in animals slaughtered for human food the chief seat of the disease is found in the lungs or alimentary canal, and much less frequently in the udder. It is therefore more than probable that search and effort has been made in a wrong direction, and that tubercular milk has been largely caused by the ordinary tubercular animal, and the fouling of the milk with excrementitious matter.

The following observations from page 6 of the Third Interim Report of the Royal Commission on Human and Animal Tuberculosis, January, 1909, is very definite on this point:—

> "Cows suffering from extensive tuberculosis of the lungs must discharge considerable numbers of bacilli from the air passages in the act of coughing, and some of the bacilli thus expelled may find their way into the milk. But our experiments indicate that the excrement of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as much more dangerous than the matter discharged from the mouth or nostrils."

> "We have found that even in the case of cows with slight tuberculous lesions tubercle bacilli in small numbers are discharged in the fæces, whilst as regards cows clinically tuberculous our experiments show that the fæces contain large numbers of living and virulent tubercle bacilli."

It is therefore imperative that in any new legislation regarding the purity and cleanliness of milk this phase of dangerous and infective pollution should be dealt with.

I cannot close this report for the year without placing on record my deep regret at the death of an old and valued colleague and assistant, Inspector Thomas Turner.

This event occurred with tragic suddenness, he dying in the office on 13th September. He had served the Corporation continuously for a period of 35 years, and a more conscientious, painstaking and fearless officer it would be impossible to find. Inspector Hanson, who is a qualified and certificated officer, has been appointed to succeed him as Inspector of Meat and Slaughter-houses and as Assistant Inspector under the Diseases of Animals Acts.

WILLIAM WILKINSON,
Chief Sanitary Inspector.

Borough Surveyor's Office,
Babington Lane, Derby,
January 26th, 1912.

Borough Surveyor's Report, 1911.

Manholes Constructed during the Year 1911.

Stores Road	1	Bloomfield Street	1
Bath Street	1	Baker Street	1
Elvaston Street	1	Park Street	1
Cowley Street	1	John Street	1
Leaper Street	1	Mundy Street	1
Green Lane	1		—
Warwick Street	1		13
Charles Street	1		—

Sewers Cleaned out during the Year 1911.

	LOADS.		LOADS.
Derby Lane	3	Drewry Lane	1
Mill Fleam	13	Graham Street	3
Holcombe Street	24	Charles Street	6
Nottingham Road ...	2	Nightingale Road ...	2
Kedleston Road	14	Stenson Road	1
Yates Street	6	Cheapside	1
Vale Street	2	Wardwick	1
Porter Road	7	Grove Place	1
Duke Street	4	Nelson Street	1
Woods Lane	4	Brighton Road	1
London Road	30	Cowley Street	1
Liversage Street	17	Leman Street	1
Mansfield Road	3	Sherwood Street	1
Bridge Gate	5	Duffield Road	1
Bath Street	13	Markeaton Street ...	1
Meadow Road	22	Dickenson Street ...	1
Leaper Street	7	Taylor Street	2
Clifford Street	1	Brook Street	6
Mundy Street	7		—
Thorntree Lane	4	Total ...	220

Manholes Cleaned out during the Year 1911.

	LOADS.		LOADS.
Sowter Road	1	Clarence Road	1
Kedleston Road	1	Byron Street	1
Bromley Street	2	Pear Tree Road	1
Cowley Street	1	St. James' Street	1
Morledge	1	Brook Street	1
Leman Street	1		—
Sherwood Street	2		14
			—

This list is, of course, in addition to the Manholes on the Sewers Cleaned Out.

New Sewers laid during the Year 1911.

Charles Street, 9″

Water used during the Year 1911.

	GALLONS.
Sewer Flushing	6,608,116
Court Flushing	1,162,082
Street Watering	6,875,600
Steam Rolling	1,875,600
Cabstands, Bridges, and Wood Paving...	210,000
Footways	62,000
Watering Trees	18,800
Total ...	16,812,198

JOHN WARD,
Borough Surveyor.

Appendix I.

COUNTY BOROUGH OF DERBY.

Vital Statistics of Whole District during 1911 and previous years.

Year.	Population estimated to middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to District.			
		Uncorrected Number.	Nett.						Under 1 Year of Age.		At all Ages.	
			Number.	Rate.	Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Net Births.	Number.	Rate.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1900.	104,684	2,900	...	...	1,932	18·5	78	nil.	...	...	1,854	17·7
1901.	106,076	2,939	...		1,673	15·8	75	...	...	...	1,598	15·1
1902.	116,869	3,326	...	...	1,698	14·6	59	...	...	...	1,639	14·1
1903.	118,707	3,215	...	...	1,671	14·1	75	...	...	...	1,596	13·5
1904.	120,449	3,282	...	.	1,905	15·9	81	...	...	...	1,824	15·2
1905.	122,207	3,108	...	...	1,823	15·0	79	2	...	...	1,746	14·3
1906.	123,981	3,103	...	...	1,829	14·7	99	3	354	114	1,733	14·0
1907.	125,774	3,152	...	...	1,870	14·9	88	2	377	120	1,784	14·2
1908.	127,583	3,321	...	..	1,777	14·0	99	4	359	108	1,682	13·2
1909.	129,411	3,242	3,220	24·9	1,799	13·91	87	3	391	121	1,715	13·3
1910.	131,256	3,198	3,163	24·1	1,556	11·9	117	5	266	84	1,444	11·01
1911.	123,648	2,948	2,921	23·6	1,831	14·8	111	16	360	123	1,736	14·04

Area of District in acres (exclusive of area covered by water) 5,272 acres.

Total population at all ages	123,433	At Census of 1911.
Number of inhabited houses	24,851	At Census of 1901.
Average number of persons per house	4·7	

COUNTY BOROUGH OF DERBY.

Appendix II.

Cases of Infectious Disease Notified during the Year 1911.

Notifiable Disease.	Cases notified in whole District.								Total Cases Notified in each Locality.																Total Cases removed to Hospital.
	At all Ages.	At Ages—Years.							Abbey.	Arboretum.	Babington.	Becket.	Bridge.	Castle.	Dale.	Derwent.	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.																	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup) ...	447	3	83	300	25	30	6	...	24	31	20	15	18	16	56	15	35	19	33	10	46	33	54	22	206
Erysipelas...	92	2	2	5	6	20	45	12	11	7	5	7	7	2	4	1	7	5	...	9	6	3	8	10	1
Scarlet Fever	404	5	88	276	19	16	...	...	28	36	20	16	6	14	46	8	20	15	23	16	37	41	64	14	286
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	52	...	4	6	12	20	9	1	...	1	3	2	5	8	1	8	3	6	2	7	3	1	...	2	41
Relapsing Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever... ...	13	...	...	...	1	12	...	...	2	1	1	2	...	...	...	...	1	...	1	1	...	...	3	1	5
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis																									
Under Tuberculosis Regulations, 1908	115	...	3	5	19	72	14	2	10	...	5	3	14	6	...	6	6	40	...	19	...	...	5	1	11
Under Tuberculosis Regulations, 1911	65	...	5	9	17	24	10	...	4	4	2	5	3	10	6	4	4	3	4	4	4	...	4	4	9
Others	75	...	1	8	19	37	9	1	7	7	3	5	1	4	6	5	7	4	5	7	5	4	3	2	27
Chicken Pox	105	8	48	46	1	2	...	...	5	13	6	10	...	11	7	17	9	...	2	4	5	1	4	11	...
Totals	1368	18	234	655	119	233	93	16	91	100	65	65	54	71	126	64	92	92	70	77	106	83	145	67	586

Appendix III.

Causes of, and Ages at Death, during 1911.

Causes of Death.		Deaths in or belonging to whole District at subjoined Ages.									Total Deaths in Public Institutions in the District.
		All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards	
All causes	Certified	1565	324	104	59	68	75	186	309	440	449
	Uncertified	172	36	5	9	6	8	23	39	46	86
Enteric Fever		11	...	...	...	...	5	5	...	1	10
Small-pox		...	...	...	...	...	...	...	...	...	...
Measles		55	18	14	17	6	...	...	...	..	2
Scarlet Fever		2	...	...	...	1	1	...	...	...	1
Whooping-cough		23	7	13	3	...	...	...	...	...	...
Diphtheria and Croup		25	1	2	7	14	...	1	...	...	15
Influenza		14	...	2	1	...	..	5	2	4	...
Erysipelas		2	...	...	...	...	...	1	1	...	1
Cerebro-Spinal Fever		...	...	...	...	...	...	..	...	...	1
Mumps		1	...	...	...	1	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)		136	1	3	2	8	26	64	28	4	43
Tuberculous Meningitis		17	2	5	3	6	1	...	...	...	8
Other Tuberculous Diseases		43	8	9	6	6	8	4	1	1	16
Rheumatic Fever		16	...	...	...	3	5	1	5	2	2
Cancer, Malignant Disease		125	...	1	2	...	1	10	65	46	45
Bronchitis		158	30	10	2	2	1	2	34	77	16
Broncho-Pneumonia		22	10	4	2	...	...	2	3	1	2
Pneumonia (all other forms)		66	10	7	3	2	2	15	16	11	29
Other Diseases of Respiratory Organs		15	...	1	2	...	...	...	5	7	5
Diarrhœa and Enteritis		109	69	17	2	...	...	3	5	13	16
Appendicitis and Typhlitis		5	...	...	...	1	1	2	1	...	11
Alcoholism		2	...	...	...	...	...	2	...	...	...
Cirrhosis of Liver		15	...	...	...	...	...	5	8	2	3
Nephritis and Bright's Disease		43	...	...	...	3	...	9	14	17	16
Puerperal Fever		5	...	...	...	...	...	5	...	...	2
Other accidents and diseases of Pregnancy and Parturition		7	...	...	...	...	2	5	...	...	3
Congenial Debility and Malformation, including Premature Birth		160	160	...	...	...	...	...	...	...	20
Violent Deaths, excluding Suicide		35	1	2	6	4	1	6	8	7	35
Suicides		6	...	...	...	...	...	1	3	2	3
Other Defined Diseases		483	13	9	5	15	22	53	128	238	169
Diseases ill-defined or unknown		136	30	10	5	2	7	8	21	53	61
		1737	360	109	68	74	83	209	348	486	535

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