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CITY OF CARLISLE.

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# REPORT

ON THE

**Sanitary Condition of the City of Carlisle,**

FOR THE YEAR 1910,

BY

**JOSEPH BEARD, D.P.H., Cantab.,**

Fellow of the Royal College of Surgeons, Edinburgh ;  
Member of the Royal College of Surgeons, England ;  
Licentiate of the Royal College of Physicians, London.

Medical Officer of Health,  
School Medical Officer and  
Surgeon to the Police Force.

CARLISLE :

CHAS. THURNAM & SONS, PRINTERS, ENGLISH STREET,



HEALTH COMMITTEE  
 OF THE  
 CARLISLE CITY COUNCIL, 1910—1911.

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MR. COUNCILLOR DALTON, Deputy Chairman.

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„ COUNCILLOR EDMONDSON	„ „ KING
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and

HIS WORSHIP THE MAYOR (ALDERMAN SIR B. SCOTT, J.P.).



OFFICIALS AND OTHERS CONNECTED WITH THE  
PUBLIC HEALTH DEPARTMENT.

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D.P.H. (Cantab.), &c.

*Chief Sanitary Inspector.*

\*C. W. HILL.

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*Public Analyst.*

ROBERT HELLON, Ph.D., F.I.C.

*Bacteriologist.*

PROF. S. DELEPINE, M.B., B.Sc.

\*Certificated Inspectors.

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## STATISTICAL SUMMARY FOR THE YEAR 1910.

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Area in Acres ...	...	...	...	...	2,025
Estimated Population (Middle of 1910)	...	...	...	...	51,433
Population per Acre	...	...	...	...	25·3
Number of Inhabited Houses (1901 Census)...	...	...	...	...	9,362
Rateable Value	...	...	...	...	£225,441
Number of Inhabitants per House at the last Census	...	...	...	...	4·8
Birth-Rate per thousand living	...	...	...	...	22·2
Death-Rate per thousand living	...	...	...	...	12·6
Infantile Mortality per thousand Births	...	...	...	...	110·0
Percentage of Uncertified Deaths	...	...	...	...	1·8
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To the Chairman and Members of the Health  
Committee of the Carlisle City Council.

Mr. Chairman and Gentleman,

I have the honour to submit, in accordance with the regulations of the Local Government Board and the Memorandum of the Board, dated October, 1909, my Annual Report upon the health and Sanitary Condition of the City of Carlisle during 1910.

The Report deals with the Birth and Mortality Statistics, and the work carried out by this department, including the measures adopted against the prevention of epidemic and other diseases.

I have to thank you for your support during the year.

I am, Mr. Chairman and Gentlemen,

Your obedient Servant,

JOSEPH BEARD.

Health Department,  
19 Fisher Street, Carlisle,  
*12th May 1910.*

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# STATISTICS


RELATING TO

BIRTHS, DEATHS, AND CAUSES OF  
DEATHS, Etc.

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## BIRTHS.

The number of births registered during the past year was 1,145, of which 589 were males and 556 females; this number shows a decrease of 4 births upon the figure for 1909. Calculating upon the estimated population of 51,433, the birth-rate was 22.2 per 1,000, which shows a further decline of .4 per 1,000 upon the year 1909, and is the lowest birth-rate yet recorded. The rate varies from 13.6 per 1,000 (of the estimated population) in Ricker-gate Ward to 27.3 per 1,000 in both Newtown and St. Nicholas Wards.

Year.	Number of Births registered.			Total.
	Males.	Females.	Per 1,000 of estimated population.	
1909	590	559	22.6	1,149
1910	589	556	22.2	1,145

The birth-rate for England and Wales, calculated as a whole, during 1910 was 24.8 per 1,000, and for the 76 great towns 25 per 1,000. The 142 smaller towns (to which classification Carlisle belongs) shew an average birth-rate of 23.7 per 1,000, whilst the rate for England and Wales, less the 218 great and small towns, was 25 per 1,000.

The figures for 1910 again show a decrease in the birth-rate over the previous year in each of the statistical groups mentioned, and the figures for Carlisle do not appear to be any more favourable than those shown in the Report for 1909.

A glance at the columns (post) demonstrates to what degree the birth-rate in the City has fallen; this fall, however, has to some extent (as pointed out in my Report

for 1909) been modified by the fall in the general death-rate which has taken place during practically the same period of years, but as there may be said to be a point below which the general death-rate will not fall, having regard to the fact that the death-rates in certain groups of diseases are higher than they should be, a care for the falling birth-rate is a thing not to be put lightly aside, especially in view of the fact that a good deal of the effective increase of the population is adversely influenced by a number of factors, amongst which emigration of the young adult is not the least important.

#### ILLEGITIMATE BIRTHS.

The number of illegitimate births registered during 1910 was 55, equal to 48.03 per 1,000 of the total births. The distribution of these births to the two Registration Sub-Districts was as follows:—

St. Cuthbert's—34 illegitimate births, or 68.07 per 1,000 of the total births in that district.

St. Mary's—21 illegitimate births, or 35.47 per 1,000 of the total births in that district.

The total number of illegitimate births registered shows a decrease of 33 upon the figures for 1909, when 88 illegitimate births were registered, equal to 76.7 per 1,000 of the total births registered, and a distribution as follows:—

St. Cuthbert's—44 illegitimate births, or 83.8 per 1,000 of the total births in that district.

St. Mary's—44 illegitimate births, or 70.5 per 1,000 of the total births in that district.

#### DEATHS.

The total number of deaths registered in the City during 1910 was 683, as compared with 735 in 1909,



making a gross death-rate for the year under review of 13.2 per 1,000 of the estimated population living at all ages.

Twenty-eight deaths occurred of persons belonging to the City in institutions and other places outside, while the deaths of 63 persons not belonging to the City occurred in public institutions and other places within the City Sub-Registration Districts.

Excluding the 63 deaths of persons belonging to other districts, and substituting the 28 deaths of Carlisle residents which occurred in the districts beyond the City boundaries, a nett figure of 648 remains, which is the actual number of deaths reckoned as belonging to the City, and which shows *the death-rate for 1910 to be 12.6 per 1,000 of the estimated population living at all ages.*

The corrected death-rate for the whole of England and Wales for 1910 was 13.4 per 1,000 living at all ages, and for the 76 great towns 14.3 per 1,000, the death-rate for the 142 smaller towns (amongst which Carlisle figures) was 12.9 per 1,000, whilst the death-rate for England and Wales (less the 218 great and small towns) was 12.8 per 1,000 living.

It will be observed that the nett general death-rate for Carlisle is slightly lower than the most favourable of any of the above-mentioned groups, and implies a satisfactory death-rate, but by comparison of certain of the statistical units with those of many of the individual towns of the 142 group, the City would not appear in such a favourable light. Furthermore, the death-rate has been based upon the estimated population, which in all probability is greatly in excess of what the census return will show the actual population to be, and which would furnish a death-rate approaching something like the figures for the gross rate previously mentioned, viz., 13.2 per 1,000.

Table showing details of the births in the two Sub Registration Districts, 1910:—

QUARTER ENDING.	ST. MARY.			ST. CUTHBERT.			TOTALS FOR CITY.
	Males.	Females.	Totals.	Males.	Females.	Totals.	
March 31 .....	86	73	159	59	74	133	292
June 30.....	91	73	164	80	62	142	306
September 30	84	81	165	68	75	143	308
December 31..	62	63	125	59	55	114	239
Totals.....	323	290	613	266	266	532	1145

The following list shows the annual birth-rate per 1,000 at all ages in Carlisle since 1875, which appears to be the earliest record available:—

Year.	Birth Rate.	Year.	Birth Rate.
1875	35.5	1893	34.5
1876	38.6	1894	32.0
1877	38.5	1895	31.4
1878	38.7	1896	29.6
1879	37.7	1897	30.8
1880	37.0	1898	30.0
1881	36.0	1899	29.4
1882	35.3	1900	30.1
1883	32.3	1901	27.3
1884	35.0	1902	27.0
1885	34.0	1903	28.4
1886	33.0	1904	26.9
1887	31.3	1905	24.3
1888	33.5	1906	25.3
1889	30.6	1907	23.8
1890	30.0	1908	24.4
1891	30.8	1909	22.6
1892	30.5	1910	22.2



Table showing details of the deaths in the two Sub-Registration Districts, 1910:—

QUARTER ENDING.	ST. MARY.					ST. CUTHBERT.					TOTALS FOR CITY.
	Males.		Females.		Totals.	Males.		Females.		Totals.	
	Under 5 years	Over 5 years	Under 5 years	Over 5 years		Under 5 years	Over 5 years	Under 5 years	Over 5 years		
March 31	18	32	7	30	87	11	37	9	23	80	167
June 30	17	41	11	35	104	10	29	4	21	64	168
Sept. 30	13	38	7	26	84	8	17	9	21	55	139
Dec. 31	19	38	18	44	119	16	27	15	32	90	209
TOTALS	67	149	43	135	394	45	110	37	97	289	683

Table showing the number of deaths at various age periods in Carlisle:—

	All Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. Mary's Sub-District.	St. Cuthbert's Sub-District.
No. of Deaths at all ages and at several age periods ...	683	126	67	28	35	232	195	394	289

Number of deaths of persons not belonging to the district occurring in public institutions and other places within the City:—

Cumberland Infirmary	...	...	...	39
Fusehill Workhouse	...	...	...	10
Strathclyde House	...	...	...	6
Fever Hospital	...	...	...	2
H. M. Prison	...	...	...	1
Hetheringtons' Auction Mart	...	...	...	1
Granville Road	...	...	...	1
English Street	...	...	...	1
Sheffield Street	...	...	...	1
West Walls	...	...	...	1



Number of deaths of persons belonging to the district occurring in public institutions and other places outside the City:—

Garlands Asylum	...	...	...	...	13
St. Joseph's Home	...	...	...	...	6
The Hospice, Crewe	...	...	...	...	1
Carlton Stables, Kilmarnock			...	...	1
Harthorpe Temperance Hotel, Moffat				...	1
Kildale, Hightae, Lockerbie			...	...	1
Blencathra Sanatorium	...	...	...	...	1
The Infirmary, Whitehaven	...	...	...	...	1
King's Park Road, Glasgow			...	...	1
Strathearn Road, Edinburgh			...	...	1
Arcade, Cockburn Street, Edinburgh				...	1
					28

Table showing birth-rates and death-rates for Carlisle as compared with England and Wales for the year 1910:—

	Annual Rate per 1,000 living.				Deaths under 1 Year to 1,000 Births.
	Births.	Deaths.		Principal Epidemic Diseases.	
		Crude.	*Corrected		
England and Wales ... ..	24·8	13·4	13·4	0·99	106
77 Great Towns ... ..	25·0	13·4	14·3	1·23	115
142 Smaller Towns ... ..	23·7	12·4	12·9	0·88	104
England and Wales, less the 218 Towns	25·0	13·6	12·8	0·74	96
<b>CARLISLE</b> . . . . .	22·2	13·2 †	12·6 ‡	0·40	110·0

\* The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales, as enumerated in 1901.

† Includes deaths of Non-Residents in the City.

‡ As there is no factor for correction for this City, this figure represents the death-rate after exclusion of certain Non-Residents dying within the City, and the inclusion of certain residents dying outside,

Table showing the gross Death-rate of Carlisle from 1874 to 1910 inclusive:—

Year.	Deaths from all causes.		Deaths from Principal Zymotic Diseases.	
	No. Registered.	Rate per 1000 of Population.	No. Registered.	Rate per 1000 of Population.
1874	1055	32·6	367	11·3
1875	934	29·2	201	6·3
1876	800	25·0	100	3·0
1877	750	23·0	55	1·7
1878	828	23·5	83	2·3
1879	818	23·5	76	2·0
1880	777	22·2	106	3·0
1881	717	20·0	67	1·8
1882	852	23·6	189	5·0
1883	779	21·0	67	1·8
1884	783	21·0	38	1·0
1885	769	20·3	66	1·7
1886	745	19·4	62	1·6
1887	772	19·9	75	1·9
1888	722	18·5	59	1·5
1889	723	18·1	69	1·7
1890	792	19·5	65	1·6
1891	789	20·1	63	1·6
1892	805	20·2	55	1·3
1893	868	21·6	145	3·6
1894	780	19·2	44	1·1
1895	794	19·4	33	0·8
1896	753	18·2	30	0·7
1897	811	19·4	54	1·3
1898	935	22·2	103	2·4
1899	818	19·2	42	0·9
1900	807	18·8	60	1·4
1901	810	17·8	64	1·4
1902	856	18·5	82	1·7
1903	813	17·4	58	1·2
1904	933	19·7	63	1·3
1905	783	16·3	66	1·3
1906	811	16·7	34	0·7
1907	848	17·1	77	1·5
1908	713	14·2	42	0·8
1909	735	14·5	30	0·5
1910	683	13·2	21	0·4

## CAUSES OF DEATH.

Table showing the diseases causing the largest number of Deaths during 1910, and a comparison with those of 1909:—

	1909.	1910.	Increase or Decrease
Pulmonary Tuberculosis & Phthisis ...	64	52	—12
Tubercular Peritonitis and Tabes Mesenterica }	12	6	— 6
Tubercular Meningitis and Hydro- cephalus }	11	15	+ 4
Cancer and Malignant Disease ...	58	47	—11
Prematurity and Injury at Birth ...	25	34	+ 9
Old Age ... ..	42	46	+ 4
Syncope, Heart Disease (not specified)...	46	53	+ 7
Valvular Disease of Heart ... ..	34	26	— 8
Cerebral Hæmorrhage, Embolism, Thrombosis and Apoplexy }	34	29	— 5
Pneumonia ... ..	67	56	—11
Bronchitis ... ..	38	35	— 3
Kidney and Bladder Disease...	18	23	+ 5
Debility, Atrophy, Inanition, Marasmus	21	16	— 5
Measles ... ..	11	3	— 8

+ Shows an increase over previous year.

— Shows a decrease over previous year.

NOTE—The Table shows that in 1910, the number of deaths from Prematurity and injury at birth, Heart Disease, Kidney Disease, Tubercular Meningitis, and old age is in excess of 1909, but that in several other diseases or groups of diseases the number of deaths was less.



TABLE I.

Vital Statistics of whole District during 1910 and previous years.

## CARLISLE URBAN DISTRICT.

YEAR.	Population estimated to Middle of each Year	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT	
		Number.	Rate.	Number.	Rate per 1,000 Births registered.	Number.	Rate.				Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1900	44,838	1354	30.1	182	134	807	17.9	135	35	No information.	772	17.2
1901	45,478	1246	27.3	161	129	816	17.8	113	39	No information.	771	16.9
1902	46,078	1245	27.0	146	117	856	18.5	180	56	13	813	17.6
1903	46,590	1322	28.4	157	118	781	17.4	105	39	7	781	16.7
1904	47,350	1278	26.9	195	152	933	19.7	176	63	7	877	18.5
1905	47,920	1168	24.3	163	139	783	16.3	150	37	13	759	15.8
1906	48,425	1227	25.3	163	132	811	16.7	163	56	16	781	15.9
1907	49,400	1178	23.8	169	143	848	17.1	161	62	21	807	16.3
1908	50,047	1223	24.4	158	121	713	14.2	128	55	13	671	13.4
1909	50,675	1149	22.6	142	123	735	14.5	168	53	27	709	13.9
Averages for years 1900-1909.	47,671	1239	26.0	163	130	807	17.0	147	49	...	774	16.2
1910	51,433	1145	22.2	126	110	683	13.2	158	63	28	648	12.6

Area of District in acres (exclusive of area covered by water), 2,025.

Total population at all ages 45,480	} At Census of 1901.
Number of inhabited houses 9,362	
Average number of persons per house 4.8	

The following public and other Institutions are within the City.

The Union Workhouse and its Infirmary.

The Cumberland Infirmary.

The Crozier Lodge Isolation Hospital.

Strathelyde House (Home for Incurables).

TABLE II.

Vital Statistics of separate Localities in 1910 and previous years.

## CARLISLE URBAN DISTRICT.

NAMES OF LOCALITIES.	1—WHOLE DISTRICT.				2—ST. MARY'S SUB-DISTRICT.				3—ST. CUTHBERT'S SUB-DISTRICT.			
	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
1900	44,838	1,354	772	182	25,580	731	454	80	19,258	623	318	102
1901	45,478	1,246	771	161	25,756	679	452	100	19,722	567	319	61
1902	46,078	1,245	813	146	26,274	723	486	72	19,804	522	327	74
1903	46,500	1,322	781	157	26,534	738	460	97	19,966	584	321	60
1904	47,350	1,278	877	195	26,984	701	506	111	20,366	577	371	84
1905	47,920	1,168	759	163	27,277	648	452	81	20,643	520	307	82
1906	48,425	1,227	781	163	27,561	685	454	95	20,864	542	327	68
1907	49,400	1,178	807	169	28,207	653	459	84	21,193	525	348	85
1908	50,047	1,223	671	158	28,576	676	371	85	21,471	547	300	73
1909	50,675	1,149	709	142	28,934	624	399	72	21,741	525	310	70
Averages of Years 1900 to 1909	47,671	1,239	774	163	27,168	685	449	87	20,503	554	325	76
1910	51,433	1,145	648	125	29,313	613	356	67	22,120	532	292	58

TABLE IV.  
Causes of, and Ages at Death during Year 1910.  
CARLISLE URBAN DISTRICT.

CAUSES OF DEATH.	DEATHS AT THE SURJOINED AGES OF "RESIDENTS" WHETHER OCCURRING IN OR BEYOND THE DISTRICT.						DEATHS AT ALL AGES OF "RESIDENTS" BELONGING TO LOCALITIES, WHETHER OCCURRING IN OR BEYOND THE DISTRICT.		TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESIDENTS" IN PUBLIC INSTITUTIONS IN THE DISTRICT.	
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. Mary Sub-Dist.		St. Cuthbert Sub-Dist.
Smallpox	3	1	2	...	...	...	...	1	2	
Measles	2	...	...	...	...	1	...	2	...	
Scarlet Fever	11	3	5	1	...	...	...	6	5	
Whooping Cough	2	...	...	...	...	...	...	2	...	
Diphtheria includ. Membranous Group	...	...	...	...	...	...	...	...	3	
Fever { Typhus	...	...	...	...	...	...	...	...	...	
{ Enteric	...	...	...	...	...	...	...	...	...	
{ Other continued	...	...	...	...	...	...	...	...	...	
Epidemic Influenza	7	1	1	...	...	2	...	4	3	
Cholera	...	...	...	...	...	...	...	...	...	
Plague	3	2	1	...	...	...	...	1	2	
Diarrhoea	14	10	2	...	...	1	...	6	8	
Enteritis	3	2	1	...	...	...	...	2	1	
Gastritis	1	...	...	...	...	...	...	1	...	
Puerperal Fever	...	...	...	1	...	...	...	...	1	
Erysipelas	...	...	...	...	...	...	...	...	...	
Phthisis (Pulmonary Tuberculosis)	52	...	1	3	11	37	...	28	24	
Other Tuberculous Diseases	15	4	4	2	2	3	...	6	3	
Cancer, Malignant Disease	47	...	...	...	1	29	...	25	17	
Bronchitis	35	11	2	...	1	7	...	19	14	
Pneumonia	56	6	20	2	3	18	...	33	23	
Pleurisy	...	...	...	...	...	...	...	...	...	
Other Diseases of Respiratory Organs	7	...	2	...	...	4	...	3	4	
Alcoholism, Cirrhosis of Liver	2	...	...	...	...	1	...	2	1	
Veneral Diseases	6	...	...	...	...	...	...	6	...	
Premature Birth	33	33	...	...	...	...	...	17	16	
Diseases and Accidents of Parturition	4	...	...	...	...	4	...	2	1	
Heart Diseases	96	...	...	...	4	42	50	43	63	
Accidents	16	2	2	3	...	2	...	13	3	
Suicides	3	...	...	...	...	3	...	1	2	
Tuberculous Meningitis	15	4	4	4	2	1	...	9	6	
Cerebro Spinal Fever	1	...	...	...	...	...	...	1	...	
All other Causes	213	38	13	5	5	66	86	123	90	
All Causes	648	125	62	23	29	227	182	356	292	











Injury at Birth ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Atelectasis ...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Want of Breast Milk ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Teething ...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	11	...	...	2
Old Age ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32	...	6	51
II. LOCAL DISEASES.																			
<i>I.—Diseases of Nervous System.</i>																			
Meningitis, Inflammation of Brain ...	4	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
Softening of Brain ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	1
General Paralysis of Insane ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
Insanity (not Puerperal) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chorea ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Convulsions ...	7	3	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	10
Laryngismus Stridulus ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Locomotor Ataxy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paraplegia and Disease of Spinal Cord ...	1	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Neuritis Periph, Poly-Neuritis ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	7
Brain Tumour (not specific) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nervous System, other Diseases ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
<i>2.—Diseases of Organs of Special Sense.</i>																			
Otitis, Mastoid Disease ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Epistaxis, Nose Disease ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia, Eye Disease ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>3.—Diseases of Heart.</i>																			
Valve Disease, Endocarditis (not Infective) ...	...	...	...	...	...	...	...	...	...	2	...	...	...	3	...	...	...	...	27
Pericarditis ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
Hypertrophy of Heart ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Angina Pectoris ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	6
Dilatation of Heart ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	5
Fatty Degeneration of Heart ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2
Syncope, Heart Disease (not specified) ...	...	...	...	...	...	...	...	...	...	2	...	...	...	3	...	...	...	...	55











Table showing population and rates from principal

NAME OF TOWN.	Population.	Birth-Rate.	Death-Rate. (after correc- tion for Non- Residents.)	Infantile Mortality Rate.
Aerlington ... ..	46,850	19·76	12·38	109·0
Ashton-under-Lyne ... ..	46,514	23·4	15·8	148·2
Aston Manor ... ..	86,269	23·2	11·9	109·0
Barnsley ... ..	48,000	32·95	15·86	244·0
Barrow-in-Furness ... ..	68,024	23·7	13·7	124·0
Bath ... ..	50,000	18·1	13·1	82·6
Blackpool ... ..	63,216	15·90	10·83	104·4
Bootle ... ..	72,000	29·0	14·1	123·0
Burton-upon-Trent ... ..	53,000	21·6	11·73	84·0
Bury ... ..	59,409	20·79	14·61	124·0
Cheltenham ... ..	51,500	17·98	12·11	68·0
Coventry ... ..	98,900	27·2	11·7	86·0
Crewe ... ..	48,340	23·0	11·8	103·0
Eastbourne ... ..	52,500	16·74	9·70	93·3
Edmonton ... ..	61,741	30·42	9·51	69·76
Enfield ... ..	58,282	24·55	10·10	83·15
Exeter ... ..	48,700	20·6	13·74	96·9
Gillingham ... ..	53,675	25·1	9·5	79·1
Handsworth ... ..	72,964	19·4	8·8	79·0
Hornsey ... ..	94,721	14·7	7·78	69·0
Ilford ... ..	75,327	22·28	7·97	73·8
Ipswich ... ..	75,936	23·9	13·5	95·0
Lancaster ... ..	44,270	20·63	12·53	137·0
Lincoln ... ..	55,474	23·8	13·5	100·5
Newport ... ..	79,729	30·5	12·97	115·5
Northampton ... ..	95,940	19·8	11·7	110·0
Oxford ... ..	52,666	20·7	12·10	88·9
Reading ... ..	84,355	19·85	10·0	75·3
Rotherham ... ..	66,500	28·21	13·73	130·0
Stockton-on-Tees ... ..	54,629	26·89	15·3	126·0
Tynemouth ... ..	56,378	31·7	17·2	125·0
Wakefield ... ..	52,828	22·4	14·5	109·0
Wallasey ... ..	75,000	22·9	11·8	86·0
Warrington ... ..	73,580	30·2	14·5	113·0
Wigan ... ..	94,654	29·2	14·5	133·0
Wimbledon ... ..	58,222	19·9	7·9	74·0
Workington ... ..	27,500	26·4	12·5	129·4
<b>CITY OF CARLISLE...</b>	<b>51,433</b>	<b>22·2</b>	<b>12·6</b>	<b>110·0</b>



causes of death in Carlisle and a number of other towns :—

Zymotic Death-Rate.	Respiratory Diseases, Death Rate (other than Phthisis).	Phthisis Death-Rate.	Other Tuberculous Diseases, Death-Rate.	Malignant Diseases, Death-Rate.	Average Death Rate for 10 Years.
0.79	1.75	0.79	0.36	0.94	14.68
1.7	2.6	1.4	0.02	0.9	18.6
1.1	not stated	1.1	0.23	not stated	14.7
2.66	3.74	1.04	0.48	0.88	19.07
2.01	2.52	1.69 (All Tuberculous Diseases)		0.63	12.7
0.74	1.98	0.92	0.20	1.38	15.07
0.73	1.64	0.60	0.28	0.73	12.83
1.8	2.9	1.1	0.43	0.73	18.1
1.27	1.66	1.10	0.33	0.95	13.45
1.06	2.27	1.23	0.33	0.71	16.87
0.49	1.32	0.75	0.56	1.08	13.8
0.78	1.58	0.89	0.50	not stated	14.7
1.40	1.71	0.7	0.5	0.7	13.6
0.4	1.18	0.87	0.22	1.18	9.83
0.79	1.60	0.81	0.50	0.53	16.56
0.52	1.37	0.96	0.34	0.61	11.99
0.78	2.5	0.99	0.33	1.21	15.86
0.6	1.1	0.8	0.2	0.8	11.6
0.39	1.45	0.58	0.19	0.90	11.2
0.27	not stated	0.43	0.19	not stated	8.38
0.4	1.1	0.6	0.3	0.8	9.7
1.07	1.64	1.31	0.40	1.14	15.3
0.76	2.0	0.88	0.42	0.56	13.85
1.1	1.5	0.81	0.55	1.1	16.0
1.13	1.89	0.98	0.28	0.90	16.3
0.89	not stated	1.17	0.18	0.98	13.2
0.39	1.72	0.96	0.18	1.31	13.19
0.37	1.35	0.81	0.21	0.92	13.11
1.74	2.35	0.77	0.48	0.8	16.0
1.09	3.27	1.28	0.86	0.98	17.28
1.7	3.2	1.08	0.4	0.8	18.7
1.14	1.37	1.08	0.44	0.94	15.5
0.8	2.1	0.7	not stated	not stated	13.59
1.2	2.1	1.07	0.65	0.78	17.7
1.39	3.33	0.69	0.35	0.40	19.66
0.49	0.94	0.06 (All Tuberculous Diseases)		0.92	9.8
0.65	not stated	not stated	not stated	not stated	12.58
<b>0.4</b>	<b>1.90</b>	<b>1.01</b>	<b>0.58</b>	<b>0.91</b>	<b>16.2</b>

## INFANTILE MORTALITY.

This term is used as an interpretation of the mortality amongst infants under one year of age, and the mortality rate is calculated upon the number of deaths of such infants per 1,000 born during the same period.

The number of deaths of infants under one year during 1910 was 126, giving an Infantile Mortality rate of 110 per 1,000.

The Infantile Mortality rate for the whole of England and Wales during 1910 was 106 per 1,000 born, for the 76 great towns 115 per 1,000, for the 142 smaller towns (of which Carlisle is one) 104 per 1,000, and for England and Wales less the 218 great and small towns 96 per 1,000.

The rate during 1910 shows that the decrease in Infantile Mortality was general throughout England and Wales, which was chiefly to be accounted for by the generally prevailing meteorological conditions, viz., cold and wet during the summer and early autumn months, conditions which are unfavourable to the spread of certain Zymotic diseases, upon which fluctuating rates of Infantile Mortality are generally dependent.

The Infantile Mortality rate for this City was lower during 1910 than 1909 by 13.6 per 1,000, and for this local decrease several factors were responsible, the chief of which were—

1. A diminution of those diseased conditions usually associated with a hot dry summer, viz., Enteritis, Gastro-Enteritis, and Muco-Enteritis.

2. A decrease in the deaths from Measles, Atrophy, Debility and Wasting, Tuberculous Peritonitis, and Tabes Mesenterica.

The death-rate of legitimate infants under one year of age was 106.4 per 1,000 legitimate births registered.

The death-rate of illegitimate infants under one year of age was 163.6 per 1,000 illegitimate births registered.

I have not repeated the defective conditions concerned in the production of Infantile Mortality, but would refer the reader to my Annual Report for 1909, page 32, for further particulars upon this subject.

The Infantile Mortality rate for this City, although 13.6 per 1,000 below the figure for last year, is much too high, and is capable of further reduction; it is the duty, therefore, of all those upon whom the obligation rests to endeavour to stop this leakage of life at every preventable point, remembering that as the chances of the conditions being present which are concerned in the production of a high infantile death-rate may preponderate, the relaxation of any preventive precaution is inadmissible.



## St. Mary's Sub-District.

## INFANTILE MORTALITY DURING THE YEAR 1910.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified ... ..	14	2	4	2	22	7	7	5	1	4	1	1	5	6	...	2	61
	Uncertified ... ..	3	...	...	...	3	...	...	...	...	2	...	...	...	1	...	...	6
Common Infectious Diseases.	Small-pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria, including Membranous Croup ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœal Diseases.	Whooping Cough ... ..	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	3
	Diarrhœa, all forms ... ..	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
	Enteritis, Muco-enteritis ... ..	...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	...	4
	Gastro-enteritis ... ..	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Wasting Diseases.	Gastritis, Gastro-intestinal Catarrh ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Premature Birth ... ..	11	2	...	1	14	2	...	...	1	...	...	...	...	...	...	...	17
	Congenital Defects ... ..	1	...	1	1	3	...	...	...	...	...	...	...	...	...	...	...	3
	Injury at Birth ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Diseases.	Want of Breast-milk ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Starvation ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Atrophy, Debility, Marasmus ... ..	2	...	1	...	3	2	2	...	...	...	...	...	...	...	...	1	8
	Tuberculous Meningitis ... ..	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2
Other Tuberculous Diseases.	Tuberculous Peritonitis: Tabes Mesenterica ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
	Other Tuberculous Diseases ... ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Other Causes.	Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis ... ..	...	...	1	...	1	1	2	...	1	1	...	...	...	...	...	...	6
	Rickets ... ..	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2
	Meningitis (not Tuberculous) ... ..	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	2
	Convulsions ... ..	3	...	...	...	3	...	...	...	1	...	...	1	1	...	...	...	6
	Bronchitis ... ..	...	...	...	...	...	2	...	...	1	...	...	...	1	...	...	...	4
	Laryngitis ... ..	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	3
	Pneumonia ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, over-lying ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Causes ... ..	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	3	
		17	2	4	2	25	7	7	5	1	6	1	1	5	7	...	2	67

District (or Sub-Division) of St. Mary's  
Births in the year { Legitimate, 592. Deaths in the year of { Legitimate Infants, 63.  
{ Illegitimate, 21. { Illegitimate " 4.  
Population—Estimated to middle of 1910—29,313.  
Deaths from all Causes at all Ages—356.

## St. Cuthbert's Sub-District.

## INFANTILE MORTALITY DURING THE YEAR 1910.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
		12	6	5	...	23	6	2	3	4	4	4	6	1	1	2	1	57
All Causes	{ Certified ...	12	6	5	...	23	6	2	3	4	4	4	6	1	1	2	1	57
	{ Uncertified ...										1							1
Common Infectious Diseases.	Small-pox ...																	
	Chicken-pox ...																	
	Measles ...								1									1
	Scarlet Fever ...																	
	Diphtheria, including Membranous Croup ...																	
Diarrhoeal Diseases.	Whooping Cough ...												1				1	2
	Diarrhoea, all forms ...						1											1
	Enteritis, Muco-enteritis ...						1	1		2	1			1				6
	Gastro-enteritis ...				1		1											1
Wasting Diseases.	Gastritis, Gastro-intestinal Catarrh ...																	1
	Premature Birth ...	11	3	1		15	1											16
	Congenital Defects ...	1		2		3												3
	Injury at Birth ...		1			1												1
	Want of Breastmilk } Starvation }		1			1												1
Tuberculous Diseases.	Atrophy, Debility, Marasmus ...		1	1		2	3				1	1						7
	Tuberculous Meningitis ...												2					2
	Tuberculous Peritonitis: Tabes Mesenterica ...															1		1
	Other Tuberculous Diseases ...												1					1
Other Causes.	Erysipelas ...																	
	Syphilis ...																	
	Rickets ...																	
	Meningitis (not Tuberculous) ...										1				1			2
	Convulsions ...											1						1
	Bronchitis ...							1	1			1	3	1				7
	Laryngitis ...																	
	Pneumonia ...									1	1		1					3
Suffocation, over-lying } Other Causes ...										1							1	
		12	6	5	...	23	6	2	3	4	4	4	6	1	1	2	1	58

District (or sub-division) of St. Cuthbert.

Births in the year { Legitimate, 498. Deaths in the year of { Legitimate Infants, 53.  
 { Illegitimate, 34. { Illegitimate „ 5.

Population—Estimated to middle of 1909—22,120.

Deaths from all Causes at all Ages—292.



Population, births, birth-rate, and infantile mortality rates for a series of years, 1884-1910:—

Year.	Population.	No. of Births.	Rate per 1000.	Infantile Death-Rate per 1000 births.
1884	37,285	1303	35.0	158
1885	37,881	1285	34.0	164
1886	38,402	1262	33.0	146
1887	38,793	1214	31.3	141
1888	39,027	1307	33.5	129
1889	39,944	1224	30.6	142
1890	40,500	1215	30.0	150
1891	39,200	1207	30.8	137
1892	39,750	1213	30.5	123
1893	40,150	1389	34.5	178
1894	41,022	1315	32.0	133
1895	41,658	1311	31.4	142
1896	42,294	1246	29.6	137
1897	42,930	1324	30.8	134
1898	43,566	1311	30.0	183
1899	44,202	1306	29.4	145
1900	44,838	1354	30.1	134
1901	45,478	1246	27.3	129
1902	46,078	1245	27.0	117
1903	46,500	1322	28.4	118
1904	47,350	1278	26.7	152
1905	47,920	1168	24.3	139
1906	48,425	1227	25.3	132
1907	49,400	1178	23.8	143
1908	50,047	1223	24.4	129
1909	50,675	1149	22.6	123.6
1910	51,433	1145	22.2	110.0



The 125 deaths of infants belonging to the City under one year of age are recorded under the following headings, arranged in order of their frequency:—

Premature Birth	...	...	...	33
Atrophy, Debility, Inanition, Marasmus	...	...	...	15
Enteritis, Muco-Enteritis, and Gastro-Enteritis	...	...	...	11
Bronchitis	...	...	...	11
Convulsions	...	...	...	7
Congenital Syphilis	...	...	...	6
Pneumonia	...	...	...	6
Whooping Cough	...	...	...	5
Atelectasis	...	...	...	4
Tabes Mesenterica, Tuberculous Peritonitis	...	...	...	4
Tuberculous Meningitis	...	...	...	4
Meningitis (not tuberculous)	...	...	...	4
Gastritis, Gastro-intestinal Catarrh	...	...	...	2
Congenital Defects	...	...	...	2
Suffocation (overlying and fit of coughing)	...	...	...	2
Rickets	...	...	...	2
Zymotic Diarrhœa	...	...	...	1
Measles	...	...	...	1
Influenza	...	...	...	1
Want of Breast Milk	...	...	...	1
Hernia	...	...	...	1
Disease of Spinal Cord (Infantile Paralysis)	...	...	...	1
Injury at Birth	...	...	...	1

LIST SHOWING NUMBER OF DEATHS OF INFANTS  
UNDER 1 YEAR, WITH OCCUPATION OF PARENTS.

Whole District	...	...	{ Legitimate 116 }	} 125
			{ Illegitimate 9 }	
St. Mary's Sub-Registration District	...	...	{ Legitimate 63 }	} 67
			{ Illegitimate 4 }	
St. Cuthbert's Sub-Registration District	...	...	{ Legitimate 53 }	} 58
			{ Illegitimate 5 }	

LEGITIMATE.

Occupation of Father.	Numbers.
Labourer	43
Railway Employés (Engine Drivers, Guards, Firemen, Cleaners and Porters)	11
Engine or other Fitter	7
Groom, Coachman, Cab Driver, Carter	6
Painter, Plumber, Joiner	5
Baker, Biscuit Icer	5
Stock-keeper, Store-keeper	4
General Dealer, Hawker, Drover	3
Felt Hatter, Dyer, Calico Printer	3
Shoemaker	3
Musician	3
Iron Worker	3
Barman	2
Clerk	2
Gardener	2
Tailor	1
Grocer	1
Telegraph Linesman	1
Electrician	1
Watchmaker	1
Miner	1
Gas Stoker	1
Assurance Agent	1
Butcher	1
Chimney Sweep	1
Stonemason	1
Brick Burner	1
Compositor	1
Tram Inspector	1
Total	116

## ILLEGITIMATE.

Occupation of Mother.	Numbers.
Domestic Servant ... ..	3
Confectioner ... ..	1
Factory Worker ... ..	1
Laundress ... ..	1
Printers Machine Feeder ... ..	1
Saleswoman ... ..	1
No Occupation ... ..	1
Total	9

## ZYMOTIC DISEASES.

(Syn. Infectious Diseases.)

The number of Infectious Diseases notified during 1910 was 357, being an increase of 113 on the number notified during 1909. This increase was caused by a prolonged outbreak of Scarlet Fever, the maximum effect of which was observed during the latter quarter of the year, when practically half the total number of notifications of the disease was received.

The number of deaths from all zymotic diseases during 1910 was 21, as compared with 30 and 42 for 1908 and 1909 respectively; this figure gives a death-rate of .4 per 1,000 of the estimated population, which is to be regarded as a low death-rate from this class of diseases. The principal cause of the mortality was Whooping Cough, which was responsible for 11 out of the 21 deaths. The remarkable low death-rate from the 248 cases of Scarlet Fever is to be attributed to the mild type of the disease which prevailed throughout the entire course of the epidemic.

The death toll from Measles was practically only a quarter of that for 1909, and a similar fact obtained with regard to epidemic diarrhœa.



## ZYMOTIC DISEASES.

Table showing the number of notifications during each of the four quarters of the year ending 1910 :—

Notifiable Disease.	Number of Notifications sent in during				Totals.
	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	
Scarlet Fever ... ..	23	26	76	123	248
Diphtheria (including Membranous Croup)	7	11	9	10	37
Erysipelas ... ..	16	7	9	28	60
Enteric or (Typhoid) Fever	3	2	1	0	6
Typhus Fever ... ..	0	0	0	0	0
Smallpox ... ..	0	0	0	0	0
Puerperal Fever ... ..	0	3	2	1	6
Totals ... ..	49	49	97	162	357

Total number of notifications of each class of notifiable Infectious Disease :—

Notifiable Disease.	1908	1909	1910
Scarlet Fever ... ..	89	119	248
Diphtheria (including Membranous Croup) ... ..	32	36	37
Erysipelas ... ..	63	79	60
Enteric or (Typhoid) Fever .. ..	2	1	6
Typhus Fever ... ..	0	8	0
Smallpox ... ..	0	0	0
Puerperal Fever ... ..	3	1	6
Totals ... ..	189	244	357

Deaths from the principal Zymotic Diseases, including Diarrhœa and Dysentery :—

Year	1907	1908	1909	1910
Total number of deaths	77	42	30	21

Table showing the Number and Nature of the Deaths from the principal Zymotic Diseases,  
1900 to 1910.

NOTIFIABLE DISEASE.	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910.
Smallpox .....	...	...	...	4	...	...	...	...	...	...	...
Measles... ..	13	5	10	3	7	17	1	54	...	11	3
Scarlet Fever .....	2	6	17	5	3	5	9	6	1	6	2
Diphtheria .....	3	14	41	20	14	6	5	3	4	4	2
Whooping Cough.....	17	14	5	20	20	11	5	11	23	8	11
{ Typhus .....	...	...	...	...	...	5	...	...	...	...	...
{ Enteric or Typhoid .....	2	5	7	3	3	3	1	...	...	1	...
{ Simple continued .....	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea .....	23	20	2	3	16	19	13	3	14	...	3
Totals .....	60	64	82	58	63	66	34	77	42	30	21
Rate per 1000 of population.....	1.4	1.3	1.7	1.2	1.3	1.3	0.7	1.5	.84	0.5	.40

Table showing the number and nature of the Infectious Diseases at the several age groups notified in the several sub-registration districts of the City during 1910.

NOTIFIABLE DISEASE	Cases notified in whole District.							Total Cases notified in each Locality.		No. of Cases removed to Hospital from each Locality.		TOTAL CASES REMOVED TO HOSPITAL.
	At all ages.	At Ages—Years.						St. Mary Sub-District.	St. Cuthbert Sub-District.	St. Mary Sub-District.	St. Cuthbert Sub-District.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.					
Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	37	3	6	13	8	7	...	22	15	17	10	27
Erysipelas ... ..	60	4	1	5	10	38	2	35	25	...	..	...
Scarlet Fever ... ..	248	2	57	155	26	8	...	112	136	82	89	171
Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	..	...
Enteric Fever ... ..	6	...	...	...	3	3	..	4	2	4	..	4
Relapsing Fever ... ..	...	...	...	..	...	...	..	...	...	..	...	...
Continued Fever ... ..	...	...	...	...	...	...	...	..	...	..	..	...
Puerperal Fever ... ..	6	...	...	...	2	4	..	4	2	...	..	...
Plague ... ..	...	...	...	...	..	...	...	...	...	...	...	...
Totals ... ..	357	9	64	173	49	60	2	177	180	103	99	202

Isolation Hospitals—Names and Situations—

Crozier Lodge, Fever Hospital—Total Available Beds 50

City of Carlisle Smallpox Hospital „ „ , 12

Number of Diseases that can be concurrently treated, 4.



Table showing the several localities where deaths from the principal Zymotic Diseases occurred:—

LOCALITY.	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Enteric or (Typhoid) Fever	Diarrhoea	Totals
<i>St. Mary's Sub-District—</i>									
Fever Hospital ... ..	...	...	2	1	...	...	...	...	3
Clift Street... ..	...	...	...	1	...	...	...	...	1
Scotch Street ... ..	...	...	...	...	...	...	...	1	1
Graham Street ... ..	...	...	...	...	1	...	...	...	1
Charlotte Street ... ..	...	...	...	...	1	...	...	...	1
Scott Street ... ..	...	...	...	...	1	...	...	...	1
Bellgarth Road ... ..	...	...	...	...	1	...	...	...	1
Rigg Street ... ..	...	...	...	...	1	...	...	...	1
Artizans' Dwellings ... ..	...	...	...	...	1	...	...	...	1
Queen Street ... ..	...	1	...	...	...	...	...	...	1
<i>St. Cuthbert's Sub-District—</i>									
Edward Street ... ..	...	1	...	...	...	...	...	...	1
Princess Street ... ..	...	1	...	...	...	...	...	...	1
King's Arms Lane ... ..	...	...	...	...	...	...	...	1	1
Lord Street ... ..	...	...	...	...	...	...	...	1	1
Greyflatt Terrace ... ..	...	...	...	...	2	...	...	...	2
Harraby Street ... ..	...	...	...	...	1	...	...	...	1
Thompson Street ... ..	...	...	...	...	1	...	...	...	1
Close Street ... ..	...	...	...	...	1	...	...	...	1
Totals .. ..	...	3	2	2	11	...	...	3	21

## SCARLET FEVER.

(Syn. Scarlatina.)

The number of cases of Scarlet Fever notified or brought to my notice by other means during 1910 was 248, being an increase of 129 over the figures for 1909.

The number of deaths registered from this disease was 2, equal to a rate of .03 per 1,000 of the estimated population, and .8 per cent. of the number of notified cases of the disease.

During 1909, 6 deaths were registered from this disease, or equal to a rate of .11 per 1,000 of the then estimated population.

Of the 248 cases thus recorded, 171 or 68.9 per cent. were isolated in Hospital.

Out of the total number of cases notified two were children who had been infected during a holiday in districts outside the City, and in whom the disease manifested itself immediately after their return home. Upon examination six other children exhibited no symptom or sign of the disease; out of this number three were perfectly free from any disease, one suffered from Icthyosis, one from Infantile Paralysis (Poliomyelitis), and one from a mild attack of appendicitis.

During the year the Health Committee instituted proceedings against two Great Orton persons, a father and mother, for exposure of their child in certain streets and public places of the City whilst suffering from Scarlet Fever. The Bench convicted the two defendants and imposed a fine of 5s. and £1 costs.

## RETURN CASES OF SCARLET FEVER.

Seven cases of Scarlet Fever occurred in five houses, to which a patient recently isolated in Hospital had returned. Out of these 7 cases, 3 occurred in a two-roomed dwelling in some old property in Old Greystone. The cause of infection of these 3 cases was an intractable nasal discharge, which persisted in a boy who had returned home after treatment of 21 weeks in hospital, but one cannot altogether dissociate an important contributory element, viz., the overcrowding of the two rooms which existed at the time of his return, and the total lack of ventilation in the rooms.

TABLE SHOWING RETURN CASES.

Address.	Date of Notification of first case.	Date of Discharge of first case from Hospital.	Date of Notification of a second or more cases at the same house.	Period of Isolation of first case in Hospital.
Princess Street ...	4th January	28th March	12th April	83 days
Old Greystone ...	7th Sept. (1909)	2nd February	9th February 14th Feb. 4th March	148 days
Artizans' Dwellings	25th March	12th May	23rd May	48 days
Clifford Street ...	8th Sept.	15th October	19th October	37 days
Jackson Street ...	24th October	7th December	27th Dec.	44 days



Table showing simultaneous and secondary cases of  
Scarlet Fever :—

Address.	Date of notification of first case or cases.	Date of notification of a second or more cases at the same house.	Whether isolated in Hospital or not.
Cecil Street .. ..	4th February	...	No
	4th February	...	No
Artizans' Dwellings ...	25th March	16th May	Yes
Metcalf's Court, Princess-St.	8th June	9th July	Yes
Oswald Street ... ..	24th June	27th June	Yes
		27th June	Yes
		18th July	Yes
Monkclose Road ... ..	17th August	...	Yes
	17th August		Yes
	17th August		Yes
	17th August		Yes
Trinity Buildings ... ..	18th August	...	No
	18th August		No
Cranbourne Road ... ..	19th August	20th August	Yes
Bowman's Court, Rickergate	1st September	27th September	Yes
Montreal Street ... ..	6th September	7th September	Yes
Melbourne Road ... ..	14th September	19th September	Yes
Montreal Street ... ..	16th September	3rd October	No
Montreal Street ... ..	21st September	5th October	No
Redbank Square ... ..	27th September	3rd October	Yes
Bassenthwaite Terrace ...	29th September	10th October	Yes
Oswald Street ... ..	5th October	12th October	Yes
Alexander Street ... ..	11th October	25th October	Yes
Thirlwell Terrace ... ..	17th October	20th October	No
		24th October	No
Tait Street ... ..	17th October	19th October	Yes
Gibbons' Terrace ... ..	17th October	25th October	No
Tait Street ... ..	22nd October	24th October	Yes
Sybil Street ... ..	24th October	26th October	No
Wood Street, Newtown ...	31st October	...	Yes
	31st October		Yes
Blackwell Road ... ..	2nd November	9th November	Yes
Oswald Street ... ..	14th November	19th November	Yes
	14th November		Yes
Lindisfarne Street ... ..	16th November	21st November	Yes
Bower Street ... ..	17th November	19th November	Yes
Esther Street ... ..	21st November	23rd November	Yes
		7th December	Yes
Walsh's Square, Finkle-St.	30th November	...	Yes
	35th November		Yes
Lindisfarne Street ... ..	7th December	...	Yes
	7th December		Yes

Table showing yearly number of cases of Scarlet Fever notified since 1891:—

Year	No.	Year	No.	Year	No.
1891	564	1898	120	1905	378
1892	103	1899	61	1906	670
1893	181	1900	99	1907	177
1894	77	1901	363	1908	89
1895	64	1902	280	1909	119
1896	162	1903	101	1910	248
1897	258	1904	180		

Table giving name of school and number of cases in which a school child was infected with Scarlet Fever during 1908, 1909, and 1910:—

			1908	1909	1910
Ashley Street	...	...	11	8	23
Bishop Goodwin	...	...	18	14	22
Brook Street	...	...	15	13	34
Caldewgate	...	...	0	3	4
Christ Church	...	...	0	1	3
Denton Holme	...	...	0	6	2
Fawcett	...	...	1	1	2
Higher Grade	...	...	0	1	3
Holy Trinity	...	...	0	0	3
Lowther Street	...	...	1	4	12
Norman Street	...	...	2	1	14
Robert Ferguson	...	...	2	8	7
St. Bede's	...	...	1	0	2
St. Cuthbert's	...	...	0	1	3
St. John's	...	...	0	7	5
St. Patrick's	...	...	0	2	0
St. Stephen's	...	...	1	1	0
Botcherby	...	...	0	3	6
Stanwix	...	...	0	0	1
Upperby	...	...	1	0	0
Private Schools	...	...	1	3	10
		Total	54	77	156

## DIPHTHERIA.

(Including Membranous Croup.)

The number of cases of this disease notified during 1910 was 37, as against 36 during 1909 and 31 during 1908.

Of this number 22 occurred in St. Mary's and 15 in St. Cuthbert's Sub-Registration Districts respectively.

During 1910 two deaths were registered as due to this disease.

Of the 37 cases notified, 27 or 72.9 per cent. were removed to the Isolation Hospital.

One fatal case of Diphtheria occurred in a child visiting the City, who was taken ill some time after arrival.

No return case of this disease occurred.

Two cases of the disease occurred simultaneously in the same house in two single adults.

Table showing localities where two or more cases of Diphtheria occurred at the same house:

Address.	Date of Notification of first case.	Date of discharge of first case from Hospital.	Date of Notification of second case at the same house.	If sent to Hospital.	If treated at home.
Eldred St.	28th Sept.	...	28th Sept.	No.	Yes

## ANTITOXIN.

During 1910 three applications were made by medical men for the free supply of anti-diphtheric serum, a total of 10,000 units being distributed.



Tabular statement—total number of cases of Diphtheria during the year 1910—with action taken thereon :—

Date.	Locality.	Insanitary conditions present.	Action taken.
1910			
4th Jan.	Warwick Road	None	Isolated at home, and subsequent disinfection
21st Feb.	Raven Street	Do.	Do.
1st Mar.	Eldred Street	Do.	Removed to Isolation Hospital
10th "	Gibbons' Terrace, Newtown	Do.	Isolated at home, and subsequent disinfection
15th "	Warwick Road	Do.	Removed to Isolation Hospital
21st "	Gibbons' Court, Scotch Street	Do.	Do.
28th "	Myddleton Street	Do.	Do.
7th April	Denton Crescent	Do.	Do.
9th "	King Street	Do.	Do.
25th "	Granville Road	Do.	Do.
4th May	Delagea Street	Do.	Do.
14th "	Spencer Street	Do.	Do.
15th "	Annetwell Street	Do.	Do.
28th "	Hart Street	Do.	Do.
28th "	Northumberland Rd	Do.	Isolated at home, and subsequent disinfection
4th June	Newtown Road	Do.	Removed to Isolation Hospital
13th "	Ruth-illa Street	Do.	Do.
18th "	Warwick Road	Do.	Do.
2nd Aug.	English Street	Do.	Do.
21st "	Glaister's Court, South Street	Do.	Do.
31st "	Corporation Road	Do.	Do.
1st Sept.	Bread Street	Do.	Do.
19th "	Simpson's Lane, Caldewgate	Do.	Do.
19th "	Northumberland St.	Do.	Isolated at home, and subsequent disinfection
28th "	Eldred Street	Do.	Do.
28th "	Do. do.	Do.	Do.
1st Oct.	Goodwin Terrace	Do.	Do.
18th "	Bower Street	Do.	Removed to Isolation Hospital
28th "	Hope's Court, Port Road	Do.	Do.
31st "	Union Street	Do.	Do.
11th Nov.	Denton Street	Do.	Do.
16th "	Clift Terrace, Newtown	Do.	Do.
30th "	Graham Street	Do.	Do.
12th Dec.	Court Street	Do.	Do.
16th "	Warwick Road	Do.	Isolated at home, and subsequent disinfection
22nd "	Shaddongate	Do.	Removed to Isolation Hospital
29th "	Clift Street	Do.	Isolated at home, and subsequent disinfection

Table giving name of school and number of cases in which a school child was infected with Diphtheria during 1908, 1909, and 1910:—

			1908	1909	1910
			—	—	—
Ashley Street	...	...	4	1	2
Bishop Goodwin	...	...	3	1	1
Brook Street	...	...	1	0	1
Caldewgate	...	...	1	1	1
Christ Church	...	...	0	0	1
Denton Holme	...	...	0	0	1
Fawcett	...	...	1	0	1
Higher Grade	...	...	0	0	0
Holy Trinity	...	...	0	0	0
Lowther Street	...	...	0	0	0
Norman Street	...	...	0	0	1
Robert Ferguson	...	...	1	1	0
St. Bede's	...	...	1	3	0
St. Cuthbert's	...	...	0	1	2
St. John's	...	...	1	0	0
St. Patrick's	...	...	1	1	0
St. Stephen's	...	...	0	0	0
Botcherby	...	...	1	0	0
Stanwix	...	...	0	0	0
Upperby	...	...	0	0	0
Private Schools	...	...	0	1	2
			—	—	—
			15	10	13
			—	—	—

#### SMALLPOX.

The district was free from Smallpox during 1910.

#### PUERPERAL FEVER.

During 1910 six cases were notified and one death resulted from this disease.

In each case careful investigations were made, the necessary precautions taken, and where any Midwife was



attending she was at once suspended, and the requisite cleansing of her clothing, bag, and appliances carried out.

### MEASLES.

Three deaths were registered during 1910 as due to this disease.

Measles is a disease almost entirely confined to young life and is very infectious, therefore too much care and caution cannot be exercised in isolating the affected children from healthy members of a family at the earliest sign of illness. Yet how many otherwise good mothers treat the disease as a trifling ailment, and one which the child is bound to get; both these ideas are fallacious, for Measles is a most fatal infective disease in children, and is responsible annually for an appalling loss of life. Secondly, it is untrue to state that every child must take Measles, seeing that many children actually go through life without contracting the disease when care is observed, and it is important to keep always in mind the fact that the longer the infant or young child can be protected, the less likely he is to contract the disease.

During the year the following school departments were closed on account of the prevalence of Whooping Cough, Scarlet Fever, and Mumps:—

Ashley Street Infants'	} These departments were all closed from the 9th December, 1910, until the 9th January, 1911.
Bishop Goodwin Infants'	
Brook Street Infants'	
Caldewgate Infants'	
Christ Church Infants'	
Norman Street School	

The following figures do not take into account cases of Measles occurring in children not attending school, but only in those children actually attending, and perhaps convey very little to the mind of the casual reader as to the amount of suffering, distress, and inconvenience caused in homes in which the disease occurred:—



Figures showing actual number of sufferers among school children from several non-notifiable diseases during 1910:—

Name of School (All Departments)	Measles.	Chicken Pox.	Whooping Cough.	Mumps.	Total.
Ashley Street ...	3	69	47	14	133
Brook Street ...	33	27	80	33	173
Caldewgate ...	1	1	49	3	54
Denton Holme ...	1	...	1	1	3
Lowther Street ...	4	...	12	21	37
Norman Street ...	12	13	34	14	73
Robert Ferguson...	...	3	12	3	18
Bishop Goodwin...	17	13	79	26	135
Christ Church ...	14	10	30	35	89
Fawcett ...	...	...	4	5	9
Holy Trinity ...	...	...	27	3	30
St. Bede's ...	5	1	7	1	14
St. Cuthbert's ...	1	...	4	3	8
St. John's ...	10	9	12	18	49
St. Patrick's ...	...	...	2	...	2
St. Stephen's ...	3	...	1	5	9
Total ...	104	146	401	185	836

Figures showing number of children who were in contact with the above, and which necessitated their exclusion from school during 1910:—

	Measles.	Chicken Pox.	Whooping Cough.	Mumps.	Total.
All Departments...	53	39	82	...	174

Table showing the number of School Children who suffered from several non-notifiable diseases during 1909 and 1910:—

Year.	Measles.	Chicken Pox.	Whooping Cough	Mumps.	Total.
1909	728	171	133	112	1144
1910	104	146	401	185	836

ANNUAL MORTALITY FROM MEASLES, 1874—1910.

Year.	No. of Deaths.	Year.	No. of Deaths.
1874	... 1	1893	... 77
1875	... 56	1894	... 20
1876	... 5	1895	... 5
1877	... 12	1896	... 1
1878	... 2	1897	... 1
1879	... 22	1898	... 59
1880	... 4	1899	... 5
1881	... 0	1900	... 13
1882	... 36	1901	... 5
1883	... 11	1902	... 10
1884	... 0	1903	... 3
1885	... 22	1904	... 7
1886	... 4	1905	... 17
1887	... 16	1906	... 1
1888	... 3	1907	... 54
1889	... 44	1908	... 0
1890	... 1	1909	... 11
1891	... 22	1910	... 3
1892	... 3		

## ENTERIC FEVER.

(Syn. Typhoid Fever.)

Six cases of Enteric Fever were notified during 1910, but three only out of the six were found to be suffering from this disease, and of these three, one case only would appear to have had its origin within the City, which was that of a young woman, a factory worker, who had not lived outside the City or paid any visit outside for some considerable time. Of the two other cases one was a young male adult, who followed the occupation of a field drainer, whose work was entirely upon land in the country, and it appears that he had been in the habit of drinking from a stream of water which ran along one side or bottom of a field upon which he had been working for some time, and I suspect that this stream, receiving as it would the washings of manure, &c., was the source of his infection. The third case was that of a militiaman, who was taken ill at the Brachenber Camp the first week of July, and who was invalided to Carlisle barracks, and subsequently notified to me from this latter place.

All three cases recovered.

Of the three cases which were not Enteric Fever, one suffered from appendicitis and recovered, another died from chronic disease of the spinal cord, with diarrhœa as a prominent symptom. The third case recovered from what was thought to be the attack of Enteric Fever, but a few weeks later the patient was again taken ill, and an operation upon the abdomen was performed, when it was found that she was suffering from tuberculous peritonitis, from which she died.



Tabular statement of the cases notified as Enteric (Typhoid) Fever during the year 1910, with action taken.

Date.	Locality.	Insanitary conditions present.	Action taken.	Result.
14th Jan.	Green Row, Shaddongate	Defective drain	Removed to Isolation Hospital and house disinfected	Cured
11th Feb.	Rigg Street	None	Removed to Isolation Hospital and house disinfected	Cured
16th Mar.	Blackfriars Street	None	Isolated at home and subsequent disinfection	Died
20th Apr.	Shaddongate	None	Removed to Isolation Hospital and house disinfected	Cured
23rd Apr.	Blackhall Road*	None	Isolated at home and subsequent disinfection	Cured
8th July	The Castle	None	Removed to Isolation Hospital	Cured

\* This patient subsequently died (see previous remarks).

ENTERIC OR (TYPHOID) FEVER IN CARLISLE.

		Annual No. of Cases.					
BEFORE ADOPTION OF NOTIFICATION ACT. Typhoid Cases estimated from the deaths on the basis of the case mortality of Enteric or (Typhoid) Fever during the 21 years of compulsory notification.	{	1874	...	...	...	172	Average of 8 years 53.12
		1875	...	...	...	180	
		1876	...	...	...	75	
		1877	...	...	...	37	
		1878	...	...	...	82	
		1879	...	...	...	82	
		1880	...	...	...	112	
		1881	...	...	...	52	
		1882	...	...	...	67	
		1883	...	...	...	60	
		1884	...	...	...	52	
		1885	...	...	...	7	
		1886	...	...	...	45	
		1887	...	...	...	127	
1888	...	...	...	60			
1889	...	...	...	7			

Cases of Enteric or (Typhoid) Fever notified during 21 years of compulsory notification.	1890	...	...	...	...	21	Average of 5 years 21.2
	1891	...	...	...	...	18	
	1892	...	...	...	...	32	
	1893	...	...	...	...	20	
	1894	...	...	...	...	15	
	1895	...	...	...	...	20	Average of 5 years 18.6
	1896	...	...	...	...	13	
	1897	...	...	...	...	19	
	1898	...	...	...	...	22	
	1899	...	...	...	...	19	
	1900	...	...	...	...	7	Average of 5 years 12.6
	1901	...	...	...	...	19	
	1902	...	...	...	...	16	
	1903	...	...	...	...	6	
	1904	...	...	...	...	15	
	1905	...	...	...	...	7	Average of 5 years 3.2
	1906	...	...	...	...	5	
1907	...	...	...	...	1		
1908	...	...	...	...	2		
1909	See previous notes	...	...	...	1		
1910	„	„	...	...	6		

### TYPHUS FEVER.

The City was entirely free from Typhus Fever during 1910.

### NOTIFICATION FEES.

The total amount paid in fees for notifications during 1910 was £51 18s. 6d.

### ISOLATION HOSPITAL.

Diseases.	No. of cases admitted	No. of cases recovered.	No. of cases died.
Diphtheria ... ..	27	24	3
Scarlet Fever ... ..	171	169	2
Enteric or Typhoid Fever	4	4	...
Totals ... ..	202	197	5

MORTALITY FROM DIARRHŒA AND ENTERIC (TYPHOID) FEVER,  
1874-1910.

Year.	DEATHS FROM DIARRHŒA.														Deaths from Enteric or (Typhoid) Fever.	
	Autumn Quarter.	Rate per-1000 of population	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		Total for Year.
1874	35	1.50	2	2	..	..	1	1	6	20	9	6	..	3	50	23
1875	27	1.30	2	..	4	1	2	4	5	12	10	2	..	2	44	24
1876	12	1.10	3	1	3	3	1	..	2	5	5	1	6	7	37	10
1877	10	.84	2	1	2	1	2	2	2	6	2	1	3	4	28	5
1878	26	1.06	1	2	1	1	3	3	9	8	9	1	1	1	40	11
1879	..	.34	2	1	1	1	..	2	2	2	..	..	1	..	12	11
1880	3	1.20	..	..	5	..	..	..	3	7	21	5	1	..	42	15
1881	..	.50	..	2	..	2	..	2	2	2	3	3	..	2	18	7
1882	1	.55	..	1	..	..	..	1	5	7	5	1	..	..	26	9
1883	8	.45	..	2	..	..	..	..	3	5	6	1	..	..	17	8
1884	14	.61	2	..	..	1	1	1	7	3	4	3	1	..	23	7
1885	4	.26	1	1	1	..	..	1	2	2	..	1	1	1	10	1
1886	8	.60	1	2	..	..	..	2	1	1	6	7	1	2	23	6
1887	7	.36	1	..	1	2	..	2	..	5	2	1	..	..	14	17
1888	8	.23	1	..	1	1	..	..	3	5	1	1	..	1	13	8
1889	6	.27	2	1	..	..	..	..	5	1	1	1	..	1	11	1
1890	16	.54	..	..	2	..	1	..	1	7	8	1	1	1	22	2
1891	5	.22	1	..	..	..	..	1	1	2	2	2	..	..	9	2
1892	2	.10	1	..	..	..	..	..	..	..	2	1	..	..	4	3
1893	9	.49	..	2	2	2	..	2	..	2	3	1	2	..	20	5
1894	1	.09	..	..	..	..	..	..	..	..	1	1	2	..	4	2
1895	3	.24	2	1	..	1	..	..	1	..	2	3	..	..	10	4
1896	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
1897	4	.21	..	..	2	1	..	..	1	..	3	2	..	..	9	3
1898	16	.57	..	..	2	..	1	1	1	4	11	2	1	1	24	2
1899	10	.25	..	..	..	..	..	..	3	7	1	..	..	..	11	1
1900	7	.53	..	..	..	1	..	4	1	3	3	8	3	..	23	2
1901	11	.43	2	3	..	..	..	1	1	5	5	3	..	..	20	5
1902	1	.04	..	..	..	..	..	..	1	..	..	..	1	..	2	7
1903	1	.06	..	..	1	..	..	1	..	..	1	..	..	..	3	3
1904	7	.33	..	..	..	..	..	1	..	4	3	2	3	3	16	3
1905	10	.39	3	..	..	1	2	..	..	5	5	2	1	..	19	3
1906	7	.26	2	..	1	1	..	..	..	2	5	..	2	..	13	1
1907	..	.05	..	..	..	..	1	2	..	..	..	..	..	..	3	..
1908	12	.28	..	..	..	1	..	..	2	3	7	..	..	1	14	..
1909	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1910	2	.05	..	..	..	..	..	..	..	..	2	..	1	..	3	..



## DIARRHŒA.

Three deaths from this disease were registered during 1910, as against none in 1909 and 14 in 1908.

The intensity of epidemic diarrhœa varies very considerably year by year.

Deaths from this disease are more numerous during the hotter months of the year, viz., July, August, and September, and there is a strong relationship between the occurrence of Epidemic Diarrhœa, temperature, and other atmospheric and telluric (earth) conditions, a hot dry summer being usually associated with an increase in the number of deaths from Diarrhœa, and a cool wet summer with a decrease.

It will be observed from the foregoing remarks that the conditions which favour the occurrence of Diarrhœa are such as also favour the dissemination of dust and dirt, an increase in the number of house flies, increased susceptibility of all food stuffs to rapidly decompose, and these are the most important exciting causes of the malady.

So that with the approach of hot weather, greater precautions should be taken to prevent decomposition and contamination of food stuffs, especially by flies and fitn, *e.g.*, blown garbage, dried excreta, and like materials, readily carried about by air currents, the pernicious effects of which are fostered by the prevailing favourable atmospheric temperature. Particular care should be taken with milk and other foods which readily decompose in warm weather, and which form the principal diet of infants, amongst whom the greater number of deaths from Diarrhœa is found.

## SCHOOL CLOSURE.

The Infants' departments of six schools within the City were closed during the year (see notes under Measles).

## TUBERCULOUS DISEASES.

Under this heading are included deaths which have occurred from any of the following conditions:— Pulmonary Tuberculosis (Consumption of the Lungs), Tuberculous Meningitis (including Acute Hydrocephalus), Tuberculous Peritonitis, Tabes Mesenterica, Generalised Tuberculosis, Tuberculosis of bones, joints, and other organs, Lupus, and Scrofula.

The total number of deaths registered during 1910 from Tuberculosis of all forms was 82, equal to 1.50 per 1,000 of the estimated population. Of this number 52, or 63 per cent. of the deaths, were from Pulmonary Tuberculosis.

During 1909, 92 deaths were registered from all forms of Tuberculosis, of which 64, or 69.4 per cent., were from Pulmonary Tuberculosis.

The above figures show that during 1910 there was a decrease of 10 in the number of deaths from all forms of Tuberculosis, and a decrease of 12 in the deaths from Pulmonary Tuberculosis over 1909.

Twelve deaths from Tuberculosis of all forms occurred in Institutions within the City, and of this number 9 were due to Pulmonary Tuberculosis.

During 1910 voluntary notifications were received in three cases of Pulmonary Tuberculosis, and one case of Tabes Mesenterica. During 1909, 52 voluntary notifications were received, 37 relating to Pulmonary Tuberculosis, 14 to Tabes Mesenterica, and 1 to Tuberculous Meningitis.

14—Carlisle Medical Officer's Report.

### PULMONARY TUBERCULOSIS.

(Syn. Consumption of Lungs, Phthisis.)

This is the most frequent of Tuberculous Diseases, and the most universally prevalent of all diseases amongst



white races; it is an infectious disease, and is usually transmitted from man to man, but it is also capable of being transmitted from animals to man by means of food, of which milk is the commonest example; but by far the greater number of cases are those which are caused by infection due to the inhalation or swallowing of the tubercle bacillus contained in the sputum or spit from the lungs of human beings suffering from the disease.

Tuberculosis is most common amongst the poor, in fact it may be said to be a disease especially of the lower classes, and by whom it is usually disseminated, greatly as a result of their ignorance, dirty habits, and other characteristic modes of living.

The town dweller more easily falls a victim to the disease than one who lives in the country, and there is a close relationship between the overcrowding of rooms, houses, and workplaces, and this disease; the overcrowding of houses very often indicating poverty, and almost invariably associated with an impure atmosphere.

Many trades predispose the worker to this disease, especially those occupations accompanied by the formation of dust, or where work is carried out in overcrowded, hot, and moist workrooms. Intemperance and other debilitating conditions are also important factors in the predisposition to this disease.

Phthisis depends largely upon known and remediable conditions, and improvement in hygiene and other matters has no doubt led to a decline in the death-rate from this disease, but the great difficulty experienced is to get the Consumptives of the labouring classes to carry out or make any attempt to observe the simplest hygienic rules or methods of precaution, the result being that one finds such persons in dangerous stages of the disease occupying the same bed as another or several other members of the



same household. The disease thus securing victim after victim, and finally in many instances resulting in the infection of a whole household. Whereas, the precaution in every instance where possible of a separate bedroom, or, in the absence of this, a separate bed for the Consumptive, and the carrying out of certain simple rules would prevent him being a source of public danger, and minimise the chances of infection of those living under the same roof.

### PHTHISIS.

Ages at death of the 52 cases in Carlisle during 1910:—

Under 1 Year.	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	All Ages.
0	1	3	11	12	14	5	6	0	52

The distribution of the deaths were as follows:—

St. Mary's Sub-Registration District	...	28
St. Cuthbert's Sub-Registration District	...	24
		—
		52
		—

Two of the chief diseases of the chest, viz., Pneumonia and Bronchitis, were responsible for 91 deaths during 1910.

Disease.	St. Mary's	St. Cuthbert's
Pneumonia ... ..	33	23
Bronchitis ... ..	19	16
Totals ... ..	52	39

PULMONARY TUBERCULOSIS (PHTHISIS), TABES  
MESENTERICA, AND TUBERCULOUS  
MENINGITIS.

The following table gives the number and nature of voluntary notifications during 1910:—

Date.	Sex.	Age.	Address.	Nature of Disease Notified.
25th Jan.	Male	40	Wood Court, Wood Street	Phthisis
Do.	Male	50	Brook Street ... ..	Do.
Do.	Female	52	Walsh's Court, Lord Street	Do.
13th Feb.	Female	10 months	Halfway Houses, London Road	Tabes Mesenterica

Under the provisions of the Public Health (Tuberculosis) 1908 Regulations, 33 notifications of Pulmonary Tuberculosis were received, of which number 22 were from the Medical Officer of the Poor Law Infirmary and 11 from the Poor Law District Medical Officers.

In one instance the same patient was notified on three separate occasions, and in three other instances the same patient was notified on two occasions during the year.

This multiplicity of notifications is difficult to avoid, partly owing to the unsatisfactory and easy method by which a patient may take his discharge from a Poor Law Institution after a few hours' residence, and the facility with which re-admission may be gained so shortly after discharge.

In some of the cases death had taken place in the interval between the receipt of the notification and the visit to the house, and it is to be regretted that many

of the class of people affected by the notification do not obtain medical advice until the disease is in an advanced stage, even when the advice and medicine can be obtained free; others would appear to obtain advice at an earlier period, but are either unwilling or unable to carry out the treatment, and are not again heard of until just before death, when the disquieting reflection of a possible Coroner's inquiry causes the friends to seek advice in order to secure a medical certificate.

FORM A.

Notifications from Medical Officers of Poor Law Institutions of persons in their Institutions suffering from Phthisis ... ..	22
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FORM B.

Notifications from District Medical Officers of the Carlisle Union of persons suffering from Phthisis in their Districts ... ..	11
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FORM C.

Notifications from Superintendent Officers of Poor Law Institutions of the death in, or the removal of a Phthisis patient from the Institution to another address ... ..	17
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FORM D.

Notifications from Relieving Officers of change of address of Phthisis patients in their Districts	1
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## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

Tabulated Statement showing particulars of cases notified to Medical Officer of Health during 1910, and action taken.

Consecutive No.	Sex.	Age.	Went to Poor Law Institution.	Name of Poor Law Union.	Did the Patient leave Poor Law Institution before death.	Did the Patient go to his own residence or another Institution.	Visited Residence of Patient who had Tuberculosis.	Visits undertaken by Staff of Health Department.	Other actions taken by Health Department.	Result at the end of 1910.
1	Male	33 years	Yes	Carlisle	No	...	...	Not visited	...	Living
2	Male	42 years	No	Carlisle	...	...	...	Visited	Advice given Instruction paper left	Living
3	Female	48 years	Yes	Carlisle	Yes	Went to own residence	...	Visited	Advice given Instruction paper left	Living
4	Female	39 years	No	Carlisle	...	...	...	Visited	Advice given Instruction paper left	Living
5	Male	30 years	Yes	Carlisle	No	...	...	Not visited	...	Living
6*	Male	20 years	No	Carlisle	...	...	Yes	Visited	Advice given Instruction paper left	Living
7	Male	29 years	No	Carlisle	...	...	...	Visited	Advice given Instruction paper left	Living
8	Male	45 years	Yes	Carlisle	No	...	...	Not visited	...	Dead
9	Female	21 years	Yes	Carlisle	No	...	...	Not visited	...	Dead
10*	Male	22 years	Yes	Carlisle	Yes	Went to own residence	...	Visited	Advice given Instruction paper left	Living

11	Male	49 years	Yes	Carlisle	No	...	Not visited	...	Living
12	Male	21 years	No	Carlisle	No	...	Visited	Advice given Instruction paper left	Living
13	Male	38 years	No	Carlisle	No	...	Visited	Advice given Instruction paper left	Living
14	Female	18 years	Yes	Carlisle	Yes	Went to own residence	Visited	Advice given Instruction paper left	Living
15	Male	32 years	Yes	Carlisle	Yes	Went to own residence	Not visited	...	...
16*	Male	22 years	Yes	Carlisle	Yes	Went to own residence	Visited	Advice given Instruction paper left	Living
17	Male	11 years	Yes	Carlisle	Yes	Went to own residence	Not visited, lived outside the City boundary	...	...
18	Male	38 years	Yes	Carlisle	No	...	Not visited	...	Dead
19*	Male	21 years	Yes	Carlisle	Yes	Went to own residence	Visited	See case No. 6. Re- turned to Workhouse 3 days later	Living
20	Male	33 years	No	Carlisle	...	...	Not visited	...	...
21*	Male	21 years	Yes	Carlisle	No	...	Visited	See cases Nos. 6 & 19	Living
22*	Male	22 years	No	Carlisle	...	...	...	See case No. 16. House disinfected after death	Dead
23	Male	33 years	Yes	Carlisle	No	...	Not visited	...	Living
24	Female	16 years	No	Carlisle	...	...	Not visited	...	Dead
25*	Male	22 years	Yes	Carlisle	No	...	Not visited	See case No 10	Living

## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908—continued.

Consecutive No.	Sex.	Age.	Notified from Poor Law Institution.	Name of Poor Law Union.	Did the Patient leave Poor Law Institution before death.	Did the Patient go to his own residence or another Institution.	Changed Residence, i.e., Persons who did not enter Poor Law Institution.	Visits undertaken by Staff of Health Department.	Other actions taken by Health Department.	Result at the end of 1910.
26	Male	62 years	No	Carlisle	..	...	...	Not visited	Patient dead on visit	Dead
27	Male	35 years	Yes	Carlisle	No	...	...	Not visited	...	Dead
28	Male	49 years	Yes	Carlisle	No	...	...	Not visited	...	Living
29	Male	58 years	Yes	Carlisle	No	...	...	Not visited	...	Living
30	Male	56 years	Yes	Carlisle	Yes	Not known	...	Not visited	...	Not known, left district
31*	Male	26 years	No	Carlisle	...	...	...	Visited	Advice given Instruction paper left	Living
32	Male	42 years	Yes	Carlisle	No	...	...	Not visited	...	Living
33*	Male	26 years	Yes	Carlisle	No	...	...	Visited	See case No. 31	Living



## CANCER.

This term includes all registered deaths from causes comprised within the general term, and the number of deaths thus registered during 1910 was 47, as against 58 in the year 1909.

The age distribution was as follows:—

Age.	1910
15—25 years ... ..	1
25—35 „ ... ..	0
35—45 „ ... ..	7
45—55 „ ... ..	11
55—65 „ ... ..	11
65—75 „ ... ..	11
75 and upwards ... ..	6
Total ... ..	47

## POLIOMYELITIS.

(Syn. Infantile Paralysis.)

During the autumn of 1910 I saw two cases of Infantile Paralysis, and heard of several others occurring in the City about the same period; at my request the Committee sanctioned the payment of a fee of 2s. 6d. for the notification of each case of the disease. After communicating with all the medical men practising within the City, I received a number of notifications of the disease.

In all 34 cases were investigated, 27 cases were notified by Medical Practitioners, the remaining 7 coming

under my notice as a result of my own inquiries or those of the staff of the Health Department and the School Health Visitor

Out of the 34 cases 7 died, either as a result of the disease or some complication, and one of the notified cases was found not to be suffering from the disease.

The City appears to have been visited by an epidemic of the disease, upon which I hope later to present a detailed report.

#### INQUESTS.

The City Coroner held 39 inquests during the past year.

Of this number 31 were held upon the bodies of those who had been resident in the City, and 8 upon the bodies of persons who had resided in other districts of the County, but who had died within the City.

Eight of the inquests were held upon the bodies of children under 5 years, 4 of these being children under one year

The finding of the Jury in these 8 cases respectively was:—

Cause.		Age.
1*	Accidentally scalded ... ..	3 years
2*	Meningitis, caused by knitting needle ...	4 years
3	Congestion of Lungs ... ..	1 month
4	Natural Causes, Convulsions ... ..	4 days
5	Accidentally run over by a lorry ... ..	1 year
6	Injuries accidentally received through being knocked down by a tram car ...	2 yr. 9 m.
7	Suffocated, accidentally overlaid .	4 months
8	Asphyxiation, result of fit of coughing ...	3 months

1\* Resided at Belle Vue.

2\* Resided at Blennerhasset,

## MORTUARY.

During 1910, 8 bodies were removed to the Public Mortuary, West Walls, and post-mortem examinations were performed upon 6 of the bodies at the Mortuary.

## UNCERTIFIED DEATHS.

During the past year 12 deaths were registered in which no certificate was given by a medical man, and in which no Coroner's Inquest was held.

During 1909 19 such deaths were registered.

The 12 deaths in question were registered as follows:—

No.	Sex.	Age.	Cause of Death as Registered.
1	Male	*5 months	Consumption of the bowel
2	Male	*5 months	Convulsions
3	Female	75 years	Old Age
4	Male	*2 days	Prematurity
5	Female	80 years	Fracture of left thigh. Shock
6	Female	*9 months	Convulsions
7	Male	*1 day	Convulsions
8	Male	*1 day	Prematurity
9	Female	2 years	Convulsions
10	Male	61 years	Cardiac Failure
11	Female	66 years	Heart Failure
12	Male	*5 months	Convulsions

\* It will be observed that seven out of the twelve deaths were under 1 year of age.



## MIDWIVES ACT, 1902.

## SUPERVISION OF MIDWIVES.

During 1910, 15 Midwives were on the register within the City. At the end of each quarter of the year (and at all other times when necessary) I visited all the Midwives in the City who were registered with the Supervising Authority, making the necessary inspections of their books, bags, and appliances, and during the year I have had no cause for complaint against any of them.

A prosecution was undertaken during the year by the County Council against a woman who was practising midwifery contrary to the provisions of the above Act. A conviction was obtained, and the fine of 10s. 6d. imposed.

## FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

## 1.—INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES . . . . . (Including Factory Laundries)	35	4	..
WORKSHOPS ... .. (Including Workshop Laundries)	426	47	..
WORKPLACES ... .. (Other than Outworkers' premises included in Part 3 of this Report)	1	..	..
<b>TOTAL</b> ... ..	<b>462</b>	<b>51</b>	<b>..</b>

## 2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H. M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness .. ..	16	16	...	...
Want of ventilation ... ..	1	1	...	...
Overcrowding... ..	...	..	...	...
Want of drainage of floors ...	...	...	...	...
Other nuisances .. ..	9	9	...	...
<i>Sanitary accommodation :—</i>				
{ 1. Insufficient ... ..	3	3	...	...
{ 2. Unsuitable or defective	20	18	...	...
{ 3. Not separate for sexes	1	1	...	...
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (s. 101) ...	...	...	...	..
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ... ..	22	22	...	...
Other offences ... .. (Excluding offences relating to outwork which are included in Part 3 of this report)	..	...	...	...
Total .. ..	72	70	...	...

## 3.—HOME WORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107,				
	Lists received from Emp'oyers.				
	Twice in the year.			Addresses of Outworkers.	Inspection of Outworkers' Premises.
	Lists.	Outworkers.		Received from other Councils.	
Con-tractors.		Work-men.			
Wearing apparel— (1) Making, &c....	4	...	9	2	7
(2) Cleaning and Washing ...	...	...	...	...	...
Total ...	4	...	9	2	7

## 4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year	Number.
Important classes of work-shops, such as workshop bakehouses, may be enumerated here.	Workshops ... .. 209
	Domestic Workshops ... 23
	Bakehouses ... .. 67
Total number of workshops on Register ...	299



## 5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ... ..	5
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) :—	
Notified by H.M. Inspector ... ..	32
Reports (of action taken) sent to H.M. Inspector ... ..	35
Other ... ..	...
Underground Bakehouses (s. 101) :—	
Certificates granted during the year ... ..	...
In use at the end of the year ... ..	3

## PUBLIC SLAUGHTER-HOUSES.

## MEAT INSPECTION, &amp;c.

During the year special examinations were made upon 102 diseased carcasses of meat as compared with 87 during 1909.

The following table gives particulars of the carcasses examined :—

Animal	Total number of animals slaughtered	Number of carcasses examined	Number of cases in which the whole carcass was pronounced unfit for food	Number of cases in which portions of a carcass were pronounced unfit for food	Number of condemned carcasses affected with Tuberculosis
Oxen ...	3562	75	59	16	63
Sheep ...	16491	18	15	3	...
Calves ...	716	3	3	...	...
Pigs ...	3444	6	6	...	4
Totals ...	24213	102	83	19	67

## HOUSING OF THE WORKING CLASSES.

HOUSING OF THE WORKING CLASSES ACT, 1890.

HOUSING, TOWN PLANNING, &amp;C., ACT, 1909.

During the year 1910 the whole of the block of property consisting of six two-roomed tenements situated at the corner of Jane Street and Willow Holme, which were reported upon to the Health Committee as being insanitary dwellings, has been put into a habitable condition by being repaired and converted into three self-contained houses consisting of four rooms each, at a cost of upwards of £100.

The owner of the premises known as 3, 4, and 8 Rayson's Court, Drovers Lane, in which a closing order was made, decided not to carry out any work in connection with these three tenements any further than taking out the floors and ceilings to prevent their being used as dwelling houses. The question of the demolition of these buildings, which was postponed for a period of 6 months after the expiration of the Closing Order, has not yet been considered.

With respect to the houses known as 2, 3, and 5 Bird-in-Hand Lane, in which a closing order was made, the owners decided not to undertake any work in connection with the premises further than having the tenements cleaned out, the doors closed and locked, and the windows boarded up.

As in the case of the Rayson's Court property the Health Committee postponed the consideration of the demolition for 6 months, which period has not yet expired.

Under the Housing, Town Planning, &c., Act, 1909, a Closing Order which was made on 13th September, 1910, with regard to houses known as 13 to 47 and 42 to 52 Duke Street, and 1 to 41 Back Duke Street, is still operative.

The whole of this property, which is of the single and two-roomed tenement class, situated in the Caldewgate district of the City, some years ago became extremely dilapidated and ceased to be inhabited.

There is still a considerable amount of the same type of property as the foregoing, not only in the Caldewgate district, but in several other parts of the City, which can only be accurately described as being "worn out," and which will require serious consideration by the Health Committee in the near future. Some of this property is situated in narrow streets, and its demolition would make for the welfare of the inhabitants of the surrounding district; but in many instances it has a fair amount of open space about it, and would, failing its demolition, be greatly improved by a judicious scheme of remodelling.

#### PAVING OF STREETS, LANES, &c.

In the Annual Report for 1909 I called attention to the existence within the City of a number of streets, or parts of streets, lanes, and other places where either an unsatisfactory class of paving existed, or where the surface of the ground had not been treated with any kind of covering.

I further remarked upon the close relationship which exists between the prevalence of certain diseased conditions, particularly of the zymotic class, and the contamination of the superficial layers of soil in the neighbourhood of dwelling houses through the absence of an impervious covering.

During the past year the City Engineer has marked out a large number of the most important of those unpaved parts, and the work of paving has been commenced.



### SEWAGE WORKS.

During the past year I have paid several visits—all of them surprise visits—to the new Sewage Works of the City, and am satisfied that the work is carried out by those employed there in a careful manner.

The several stages through which the sewage passes during the various processes of treatment are closely supervised, and the resulting effluent is satisfactory. The lagooned material does not appear to cause any discomfort to those working upon it, and whatever effluvium arises during carting is only appreciable at a slight distance; it is, however, essential that great care should be exercised by those removing this material so as to avoid possible complaints due to leakage from the carts when passing through the streets of the City.

### AMBULANCE.

The Horse Ambulance provided by the Corporation is under the superintendence of the Head Constable, and is housed at the Chief Fire Station, Spring Gardens Lane. It is in keeping with modern requirements and is available for use by the general public in case of accident and injury by fire, &c., or its use may be obtained for the removal of any sick or convalescent person other than in infectious diseases (for which a special ambulance is provided).

During 1910 the Ambulance was engaged on 76 occasions privately, and fees amounting to £33 17s. 9d. were received through this source.

### DAIRIES, COWSHEDS, AND MILKSHOPS.

I have visited all the cow byres within the City during the past year, and certain alterations have been carried out in one or two instances; on the whole the byres are in a more satisfactory condition than at the end of 1909.

Unfortunately some of them structurally are of a flimsy and temporary character, consisting of rough scantling and old corrugated iron, but there was less overcrowding during the year than formerly.

In one or two cases conditions adjacent to the byres are unsatisfactory, where the ground being unpaved is constantly wet and easily polluted, and owing to the absence of proper drainage the polluted surface water is unable to get away, making the condition very unpleasant, and calculated to have an injurious effect upon the cattle and increases the chances of milk contamination.

The milk supply of the City consists partly of that from the byres within the City and partly from the surrounding rural districts of the County.

The dairy cattle stalled in the byres within the City are under the constant supervision of the City Veterinary Surgeon, and the dairy buildings and other places from which milk is sold are regularly inspected by the staff of the Health Department, and over which I have always exercised an active supervision.

#### SCAVENGING OF LANES AND COURTS.

In the Report for 1909 I remarked that certain of the narrower lanes and some of the common courts within the City were constantly in such a dirty condition from the neglect of sweeping and the deposit of rubbish and filth by the tenants as to constitute a danger to the Public Health.

An extra workman was put on to devote his time to the sweeping of the dirtier and more neglected of these lanes and courts, with the result that considerable improvement in their appearance has taken place.



## DISINFECTION.

In my report upon the sanitary condition of the City in 1908, and again in 1909, I pointed out the necessity for the provision of a steam disinfecter. The matter was discussed by the Health Committee, but was postponed to a future but somewhat uncertain date, the reason of this postponement being largely due to the Health Committee having knowledge that the Committee of Management of the Crozier Lodge Isolation Hospital were considering the question of the erection of a steam disinfecter, it being thought by some of the members of the Health Committee that arrangements might be made with the Crozier Lodge Hospital Committee whereby their disinfecter might be utilised for the work of the Health Department of the City, and thus obviate the necessity of the erection of a disinfecter by the City Council.

## COMMON LODGING HOUSES.

I visited the common lodging houses within the City during the past year, one or two of them on more than one occasion; on each visit they were in a fairly satisfactory condition, any slight irregularity which was observed being remedied.

There were no prosecutions during the year either of registered lodging house keepers or of any person keeping a common lodging house contrary to the provisions of the statute

## COVERED MARKETS.

In my Annual Report for 1908 and also for 1909 I reported upon the presence of dogs in the Covered Markets, and pointed out the danger to the health of the public from the excreta of such animals infecting the food products exposed for sale.



At the instance of the Markets Committee notices were posted up at several points inside the Market, warning the public against bringing dogs into the building; some beneficial effect followed this procedure, but there are still to be seen, every day upon which the market is opened, innumerable filthy looking dogs running about and voiding their excreta upon the pavement and fixtures of the market.

The exclusion of these animals should not be a difficult matter if those responsible for the supervision of the Market are zealous in carrying out what is evidently the intention of the Committee, and would put a stop to a disgusting nuisance, a great part of which is caused by animals belonging to a few of the regular stall holders.

#### FRIED FISH AND POTATO SHOPS.

At the end of 1910 there was an increase of 3 of these shops over the number existing in the City at the end of 1909. During the past year all have been carefully inspected from time to time, some of which I have personally visited.

I have no evidence of illness in the City due to the class of food sold at these shops (which generally speaking may be said to be good), although cases of illness similar in character to Enteric Fever have been observed from time to time in other towns, and said to be due to contaminated fish, or improperly cleaned fish being insufficiently cooked.

#### ICE CREAM SHOPS.

This commodity is prepared upon and sold from a number of premises within the City. It is a luxury which should have the most scrupulous attention and care during its manufacture and subsequent manipulation, but unfortunately this article, which during recent years has

become very popular with the working classes, is produced oftentimes by dirty people, some of an itinerant class, and mostly foreigners, whose disregard for cleanliness during its preparation is a marked characteristic, the consequences of which may prove very disastrous, as exemplified by an outbreak of Enteric Fever which took place in the Borough of Eccles during November and December, 1910, which is of such public importance that I feel justified in giving here the principal features connected with the outbreak.

Between November 14th and December 31st, 166 cases of Enteric Fever occurred, 124 being removed to Ladywell Sanatorium and the Salford Isolation Hospital. The outbreak was sudden, 99 cases were in children under 15 years of age, and 17 of these under 5 years. All the usual sanitary conveniences came under suspicion and were eliminated, as also were the water and milk supplies.

The houses where the cases occurred were situated in a certain district in which ice cream was sold by one particular man, an Italian, who made his ice cream in the same house as four other makers in a house in Manchester.

The occupants comprised two Italian families, consisting of 14 persons, and of these a woman and 5 children returned from Italy about the middle of September. A week later one child became ill with diarrhœa, and later other members of the household became ill, and when Dr. Hamilton, the Medical Officer of Health of Eccles, was conducting his enquiries in November, he found that out of these 14 people the blood of 6 gave a typhoid reaction.

The father of each of the two families prepared ice cream in a lower room of the house, and it is therefore probable that the ice cream became infected by one or other of the sick children.



This outbreak emphasises the dangers which may be associated with the consumption of this product, and the need for stricter control over the production.

#### BAKEHOUSES.

There are 70 known bakehouses within the City, 3 of which are underground and certified by the City Council. These three, as in the case of all the bakehouses, are very regularly inspected.

Speaking in general terms the bakehouses in the City are of an average class, but certain conditions with respect to the management of a number of them have to be closely watched, viz., the tendency to overcrowding in the smaller ones, and with the exception of perhaps three or four, an all pervading air of carelessness on the part of both women and men bakers with regard to the cleanliness of their immediate surroundings, and care during the making, storage, handling, and cooling of the food stuffs.

#### WATER SUPPLY.

During 1910 a number of samples of water were taken from a domestic tap and subjected to chemical and bacteriological examination, the quality of the water during the year being uniformly good. The slight tinted condition of the water, which was to be observed on several days during the year, and which may occur again from time to time, need not give rise to the slightest uneasiness or suspicion of contamination.

The chemical and bacteriological results of three samples of water are given in the following pages, together with the results of a special examination as to the plumbosolvency of the water.



Total output of water from Cumwhinton covered reservoir during the years 1908, 1909, 1910:—

Year.	Number of Gallons.	No. of Gallons per head, per day.
1908	618,106,000	30·29
1909	629,455,000	30·77
1910	631,453,000	30·87

Total monthly distribution of water from Cumwhinton covered reservoir during 1910:—

Month.	Number of Gallons.	No. of Gallons per head, per day.
January ...	52,653,000	30·33
February ...	47,635,000	30·37
March ...	50,185,000	28·90
April ...	50,630,000	30·13
May ...	54,125,000	31·17
June ...	54,035,000	32·16
July ...	55,635,000	32·04
August ...	54,750,000	31·53
September	52,190,000	31·06
October ...	54,035,000	31·12
November...	52,345,000	31·15
December...	53,235,000	30·66
	631,453,000	

REPORT ON WATER, CHEMICAL AND  
BACTERIOLOGICAL.

CHEMICAL ANALYSIS BY DR. HELLON.

REPORTS ON SAMPLES OF WATER FROM DOMESTIC TAP.

Results shown in grains per gallon.

1910.

CHEMICAL.	APRIL.	JUNE.	DEC.
Total Solid Matter in solution dried at 212° F ... ..	9·250	6·720	7·000
Chlorine existing as Chlorides	·560	·560	·490
Free Ammonia ... ..	traces	traces	traces
Albuminoid Ammonia ... ..	·010	·004	·004
Nitrogen existing as Nitrates...	traces	traces	traces
Oxygen absorbed in 15 minutes at 80° F ... ..	·054	·040	·058
Oxygen absorbed in 4 hours at 80° F ... ..	·103	·073	·109
Lead and other Poisonous Metals	None	None	None
Hardness before boiling ...	degrees 6 $\frac{3}{4}$	degrees 5 $\frac{1}{2}$	degrees 6 $\frac{1}{4}$
Hardness after boiling ...	do. 1	do. $\frac{1}{4}$	do. 1 $\frac{1}{4}$
Appearance in two-foot tube ...	Clear yellowish- green	Clear green	Yellowish green
Smell when heated to 100° F...	None	None	None
Microscopical Examination ...	Slight deposit of vegetable debris	Vegetable debris	Vegetable debris

A determination of the plumbo-solvent action of the water was made according to the method of the Local Government Board in the April and June samples with the following results:—

Lead dissolved at 10° C—

	1st	2nd	3rd	4th	5th	Average.
APRIL	50 c.c.	50 c.c.	50 c.c.	50 c.c.	50 c.c.	
	None.	None.	None.	None.	None.	None.

Lead dissolved at 18° C—

	1st	2nd	3rd	4th	5th	Average.
JUNE	50 c.c.	50 c.c.	50 c.c.	50 c.c.	50 c.c.	
	None.	None.	None.	None.	None.	None.

The above figures shew that the samples of water were incapable of taking up lead even under the most stringent experimental conditions.

#### BACTERIOLOGICAL EXAMINATION BY PROF. DELÉPINE.

QUANTITATIVE ANALYSIS.	AVERAGE RESULTS OF THREE EXAMINATIONS.					
	Number of colonies in one gramme of water.			No. of kinds clearly recognisable.		
A Aerobic micro-organisms growing for 3 days in nutrient gelatine at 20° C to 21° C.	APRIL.	JUNE.	DEC.	APRIL.	JUNE.	DEC.
Non-Liquefying Bacteria ...	39	20,600	4	1	2	2
Liquefying Bacteria ...	22	1,500	1	3	2	1
Other Micro-Organisms ...	...	...	...	...	...	...
B Anærobic Micro-Organisms ...	...	...	...	...	...	...
	61	22,100	5	4	4	3
QUALITATIVE ANALYSIS.	APRIL.	JUNE.	DECEMBER.			
A Bacteria associated with sewage or faecal pollution ...	B. Coli communis not found in 10 C. C.	B. Coli communis not found in 10 C. C.	Bacillus Coli not found in 10 C. C.			
B Bacteria associated with disease	Not found	Not found	Not found			



## PUBLIC BATHS.

The figures below show to what extent the Baths were used during the past year.

The total number of bathers was 57,689, as compared with 47,043 last year.

SWIMMING BATHS.				1st Class.	2nd Class.	Total.
Adults (both sexes)	...	...	...	2,757	14,568	17,325
Grammar School	...	...	...	543	...	543
Elementary School Children (Free)	...	...	...	...	12,592	12,592
Boys' Brigade, &c. (swimmers charged 1d. each)	...	...	...	...	8,295	8,295
Club and Contract Bathers	...	...	...	5,165	...	5,165
PRIVATE BATHS.						
Adults (Both sexes)	...	...	...	3,704	7,708	11,412
Vapour	...	...	...	140	...	140
Salt	...	...	...	3	...	3
TURKISH BATHS.						
Males	...	...	...	661	1,212	1,873
Females	...	...	...	69	272	341
Totals				...	...	...
				13,042	44,647	57,689

## METEOROLOGICAL STATISTICS, 1910.

OBSERVATIONS TAKEN AT THE CEMETERY BY  
J. T. CHARLTON, ESQ.

The barometrical readings indicate that the mean pressure of the atmosphere during the year was 29.58 inches. The most remarkable features were the high readings throughout September, the average being above 30.046, and the rainfall that month was the lowest in the year; rain fell on 197 days, or 15 days more than half of the whole year. On most days, however, the rainfall was not continuous, and the total for the year 29.64 inches is about an inch below the average. The barometric readings for the year show that March and October come next to September in regard to the bouyancy of the atmosphere. The recording instrument is 114' above sea level. The highest reading was 30.514 inches on October 14th, and the lowest 28.356 on November 7th, giving an extreme range during the year of 2.158 inches.

## BAROMETER.

	Highest reading.	Lowest reading.	Monthly Mean.	Monthly range.
January ...	30.272 on 4th ...	28.612 on 24th ...	29.240 ...	1.660
February ...	30.142 on 9th ...	28.396 on 20th ...	29.316 ...	1.746
March ...	30.454 on 31st ...	29.396 on 10th ...	29.975 ...	1.058
April ...	30.454 on 1st ...	28.730 on 13th ...	29.633 ...	1.723
May ...	30.280 on 25th ...	29.142 on 31st ...	29.768 ...	1.138
June ...	30.246 on 16th ...	29.216 on 29th ...	29.780 ...	1.030
July ...	30.092 on 14th ...	29.196 on 25th ...	29.736 ...	0.896
August ...	30.018 on 10th ...	29.202 on 26th ...	29.665 ...	0.816
September ...	30.352 on 17th ...	29.668 on 29th ...	30.046 ...	0.684
October ...	30.514 on 14th ...	29.314 on 3rd ...	29.908 ...	1.200
November ...	30.000 on 19th ...	28.356 on 7th ...	29.442 ...	1.644
December ...	30.212 on 31st ...	28.714 on 10th ...	29.462 ...	1.493

Fluctuations of temperature have been exceptional, the readings by the exposed instrument varying from 8 degrees above zero on January 26th to 132 degrees on August 16th, a range during the year of 124 degrees. June holds the record as the warmest month with a mean temperature of 60 degrees in the shade, and February and November rather curiously have a lower average than either January or December. The highest reading in the shade was 80 degrees on June 20th and July 12th, and the lowest 10 degrees on January 26th. The average monthly readings were as follows:—

## EXPOSED THERMOMETERS.

		Highest.		Lowest.		Mean.
January	...	81° on 25th	...	8° on 26th	...	47°
February	...	92° on 14th	...	21° on 9th	...	51°
March	...	106° on 28th	...	24° on 13th	...	59°
April	...	113° on 25th	...	23° on 2nd	...	61°
May	...	126° on 23rd	...	26° on 9th	...	73°
June	...	131° on 20th	...	36° on 17th	...	79°
July	...	130° on 4th	...	35° on 19th	...	78°
August	...	132° on 16th	...	35° on 10th	...	78°
September	...	118° on 1st	...	29° on 16th	...	69°
October	...	110° on 6th	...	24° on 20th	...	59°
November	...	96° on 4th	...	11° on 22nd	...	46°
December	...	75° on 11th	...	17° on 28th	...	49°

## SHADE THERMOMETERS.

		Maximum.		Minimum.		Mean.
January	...	57° on 9th	...	10° on 26th	...	37°
February	...	52° on 13th	...	24° on 9th	...	36°
March	...	59° on 28th	...	26° on 13th	...	43°
April	...	62° on 13th	...	25° on 2nd	...	44°
May	...	76° on 22nd	...	27° on 9th	...	51°
June	...	83° on 20th	...	41° on 26th	...	60°
July	...	83° on 12th	...	37° on 19th	...	59°
August	...	81° on 14th	...	39° on 10th	...	61°
September	...	74° on 14th	...	32° on 16th	...	54°
October	...	74° on 1st	...	31° on 20th	...	50°
November	...	52° on 10th	...	11° on 22nd	...	36°
December	...	54° on 23rd	...	22° on 1st	...	43°

		Monthly range		Diurnal range.		Mean at dew point
January	...	47°	...	25° on 26th	...	35.3°
February	...	28°	...	21° on 10th	...	36.4°
March	...	33°	...	32° on 28th	...	36.9°
April	...	37°	...	20° on 22nd	...	37.7°
May	...	49°	...	35° on 23rd	...	47.8°
June	...	42°	...	31° on 16th	...	51.5°
July	...	46°	...	33° on 12th	...	51.6°
August	...	42°	...	39° on 10th	...	54.2°
September	...	42°	...	33° on 16th	...	47.2°
October	...	43°	...	34° on 1st	...	46.3°
November	...	41°	...	32° on 10th	...	34.4°
December	...	32°	...	24° on 5th	...	40.4°



Particulars as to wind, cloud, and ozone are given in the following tables. Days of calm have prevailed during one-fourth of the year, and the prevailing winds have been south-west and west. January, February, April, and December were the months of most wind, and April, rather curiously, gave a good deal more cloud than sunshine. May and June were the brightest months of the year. Details:—

## WIND.

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Dys.
January ...	1	1	—	4	7	12	3	3	—	31
February ...	—	1	—	7	7	9	3	1	—	28
March ...	—	2	1	4	3	10	7	2	2	31
April ...	3	4	—	4	4	6	7	—	2	30
May ...	—	5	4	—	—	3	8	1	10	31
June ...	1	5	1	1	1	1	6	1	13	30
July ...	—	3	5	2	—	5	4	3	9	31
August ...	—	1	2	7	2	4	5	—	10	31
September ...	—	—	1	1	—	5	6	—	17	30
October ...	1	2	10	1	1	3	5	1	7	31
November ...	—	—	—	3	3	4	4	2	14	30
December ...	—	1	4	9	—	11	3	1	2	31
	6	25	28	43	28	73	61	15	86	365

	Wind. Mean force. Maximum 12.	Ozone. Mean amount. Dr. Schöubein's scale.	Cloud. Mean amount. Maximum 10.
January .....	3.3°	4.1°	5.9°
February .....	3.1°	4.4°	6.4°
March .....	1.8°	4.8°	5.6°
April .....	2.0°	4.8°	7.5°
May .....	1.3°	3.1°	4.6°
June .....	1.0°	3.1°	4.9°
July .....	1.0°	3.9°	5.9°
August .....	1.1°	4.5°	5.5°
September .....	1.0°	3.0°	5.1°
October .....	1.4°	2.2°	6.6°
November .....	1.4°	3.3°	5.1°
December .....	2.2°	4.3°	6.6°

## RAINFALL.

The observations were taken during 1910 at the Cemetery.

MONTHS.	1910.										Average for 10 years 1900-1909.		1910.	
	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	in.	in.	Rainfall, days on which Rain fell.	Number of days on which Rain fell.
January	2.58	2.02	2.40	4.34	2.18	1.42	4.02	1.16	2.92	1.69	2.47	2.73	19	
February	3.82	1.08	1.04	5.00	2.24	1.38	1.70	1.74	2.68	1.50	2.21	4.04	24	
March	.54	1.84	2.36	3.76	2.54	2.56	2.00	2.65	3.68	3.14	2.49	1.25	15	
April	2.44	2.28	1.58	2.06	2.36	2.90	.94	2.06	2.08	2.52	2.12	1.69	20	
May	1.94	2.02	2.48	2.76	2.62	1.56	3.80	3.30	3.28	.81	2.45	2.07	17	
June	6.58	1.76	1.66	1.60	1.86	1.26	1.46	4.64	1.70	2.95	2.54	1.53	14	
July	1.60	1.26	2.46	4.80	1.84	2.54	2.04	2.38	3.50	4.44	2.68	3.76	16	
August	5.60	4.40	2.50	4.90	3.54	3.06	4.72	3.32	3.18	3.68	3.89	4.28	18	
September	1.98	.98	1.62	3.76	1.14	2.20	1.30	6.70	3.88	2.50	2.60	0.38	6	
October	4.74	4.18	2.94	9.54	1.54	2.22	4.40	6.22	1.98	5.22	4.29	1.68	11	
November	3.70	3.64	1.28	2.58	2.60	2.54	3.02	2.68	2.56	.86	2.54	3.61	16	
December	4.14	3.74	3.20	2.14	2.26	1.34	2.48	5.64	1.86	3.82	3.06	2.62	21	
Totals ...	39.56	29.20	25.52	47.24	26.72	24.98	31.88	36.49	33.30	33.13	33.34	29.64	197	
Total number of days on which Rain fell {	218	187	216	236	198	182	194	211	201	162	200	29.64	197	

## VETERINARY INSPECTOR'S ANNUAL REPORT.

During the year 1910, 133 newly purchased and newly calved cows have been examined, and of these 120 were found to be free from disease; of the remainder 11 cows had nodular enlargements of the udder.

The milk of four of the latter animals was submitted for bacteriological examination, and was found in each case to contain pus and blood.

One cow was found to be suffering from Septicamia, another had a Chronic Cough. The latter animal was submitted to the Tuberculin Test and a characteristic reaction was obtained.

The whole of these animals were returned to the sellers. I made searching enquiries to ascertain the destination of these cows, and found that they had left the district, and consequently were no longer a menace to the milk supply of the City.

3,007 examinations have been made to ascertain the presence of disease likely to affect the milk supply. In addition to the cases mentioned above, the following diseases likely to affect the milk secretion were discovered amongst the regular occupants of the byres:—

- 5 Congestion of the Lungs.
- 1 Inflammation of the Udder.
- 1 Redwater.
- 2 Milk Fever.
- 1 Septic Pneumonia.

In the case of the animal affected with Septic Pneumonia, as the case was hopeless, I advised the owner to have her destroyed, to which he readily consented, and she was sent to the Knacker Yard. The milk of the other cows affected was destroyed until they were convalescent.



At the request of the Medical Officer of Health I made the following examinations at the Public Slaughter-houses :—

10 Carcases of Beef  
 2       ,,       Mutton  
 1 Carcase of Pork

and certified all the carcasses, with one exception, to be unfit for human food.

The Auction Marts of the City have been regularly visited each Monday, and 11,621 pigs have been examined by me. Three pigs were found to be ailing in one of the Marts, and I found their illness was caused by injudicious feeding. The animals were immediately isolated, and I kept them under observation, after having advised the owner as to the method of treatment. I examined the animals daily for five days until all symptoms of illness had subsided, and then allowed them to be sold on the following Monday.

During my inspections at the Auction Marts I discovered one cow suffering from Septic Inflammation of the Udder, and the milk secretion from another contained a large quantity of blood, whilst a third was clinically diseased. The milk of these 3 animals was immediately put down the sewer in my presence.

On October 17th and 22nd I examined at the Carlisle Auction Mart, at the request of the purchaser, and at Hetherington's Auction Mart, at the request of the Manager, two milk cows which had been sold at the above mentioned marts and returned by the purchasers.

On account of the chronically diseased and emaciated condition of these animals I reported them to the Medical Officer of Health and Chief Sanitary Inspector, and after consultation we decided that in the interests of public health we ought, if possible, to purchase and destroy them.

Acting in conjunction with the Chief Sanitary Inspector we purchased the animals for 10s. and 15s. respectively, and had them slaughtered at the public slaughter-houses. Both animals were affected with tuberculosis of long standing, and in one animal the disease extended to the udder.

The carcasses and organs of both animals were destroyed by burning and the hides sent to the Skin Mart.

After paying the purchase price and cost of slaughtering we made a profit of 16s. upon the transactions. This sum was sent to Dr. Barnes on behalf of the Infirmary Fund.

The horses belonging to the Corporation Stud number 20, including 2 horses used for Fire Brigade Purposes.

I regret to report that during the year one horse which had been in the possession of the Corporation for over 8 years dropped down dead whilst in yoke, from rupture of the heart. Another aged gelding, after 13 years' service, got cast in the stall and was unable to rise, and on account of this condition I had him immediately slaughtered.

One of the horses used for Fire Brigade purposes was seriously ill, the cause of the illness being due to over-exertion. I treated the animal for some weeks but was of opinion that he would be of no further use for fast work. I recommended the Fire Brigade Committee to dispose of him and another gelding was purchased in his place.

At present the stud of horses are in perfect condition and health.

R. CRAIG ROBINSON, M.R.C.V.S.

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# ANNUAL REPORT

OF

CHIEF SANITARY INSPECTOR.

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ANNUAL REPORT

THE EASTERN DISTRICT

CHIEF SANITARY INSPECTOR'S ANNUAL  
REPORT.

**To the Chairman and Members of the Health  
Committee of the Carlisle City Council.**

Gentlemen,

I have the honour of presenting to you my Eighteenth Annual Report, dealing with the work of the Sanitary Inspectors for the year 1910, in administering the various Acts and Bye-laws in force within the City.

There has been a considerable increase in the number of Infectious Diseases notified compared with 1909, and a good portion of the time of your Inspectors has been devoted to investigating and reporting upon the diseases to the Medical Officer of Health, removing patients to the Isolation Hospital, visiting cases isolated at home, and also disinfecting and supervising the disinfection of houses.

Many requests have been made by owners and occupiers of houses to have the drains of their premises tested by your Inspectors, and the number of tests performed during the year is the largest recorded.

Considerable attention has been paid to factory chimneys, and many observations have been made with a view to recording the length of time black smoke was emitted. In some instances the emissions were of such a character as to be nuisances, and in each case an intimation was sent to the factory owner, which invariably

produced an improvement. The owners of one of the largest works in the City have adopted electricity as a motive force. The boilers have been abandoned, and the nuisance formerly caused by the chimney belching forth huge volumes of dense black smoke has now ceased to exist. The improvement brought about by the change is much appreciated in the district in which this chimney is situated. It is now possible to open windows without fear of having the rooms filled with smoke and fine dust, and clothes can also be washed and dried in the open and look better for the operation.

Bakehouses, premises whereon food is prepared, and also Dairies and Cowsheds have received careful attention, and many improvements have been made in these premises in the nature of lighting, ventilation, paving, drainage, &c.

#### INSPECTION OF THE CITY AND REMOVAL OF NUISANCES.

The systematic inspection of the lanes, courts, and yards within the City has been carried out as in former years, and where nuisances discovered were owing to structural defects the usual notices were served, but in most cases where the nuisance could be readily abated by the occupier of the premises whereon it existed verbal intimation was given.

I have pleasure in again recording that in no case was it necessary to institute Police Court proceedings to procure the abatement of a nuisance.

Table showing the number and nature of the nuisances dealt with by notice during the year:—

##### *Public Health Acts—*

Choked and filthy water-closets	...	...	56
Defective and dilapidated water-closets	...	...	37



Defective w.c. cisterns	...	...	5
Choked and defective drains	...	...	60
Offensive and defective gullies	...	...	35
Insufficient gully accommodation	...	...	4
Dilapidated and insufficient flagging and paving of yards and lanes	...	...	73
Defective eaves, gutters, and downspouts	...	...	97
Defective sinks and sink waste pipes	...	...	14
Defective roofs to premises	...	...	9
Defective walls, floors, ceilings, &c.	...	...	10
Dirty passages and staircases	...	...	132
Overcrowding of houses	...	...	15
Nuisances caused by keeping animals and fowls	...	...	24
Accumulation of refuse and manure	...	...	15
Absence of water to sanitary conveniences	...	...	18
Accumulation or fish boxes	...	...	1
Absence of manure pit	...	...	1
Burst water pipes	...	...	6
Dirty houses	...	...	5
Dirty yards	...	...	2
Absence of drainage	...	...	4
Absence of ventilation	...	...	2
Escape of coal gas	...	...	3
Miscellaneous	...	...	5
			<hr/>
			633
			<hr/>

*Factory and Workshop Acts—*

Dirty workrooms	...	...	16
Dirty bakehouse floors	...	...	1
Dirty bakehouses	...	...	21
Defective roofs	...	...	2
Defective ceilings	...	...	2

Absence of ventilation ...	...	...	1
Defective flagging ...	...	...	1
Sanitary accommodation—			
Insufficient ...	...	...	3
Unsuitable or defective	...	...	20
Not separate for sexes	...	...	1
Other nuisances ...	...	...	4
			72
			633
			705
Total ...	...	...	705

## HOUSE-TO-HOUSE INSPECTION.

The following table gives the particulars of the houses inspected and the nuisances discovered:—

Name of Street or Court	Number of houses inspected	Defective water-closets	Choked and defective drains, gullies, and wastepipes	Dilapidated paving and flagging	Defective roofs and spouting of houses	Insufficient drainage and w.c. accommodation	Defective walls, floors, stair-cases, & ceilings of houses	Insufficient ventilation	Overcrowding of houses	Animals and fowls im-properly kept	Miscellaneous
Elm Terrace, Newtown	6	...	...	1	...	1	...	...	...	...	...
Linton Street...	34	...	1	8	4	...	...	...	...	...	2
Isabella Street	7	...	1	1	...	...	4	1	...	...	...
Bright Street ..	17	...	...	1	1	1	2	1	...	...	...
East Nelson Street	26	2	8	5	1	...	...	...	...	...	...
Monkclose Road	41	7	...	4	...	...	...	...	1	4	1
Priory Road ...	4	6	...	3	...	...	...	...	4	3	...
Brook Street ...	97	5	1	1	2	1	...	...	3	...	1
Greystone Road	21	...	...	...	...	...	...	...	...	...	...
Totals ...	253	20	11	24	8	3	6	2	8	7	4

## COMPLAINTS.

146 complaints have been received during the year. Each complaint was investigated and the following list shows the nature of the nuisance found:—

Choked and defective drains	...	...	59
Accumulation of refuse	...	...	17
Defective flagging	...	...	3
Absence of paving	...	...	1
Choked and defective water-closets	...	...	24
Defective spouting	...	...	4
Overcrowding of house	...	...	4
Dirty yards, courts, passages, &c.	...	...	1
Dampness to houses	...	...	2
Dirty house	...	...	5
Smoke nuisance	...	...	2
Animals and fowls improperly kept	...	...	6
Insanitary manure pit	...	...	3
Foul pool	...	...	1
Escape of coal gas	...	...	3
Flooding of cellar	...	...	1
Absence of drainage to stables	...	...	1
Dilapidated walls, floors, ceilings, &c.	...	...	1
Defective sink wastepipes	...	...	2
Insufficient gully accommodation	...	...	1
Miscellaneous	...	...	11
<b>Total</b>	...	...	<b>152</b>

In some instances no nuisances were discovered, complaints having been lodged through spite and quarrels.

## DRAIN TESTING.

Several applications have been received from owners and occupiers to have their drains tested, and in consequence the drains of 183 houses were examined, the smoke and water tests being applied in many cases. One



application was made under Section 41 of the Public Health Act, 1875, to have the drain opened out and examined, and in this case the drains were found to be defective.

#### INSANITARY PROPERTY.

The improvement effected by the alteration to the property at the corner of Willow Holme and Jane Street has been considerable. Instead of six families occupying the premises as formerly, it is now occupied by three families. Each house is of a type known as a "through" house, and consists of kitchen, back-kitchen, and two bedrooms, all of which are well lighted and ventilated. The rents of these houses, I am informed, are 3s. 6d. per week, rates and water included.

The alteration of the property formed part of a scheme of improvement which was commenced in the Willow Holme District in 1894, and the work done in connection with this scheme since its inception includes the following:—

1. The demolition of a large number of tenement dwellings in Bridge Lane, the widening of the lane from 20 to 40 feet, and erecting upon the remainder of the cleared area a number of modern self-contained houses.

2. The conversion of the whole of the tenement dwellings on the south side of Jane Street into self-contained houses.

3. The conversion of 20 tenement dwellings on the north side of Jane Street and on the west side of Willow Holme into 10 self-contained houses.

The Willow Holme district, although not a large one, was nevertheless densely populated. The improvement effected in carrying out the before-mentioned work has not only produced a better structural sanitary condition,

but has reduced the population upon the area by about one half, and has at the same time produced a type of house which largely contains all the essentials of a modern workman's dwelling at a rental which certainly cannot be considered high, having regard to the accommodation provided.

#### FACTORY AND WORKSHOP ACTS.

The whole of the workshops upon the register have been inspected, and where any infringements of the provisions of the Factory and Workshop Acts were discovered notices were served to have them remedied.

The total number of workshops, including bakehouses, upon the register is 299. Each registered workshop was visited at least once during the year, re-visits being paid in all cases where defects were found. The total number of visits recorded to factories and workshops during the year was 462. The defects discovered and dealt with are enumerated in the table appended.

Five workshops were found to be without the factory abstract affixed, as prescribed by Section 128 of the Factory and Workshop Act, 1901. The Factory Inspector was notified in each case, in accordance with Section 133 of the Act.

Thirty-two complaints were received from H.M. Inspector of Factories relating to sanitary defects in factories and workshops, viz. :—

Structural Sanitary Defects	...	...	18
Limewashing needed	...	...	7
Insufficient means of escape in case of fire	...	...	3
Dirty bakehouse floors	...	...	3
Absence of sanitary accommodation	...	...	1
			—
			32
			—



All the complaints were investigated, and the defects have either been remedied or are now being remedied.

It will be noticed that 18 of the complaints come under the heading of sanitary defects, the majority of these being in relation to the water-closet accommodation in the factories and workshops. Section 9 of the Factory and Workshop Act, 1901, provides that every factory and workshop must have sufficient and suitable accommodation in the way of sanitary conveniences, regard being had to the number of persons employed in or in attendance at the factory and workshop, and also where persons of both sexes are or are intended to be employed or in attendance, with proper separate accommodation for persons of each sex. The Secretary of State has extended this section by a special order which specifies the number of sanitary conveniences to be provided according to the number of the employees, and also provides that every sanitary convenience shall be sufficiently ventilated and lighted, and shall not communicate with any workroom except through the open-air or through an intervening ventilated space. The above section and order do not apply in districts where section 22 of the Public Health Act (Amendment) Act, 1890, has been adopted, but are usually taken by the Local Authorities as the standard required.

The 18 defects, chiefly discovered in old factories and workshops, were found to be due to a contravention of this order generally through the sanitary conveniences ventilating into the workroom or having no intervening ventilated space.

#### OUTWORKERS.

Five lists of outworkers have been received as required by the Home Work provisions of the Factory and Workshop Act, 1901. All the outworkers' premises were visited and were found to be in a satisfactory condition.



## BAKEHOUSES.

There were 67 bakehouses upon the register, including 3 underground bakehouses.

Twenty-three defects, chiefly need of limewashing and cleaning of floors, were found in these bakehouses and were remedied after serving the usual notices. One underground bakehouse has been closed during the year.

The following table gives the number of inspections made, number of defects found, and action taken:—

Premises.	No. of Inspections made.	No. of Defects found.	Notices written.	Defects remedied.
Factories ... ..	35	25	4	23
Workshops ... ..	308	24	24	24
Domestic Workshops...	10	...	...	...
Workplaces ... ..	1	...	...	...
Bakehouses ... ..	108	23	23	23
Total ... ..	462	72	51	70

## DAIRIES, COWSHEDS, AND MILKSHOPS.

There are 45 cow-keepers and milk-sellers upon the register, 1 purveyor of milk having been registered during the year. Their premises have been frequently inspected, and the provisions of the Dairies, Cowsheds, and Milkshops Order as to air space and ventilation, cleansing of milk vessels, &c., have been enforced.

### COMMON LODGING-HOUSES.

There are 4 registered common lodging-houses. They have been frequently visited, both during the day and at night time, and have generally been found to be kept in a satisfactory condition.

The houses of the persons prosecuted last year for keeping unregistered common lodging-houses have been under observation by your Inspectors, but in no case were "nightly" lodgers found to be staying there.

### VANS USED AS DWELLINGS.

As in previous years all vans used as dwellings entering the City to attend fairs, &c., have been inspected for the purpose of ascertaining if any infectious diseases existed therein, and as to their cleanliness.

The majority of these vans are generally found to be paragons as regards tidiness and cleanliness, and in only one instance was it necessary to administer a caution as to want of cleanliness. No infectious illness was found to exist amongst the inmates.

### URINALS AND GULLIES.

The urinals and gullies have received the same amount of attention as in previous years, being regularly cleansed by the staff of men employed for that purpose. There has been no increase made during the year in the number of public conveniences.

### HOUSE REFUSE REMOVAL.

12,816 loads of refuse have been collected and removed to the refuse tips and destructor during the year.

## GARBAGE.

198 loads of garbage and refuse have also been removed from the Public Slaughter-house by the Corporation carters.

Month.	Number of Loads removed from the			Total.	Slaughter-House Garbage. Loads Removed.
	East District.	West District.	Morning Ashes.		
January ...	323	227	543	1,093	18
February ...	312	251	512	1,075	21
March ...	322	304	561	1,187	18
April ...	327	233	593	1,153	14
May ...	293	251	534	1,078	13
June ...	279	224	539	1,042	14
July ...	249	167	500	916	21
August ...	290	187	545	1,022	14
September ...	269	222	523	1,014	17
October ...	288	190	523	1,001	13
November ...	328	241	542	1,111	18
December ...	309	262	553	1,124	17
Totals ...	3589	2759	6468	12,816	198

The refuse collected in the City has been tipped at the Sheepmounds, St. Nicholas, Botcherby Brickyard, and also at the Destructor, Bousteads Grassing.

The Sheepmounds tip has been continued on the west side of the railway bridge over the River Eden, the refuse deposited being used for banking purposes. This will afford a tip for many years to come, it having taken 10 years to reach the railway bridge, the distance remaining to be covered being practically the same as that already traversed.

PUBLIC ABATTOIR AND RAILWAY  
SLAUGHTER-HOUSES.

Frequent visits have been paid to the Public Slaughter-houses, which have always been found to be kept in a satisfactory condition.



Careful attention has also been paid to the Railway Slaughter-houses, and with few exceptions they were generally found in a satisfactory condition.

The following table gives the number of animals killed at the various slaughter-houses during the years mentioned:—

Year.	Beasts.	Sheep and Lambs.	Calves.	Pigs.	Total.
1901	3,787	16,298	611	3,953	24,649
1902	3,758	17,153	660	3,808	25,379
1903	3,845	16,301	692	4,322	25,160
1904	4,075	16,860	759	4,753	26,447
1905	3,946	15,657	751	4,674	25,028
1906	4,059	15,274	797	4,139	24,269
1907	4,020	14,745	962	4,419	24,146
1908	3,772	14,911	760	4,064	23,507
1909	3,713	16,799	690	3,744	24,946
1910	3,562	16,491	716	3,444	24,213

#### L. & N. W. RAILWAY COY.'S SLAUGHTER-HOUSE.

Year.	Sheep.	Lambs.	Calves.	Pigs.	Total.
1909	39,969	...	16	...	39,985
1910	29,758	...	...	...	29,758

#### N. E. RAILWAY COY.'S SLAUGHTER-HOUSE.

Year.	Sheep.	Lambs.	Calves.	Pigs.	Total.
1909	47,852	...	...	...	47,852
1910	46,135	...	...	...	46,135

## DISEASED AND UNSOUND MEAT.

The Public Markets and premises whereon food is prepared or exposed for sale have been regularly inspected, as have also the fruit, fish, &c., exposed on hawkers' barrows in the public streets, and your Inspectors have constantly pointed out the necessity for hygienic measures being taken in all work in connection with the preparation of human food.

The following table shows the amount of food seized and condemned or surrendered during the year as being unfit for human consumption:—

Nature of Food Seized.	Quantity.
MEAT.	
Beef - - - -	28955 lbs.
Mutton - - - -	1067 „
Veal - - - -	104 „
Pork - - - -	718 „
FRUIT.	
Pears - - - -	700 „

On the 11th March my attention was drawn to a quantity of meat exposed for sale in one of the shambles of the Market. The pieces of meat were portions of a boar pig, which had been skinned, and to the eye of the uninitiated this meat had the appearance of immature beef. Believing that the meat was being sold for other than what it was, I instructed one of the juniors of the Department to go to the stall and ask for a piece of beef. The

meat sold to him by the assistant at the shamble was pig meat, and not beef. Proceedings were therefore instituted against the master butcher and his assistant, and the Justices imposed a fine of 3 guineas and costs upon the master and one guinea and costs upon the assistant.

#### FRIED FISH AND POTATO SHOPS.

There are 35 fried fish and potato shops on the register as compared with 32 last year. These premises have been regularly inspected, any infringements of the provisions of the Public Health Acts being, where discovered, quickly remedied.

#### ICE CREAM.

The premises whereon this article is known to be made have been frequently inspected, and enquiries made as to the source from which ice was obtained for freezing purposes. From these enquiries it was discovered that in two instances ice had been taken from an impure source, viz., a stagnant pool and from the beck which adjoins the sewage outlet. The persons engaged in this practice were interviewed and reprimanded, and the ice destroyed in both cases.

#### OFFENSIVE TRADES.

The premises used for the purpose of carrying on offensive trades have received attention, and were found to be conducted in a satisfactory manner. No complaints have been received from tenants of adjoining property.

#### FOOD AND DRUGS ACT.

During the year the undermentioned articles have been purchased and submitted to the Public Analyst for analysis.



The following table gives articles purchased, result of analysis, and action taken :—

Article.	Number of Samples taken.	Genuine.	Adulterated.	Extent and Form of Adulteration.	Remarks.
Milk ... ..	41	27	14	.90%, .36%, .84%, .77%, .54%, .13%, .74%, .45%, .71%, .20%, .66%, .25%, .37%, below legal limit ; and one 26.8% added water	All the milk samples which were not genuine were, with two exceptions, taken informally. Other samples were taken from the same source, and these upon analysis were found to be genuine. The samples were purchased from small shopkeepers, who retailed about 1 gallon per day each, and the deficiency of butter fat was no doubt due to carelessness in retailing the milk and not to intentional fraud. The vendors, however, were cautioned by letter, and instructed to pay more attention to the retailing of milk, so as to ensure that the purchasers receive a genuine article. One sample deficient in fat was so changed by clotting as to make a proper analysis impossible. The vendor, however, was cautioned. The vendor of the sample adulterated with 26.8 per cent of added water was proceeded against in the Police Court and the Justices imposed a fine of £5 and costs, in all £5 11s.
Whisky ... ..	12	10	...	...	Samples taken informally.
Do. ... ..	...	...	1	6½° below legal limit	Vendors cautioned by letter.
Do. ... ..	...	...	1	Do.	...
Coffee ... ..	6	4	...	...	...
Do. ... ..	...	...	1	18% chicory	No action taken.
Do. ... ..	...	...	1	10% do.	Do.
Pepper ... ..	6	3	...	...	...
Do. ... ..	...	...	1	Sagostarch 1%	No action taken. Analyst
Do. ... ..	...	...	1	Do.	reports that proportion of
Do. ... ..	...	...	1	Do.	sago appears too small to
Margarine ... ..	12	12	...	...	create suspicion of inten-
Lard ... ..	12	12	...	...	tional fraud.
Ginger ... ..	6	6	...	...	...
Baking Powder	6	6	...	...	...
Butter ... ..	15	15	...	...	...
Number of Samples taken }	116				
Genuine ... ..	...	95			
Adulterated ... ..	...	...	21		

## INFECTIOUS DISEASES.

During the year 357 cases of Infectious Diseases notifiable under the Infectious Diseases Notification Act, 1889, have been investigated and reported upon to the Medical Officer of Health, and 202 cases have been removed to the Isolation Hospital.

## TUBERCULOUS DISEASES.

All the cases of tuberculosis notified by the Poor Law Medical Officers, have, as in previous years, been visited by your Inspectors, and verbal and printed advice as to cleanliness, mode of living, and general hygiene have been given in each case.

## DISINFECTION.

All the houses from which cases of Infectious Diseases were removed to the Isolation Hospital, and the rooms in which patients had been isolated at home, were either sprayed with formaldehyde by your Inspectors, or cleansed under their supervision.

The stud of horses under my control at the Dépôt, Bousteads Grassing, numbers eighteen. Nine of these are engaged in house refuse removal, eight are used for street cleansing purposes, and one is kept as relief horse.

Two old horses died during the year. One horse was sold, and three bought.

I am, Gentlemen,

Your obedient Servant,

C. W. HILL,  
Chief Sanitary Inspector.





