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COUNTY BOROUGH OF SALFORD.

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# ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE YEAR

1891,

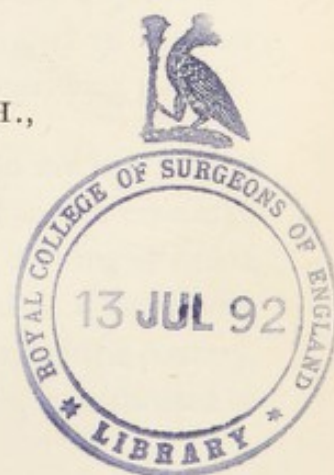
BY

CHARLES E. PAGET,

M.R.C.S. ENG., L.R.C.P. LOND., D.P.H.,

MEDICAL OFFICER OF HEALTH,

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SALFORD:

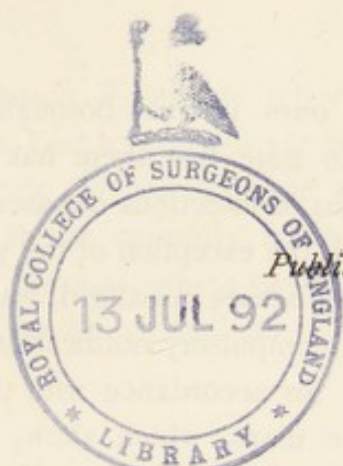
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*Public Health Department,*

*Town Hall, Salford,*

*April 21st, 1892.*

TO THE GENERAL HEALTH COMMITTEE.

GENTLEMEN—

I have the honour to present to you my third Annual Report on the Health of the Borough of Salford, being the Annual Report of the Medical Officer of Health for the year 1891. It has been drawn up in accordance with the General Order of the Local Government Board, and on the plan of my former reports.

The general death-rate of the Borough was slightly higher than the mean rate for the previous five years, being 26·0 per 1,000 of the estimated population, as against 25·7 per 1,000 for the quinquennial period 1886-90. There have been, however, very special causes for these rather high mortality-rates. The quinquennial period referred to was notable for the exceptional prevalence in the Borough of two chief zymotic diseases, namely, scarlet-fever and diphtheria. In the year 1890, there was besides an unusually heavy mortality from acute lung diseases in connection with a prevailing epidemic of influenza. This latter circumstance was repeated in the year 1891, and over this the Sanitary Authority possessed no controlling powers.

The Census of 1891 revealed the fact, mentioned in my last Annual Report, that the population of the Borough was smaller than was estimated by the Registrar-General, and again I feel fully justified in drawing attention to the need there is for a simple quinquennial, instead of a decennial, enumeration of the population in the large cities and towns of the country, for statistical purposes. The population of the Borough, as estimated to the middle of 1891, was 198,717.

It has been a satisfactory feature of the year 1891 in Salford, that while the death-rates from the chief zymotic diseases still remain higher than the mean rates for England and Wales, for the 28 great English towns, and for



London, they are actually decreasing ones in the Borough itself. In this connection, also, it is pleasing to note that there has been a very decided fall in the number of notifications of infectious diseases as compared with any year since 1885. Indeed, with the exception of the year 1885, the total number of fresh cases of zymotic diseases in Salford, was less in 1891 than in any year since 1882, when the compulsory notification of infectious diseases was adopted in the Borough. In accordance with the plan of my former reports, I have prepared three maps, which show, by means of coloured dots, the location of the houses in which cases of scarlet-fever, diphtheria, and enteric-fever, respectively, occurred during the year.

The magnificent new Corporation Hospital—the Ladywell Sanatorium—for the isolation and treatment of cases of infectious sickness, was rapidly approaching completion at the end of the year, and will provide on an exceptional scale for the needs of the Borough in this respect. I anticipate, also, that much useful work in the disinfection of bedding and clothing will be effected at the Sanitary Station attached to this Hospital.

It is with feelings of satisfaction that I am able to point to a larger amount of ordinary sanitary work having been carried out in the Borough, through the increase of the inspecting staff since my own appointment in 1889. Not only have a greater number of nuisances been abated, but the regulation and inspection of the common lodging-houses and of the sub-let houses of the Borough have been much more efficient, and some new work has been entered upon. The particular feature of the year has been the commencement of drain-testing by smoke-apparatus, and the amount of good resulting therefrom may be taken as a measure of what I am very hopeful may be done year by year in the future. As many as 3,055 dwelling-houses of the Borough have been affected by this means during the year, and orders for the abatement of nuisance in them, thus discovered, have been issued.

The number of cellar-dwellings has been considerably reduced, and the Health Committee has lost no time in pushing forward negotiations in respect of the Corporation Scheme under the Housing of the Working Classes Act, 1890, or in preparing plans for their new Model Common Lodging-house. I anticipate having to say more on these matters in my next annual report, and to record very considerable advances in regard to them.

In conclusion, I have to report that the refuse destructor required for the Pendleton District has not yet been provided ; that the advisability, on sanitary grounds, of erecting one or more public abattoirs does not grow less ; and that the necessity for the regular inspection and cleansing of all sewers in the Borough, which have been shown to be liable to deposit within them, should not be overlooked.

I am, Gentlemen,

Your Obedient Servant,

CHARLES E. PAGET,

Medical Officer of Health.



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1.

STATISTICAL SUMMARY, 1891.

**Population.**—Estimated to the { **Males** ..... 95,874 }  
middle of the year ..... { **Females** ...102,843 } **Total** ..... 198,717

Marriages .....	1,804
-----------------	-------

Marriages .....	1,804
Annual Rate of Persons Married per 1,000 of the Population.	18.2

Births .....	{	Males .....	3,595	} Total .....	7,213
		Females ...	3,618		

Annual Rate of Births per 1,000 of the Population.....	36.3
--------------------------------------------------------	------

Deaths .....	{	Males .....	2,594	}	Total .....	5,159
		Females ...	2,565			

		( Females ... 2,505 )			
Annual Rate of Mortality	{	Males .....	27°	{	Total ..... 26°
per 1,000 .....		Females ...	25°		

Excess of Registered Births over Deaths .....	2,054
-----------------------------------------------	-------

Excess of Registered Births over Deaths .....	2,854
Estimated Annual Increase of Population .....	2,341

**Density.**—The mean density of the Borough is equal to 38·5 persons per acre :—in Regent Road, 74·6; Greengate, 117·1; Pendleton, 21·0; Broughton, 26·6.

**Area.**—The Municipal Borough of Salford comprises the Townships of Salford (divided for statistical purposes into the Regent Road and Greengate Districts), Pendleton, and Broughton, and has a total area of 5,170 acres:—in Salford, 1,329 acres (Regent Road, 1,066; Greengate, 263); Pendleton, 2,415; Broughton, 1,426.

**Elevation.**—The mean elevation is 140 feet above sea-level, and varies between 85 feet and 250 feet.



POPULATION, DENSITY, ANNUAL RATES OF BIRTHS, MARRIAGES, AND DEATHS,  
IN EACH OF THE THIRTY-

Year.	POPULATION (estimated to the middle of each year).					DENSITY (persons per acre).				
	Borough.	Regent Road.	Green-gate.	Pendleton.	Broughton.	Boro'.	Regent Road.	Green-gate.	Pendleton.	Broughton.
1861	102,920	33,756	37,519	21,649	9,996	19'9	31'7	142'8	9'0	7'0
1862*	104,975	34,928	37,458	22,139	10,450	20'3	32'7	142'4	9'2	7'3
1863	107,075	36,134	37,389	22,636	10,916	20'7	33'9	142'2	9'4	7'7
1864	109,262	37,374	37,313	23,182	11,393	21'1	35'0	141'8	9'6	8'0
1865	111,393	38,646	37,231	23,633	11,883	21'6	36'2	141'5	9'8	8'3
1861-65	<b>107,125</b>	<b>36,167</b>	<b>37,382</b>	<b>22,648</b>	<b>10,928</b>	<b>20'7</b>	<b>33'9</b>	<b>142'1</b>	<b>9'4</b>	<b>7'7</b>
1866	113,614	39,949	37,144	24,136	12,385	22'0	37'4	141'2	10'0	8'7
1867	115,885	41,294	37,045	24,644	12,902	22'4	38'7	140'8	10'2	9'1
1868*	118,198	42,674	36,941	25,152	13,434	22'9	40'0	140'4	10'4	9'4
1869	120,526	44,087	36,823	25,658	13,968	23'3	41'3	140'0	10'6	9'8
1870	122,965	45,551	36,704	26,177	14,533	23'8	42'7	139'4	10'8	10'2
1866-70	<b>118,238</b>	<b>42,711</b>	<b>36,931</b>	<b>25,153</b>	<b>13,444</b>	<b>22'9</b>	<b>40'0</b>	<b>140'4</b>	<b>10'4</b>	<b>9'4</b>
1871	125,890	47,195	36,517	26,920	15,258	24'3	44'2	138'8	11'1	10'7
1872	130,301	49,301	36,145	28,357	16,498	25'2	46'3	137'4	11'7	11'6
1873*	134,883	51,463	35,747	29,847	17,826	26'1	48'3	135'7	12'4	12'5
1874	139,618	53,670	35,319	31,386	19,243	27'0	50'3	134'3	13'0	13'5
1875	144,518	55,921	34,868	32,977	20,752	27'9	52'4	132'6	13'6	14'6
1871-75	<b>135,042</b>	<b>51,510</b>	<b>35,719</b>	<b>29,897</b>	<b>17,916</b>	<b>26'1</b>	<b>48'3</b>	<b>135'8</b>	<b>12'4</b>	<b>12'6</b>
1876	149,591	58,219	34,393	34,617	22,362	28'9	54'7	130'6	14'3	15'7
1877	154,842	60,561	33,898	36,308	24,075	29'9	56'8	128'8	15'0	16'9
1878	160,277	62,945	33,379	38,054	25,899	31'0	59'1	126'9	15'8	18'2
1879*	165,899	65,371	32,843	39,848	27,837	32'1	61'4	124'9	16'5	19'5
1880	171,727	67,839	32,291	41,697	29,900	33'2	63'6	122'8	17'2	21'0
1876-80	<b>160,467</b>	<b>62,987</b>	<b>33,361</b>	<b>38,105</b>	<b>26,014</b>	<b>31'0</b>	<b>59'1</b>	<b>126'8</b>	<b>15'8</b>	<b>18'3</b>
1881†	177,760	70,346	31,725	43,598	32,091	34'4	66'0	120'6	18'0	22'5
1882†	179,855	71,237	31,632	44,307	32,679	34'8	66'8	120'2	18'3	22'9
1883†	181,951	72,128	31,540	45,016	33,267	35'2	67'6	120'0	18'6	23'3
1884*†	184,047	73,019	31,447	45,725	33,856	35'6	68'5	119'6	18'9	23'7
1885†	186,142	73,911	31,353	46,434	34,444	36'0	69'4	119'2	19'2	24'2
1881-85†	<b>181,951</b>	<b>72,128</b>	<b>31,540</b>	<b>45,016</b>	<b>33,267</b>	<b>35'2</b>	<b>67'6</b>	<b>120'0</b>	<b>18'6</b>	<b>23'3</b>
1886†	188,238	74,802	31,261	47,143	35,032	36'4	70'4	118'8	19'5	24'6
1887†	190,334	75,693	31,168	47,852	35,621	36'8	71'0	118'5	19'8	25'0
1888†	192,429	76,584	31,075	48,561	36,209	37'2	71'9	118'2	20'1	25'4
1889†	194,525	77,476	30,982	49,270	36,797	37'6	72'8	117'8	20'4	25'8
1890*†	196,621	78,368	30,889	49,979	37,385	38'1	73'6	117'4	20'7	26'2
1886-90†	<b>192,429</b>	<b>76,585</b>	<b>31,075</b>	<b>48,561</b>	<b>36,208</b>	<b>37'2</b>	<b>71'9</b>	<b>118'2</b>	<b>20'1</b>	<b>25'4</b>
1891	198,717	79,257	30,797	50,688	37,975	38'5	74'6	117'1	21'0	26'6

\* In the years 1862, 1868, 1873, 1879, 1884, and 1890 the facts are those registered in 53 instead of  
† Corrected after the results of the Census of 1891.



IN THE BOROUGH OF SALFORD, AND IN ITS FOUR REGISTRATION SUB-DISTRICTS,  
ONE YEARS, 1861-1891.

ANNUAL RATES PER 1,000 OF THE POPULATION.											Year.
MARRIAGES.	BIRTHS.					DEATHS.					
Registration Districts.	Boro'.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	Boro'.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	
11'9	39'7	40'0	43'9	38'0	26'9	24'6	27'8	26'1	21'8	13'8	1861
10'2	39'0	38'7	42'5	39'4	25'9	25'3	29'4	27'8	19'6	14'7	1862
11'7	38'0	37'9	42'0	37'0	26'9	26'0	28'3	29'1	22'5	15'0	1863
12'7	38'6	37'3	44'3	38'2	24'7	26'5	28'7	31'0	21'7	14'6	1864
12'9	37'8	37'3	42'8	36'2	26'4	29'1	32'3	32'8	25'2	14'8	1865
11'9	38'6	38'2	43'1	37'8	26'2	26'3	29'3	29'4	22'2	14'6	1861-65
13'4	37'9	38'5	42'8	35'6	25'9	28'8	32'2	33'9	23'0	13'6	1866
14'3	39'0	40'7	42'2	37'0	28'2	28'2	31'9	31'9	22'8	15'7	1867
13'3	39'3	38'5	43'5	40'4	27'9	30'5	34'3	33'0	28'7	14'9	1868
14'1	38'9	39'1	43'2	38'3	27'6	26'4	29'2	29'2	23'3	15'8	1869
14'1	39'6	41'7	43'1	36'3	30'3	25'8	30'4	27'3	21'3	15'3	1870
13'8	38'9	39'7	43'0	37'5	28'0	27'9	31'6	31'1	23'8	15'1	1866-70
14'6	40'7	43'6	44'2	39'4	26'2	30'3	34'9	32'4	27'2	16'2	1871
15'1	41'4	45'3	44'1	35'7	34'0	25'3	28'9	28'8	20'4	15'6	1872
14'3	41'5	43'7	43'0	40'5	34'1	28'3	32'2	30'1	26'6	16'7	1873
16'2	42'1	45'9	40'9	37'3	41'8	28'2	32'6	29'2	24'9	19'5	1874
17'5	44'4	48'9	41'0	40'9	43'5	29'5	34'8	32'0	23'7	20'6	1875
15'5	42'0	45'5	42'6	38'8	35'9	28'3	32'7	30'5	24'6	17'7	1871-75
20'5	45'5	47'7	43'3	44'1	45'3	29'5	34'5	30'2	24'9	22'4	1876
19'6	44'4	47'0	40'7	43'1	44'7	26'3	31'8	26'3	21'9	19'6	1877
17'9	44'7	46'5	42'5	42'9	45'6	27'1	29'8	28'8	23'6	23'2	1878
15'2	43'0	45'5	40'9	42'5	40'0	26'7	27'5	31'6	24'7	21'5	1879
16'6	41'4	41'3	41'6	42'7	39'5	27'9	31'5	33'2	23'3	20'6	1880
18'0	43'8	45'6	41'8	43'1	43'0	27'5	31'0	30'0	23'7	21'7	1876-80
16'4	38'8	40'2	39'2	38'9	34'7	22'5	24'8	24'9	21'5	16'5	1881
16'9	39'7	41'7	40'6	38'6	35'5	23'7	25'6	28'9	21'0	17'9	1882
16'1	37'3	39'9	38'5	35'2	33'0	23'6	25'8	28'6	21'3	17'0	1883
16'1	38'8	40'3	41'3	36'5	36'5	24'4	26'3	28'4	22'4	19'1	1884
16'1	37'6	40'2	36'7	36'3	34'4	23'0	25'1	28'1	20'7	17'0	1885
16'3	38'4	40'5	39'2	37'1	34'8	23'4	25'5	27'8	21'4	17'5	1881-85
15'3	38'5	39'5	40'3	37'3	36'0	24'8	26'7	30'3	22'1	19'4	1886
15'4	36'6	38'7	37'0	35'5	32'9	25'5	26'2	33'0	24'0	19'4	1887
15'2	37'1	37'7	38'6	37'5	34'1	24'8	27'7	28'2	23'5	17'7	1888
16'7	35'9	37'0	38'1	35'5	32'4	25'1	27'4	28'9	23'6	18'9	1889
17'5	36'1	38'0	38'0	35'9	30'8	27'7	28'9	36'4	25'0	21'6	1890
16'0	36'8	38'2	38'4	36'3	33'2	25'7	27'5	31'5	23'8	19'5	1886-90
18'2	36'3	37'5	38'4	36'5	31'8	26'0	26'8	32'3	25'5	19'5	1891

52 weeks ; corrections have therefore been made in calculating the rates.



## II.

## MORTALITY STATISTICS.

## Population

**Estimated Population (Result of Census of 1891).—**

One result of the Census taken on April 5th, 1891, was to show that the actual population of the Borough of Salford was enormously below the estimate of the Registrar-General, the difference being as much as 52,888, and considerably less than the estimate of the Health Department of the Borough, the difference in this case being 18,694.

The actual enumeration results gave the population of Salford as 198,136, as against 251,024 of the Registrar-General's estimate, and as against 216,830 as estimated in the borough. Such facts as these are sufficient to warrant me in repeating what I have said in my two previous annual reports that *there is real need for a simple population enumeration in the large towns of the country once in every five years, instead of only once in each decennium.*

The error in calculation of the Salford population arose, so far as the Registrar-General was concerned, in his estimating the increase during the decennium of 1881 to 1891 at the same rate which had obtained during the decennium of 1871 to 1881. The increase in the early period was as much as 41·2 per cent., while in the later one it was only 12·4 per cent. So far as the Health Department of the Borough was concerned, it recognised the fact that the unusual commercial prosperity of the earlier period had been succeeded by a period of commercial depression, and that while the birth and marriage rates of the Borough had risen considerably from the year 1871 to 1876, they had begun to fall after the latter year and were still falling during the decennium 1881 to 1891. The levels at which these falls arrived were, moreover, seen to be considerably lower than in the decennium of 1851 to 1861, or of 1861 to 1871, during which periods the rates of population increase had been respectively 20·0 per cent. and 21·8 per cent. On these chief grounds, therefore, as well as from knowledge of the extent of building operations in the borough, the increase of the population was calculated to be at a not greater rate than 23·0 per cent. This estimate, however, as it turned out, was still too high.

The actual increase of the population of the Borough during the ten years 1881 to 1891 has been 21,901, the population having risen from 176,235 to 198,136.

Proceeding then on the hypothesis that the growth of the Borough will be continued at the same rate in the current decennium as in the preceding one, the estimated population for the Borough of Salford in the middle of the year 1891 is taken as being 198,717, and in order that the general statistics of the Borough may be more accurately comparable with those of past years, the figures of Table A. of this report relating to the years



1881 to 1890 have been carefully corrected in accordance with the knowledge which has been derived from the last Census.

**Annual Rate of Mortality.**—The total deaths for the year 1891 numbered 5,150,—2,594 being deaths of males, and 2,565 being deaths of females. The death-rate for the Borough was equal, therefore, to 26·0 per 1,000 of the estimated population. This rate is 0·3 per 1,000 above the mean death-rate for the Borough for the five years 1886 to 1890. It will be seen further on in this report that one of the chief causes for the high death-rate is similar to that which occasioned an unusually high mortality during the year 1890, namely, great fatality among cases of acute lung diseases. Indeed in the mortalities from special causes it will be seen that there were no increases among these during the year over the means for the last quinquennium, except in respect of acute lung and tubercular diseases. In arriving at the correct general death-rate of the Borough care has been, as usual, taken to allow for the deaths of persons belonging to the Borough who died beyond its area, as well as for those of persons not belonging to the district who died within it. Of the former, there were 77 deaths; of the latter, there were 31 deaths. The deaths of Salford residents outside the borough were distributable as follows:—Children's Hospital, Pendlebury, 43; Manchester Royal Infirmary, 28; Monsall Hospital, 0; St. Mary's Hospital, 6.

General  
Mortality

**Annual Rate of Mortality compared with other large towns and cities of England.**—As compared with other large towns of the country the annual death-rate of the Borough of Salford for the year 1891 was 3·5 above the average for that year. The annual rate of mortality in England and Wales was equal to 20·1 per 1,000 of the population; less the 28 great English towns it was 19·2 per 1,000; and in London the general mortality-rate was 21·4 per 1,000 of population.

General Mor-  
tality compared  
with other large  
towns

**District Mortality-Rates.**—The district distribution of mortality may be seen on reference to Table D. of this report. It will be seen from this that the rate for Regent Road is 0·7 per 1,000 of population below the mean of the previous five years, that the rate for Broughton is the same, and that for Greengate and Pendleton the rates are respectively 0·8 and 1·7 per 1,000 above the means for those districts for the past five years.

District  
Mortality

The district mortality-rates per 1,000 of population for the year 1891 were as follow:—Regent Road, 26·8; Greengate, 32·3; Pendleton, 25·5; and Broughton, 19·5.

The highest district zymotic rate was in Pendleton; for constitutional diseases in Greengate, likewise for acute lung diseases and for phthisis. It will, in this latter connexion, be noticed that in the Greengate district there is the greatest density of population, and that, therefore, this district is peculiarly prone to

RECORDED DEATH-RATES PER 1,000 IN 28 GREAT TOWNS  
IN 1891.

Towns in the order of their recorded Death-rates.	Recorded Death-rate.
England and Wales .....	20'1
England and Wales less the 28 Towns .....	19'2
28 Great English Towns .....	22'5
Brighton .....	18'2
Portsmouth .....	19'0
Derby .....	19'1
Norwich .....	19'3
Nottingham .....	19'9
Bristol .....	20'9
Birkenhead .....	20'9
Hull .....	21'0
London .....	21'4
Leicester .....	21'7
Bolton .....	21'9
Cardiff .....	22'1
Birmingham .....	22'2
Bradford .....	22'2
Plymouth .....	22'5
Halifax .....	22'8
Leeds .....	22'9
Huddersfield .....	23'0
Newcastle-upon-Tyne .....	23'8
Sheffield .....	23'9
Wolverhampton .....	24'2
Sunderland .....	25'0
Oldham .....	25'7
Blackburn .....	25'8
Salford .....	26'0
Manchester .....	26'5
Liverpool .....	27'0
Preston .....	27'3



suffer from the effects of a want of fresh air and from overcrowded areas.

**Mortality in Age-Groups.**—The annual rates of mortality at all ages, and at the five chief groups of ages—under 5 years, from 5 to 20 years, from 20 to 40 years, from 40 to 60 years, and at 60 years and upwards for both males and females—which have been given in Table B. of my previous reports cannot be either correctly or completely given for the year 1891. The reason for this will be understood on reference to my remarks in this report on the estimated population of the Borough, and until a corrected return by the Registrar-General, after the Census of 1891, is made on the new English Life Table, a comparison of Salford age-mortalities with like mortalities for England cannot be accurate or satisfactory.

But I have corrected the annual rates of age-mortalities for the ten years 1881 to 1890, in accordance with what was shown by the Census of 1891 to have been the rate of annual increase of population within the Borough during the previous decade, and these will be found in Table B. of this report.

TABLE B.

ANNUAL RATES OF MORTALITY, TEN YEARS, 1881-90.

	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Mean 1881 to 1890.
<b>PERSONS</b>											
{ All Ages,	22.5	23.7	23.5	24.3	23.0	24.8	25.5	24.8	25.1	28.1	24.5
{ Under 5 Years,	69.1	80.8	74.5	81.7	73.1	81.5	84.8	78.3	80.9	84.9	79.0
{ 5-20 ...	5.0	4.5	5.9	5.7	5.2	5.9	5.8	6.0	7.4	7.3	5.9
{ 20-40 ...	9.4	9.5	9.1	9.6	9.5	9.0	8.9	9.4	8.6	10.5	9.3
{ 40-60 ...	24.4	24.0	24.7	23.4	23.4	25.6	25.8	25.9	25.3	32.2	25.5
{ 60 and upwards	83.5	76.4	84.7	80.9	83.3	86.6	92.0	92.7	87.0	108.4	87.5
<b>MALES</b>											
{ All Ages,	24.1	24.6	25.4	25.7	24.5	25.7	26.6	25.4	27.0	29.8	25.9
{ Under 5 Years,	74.7	84.0	79.3	89.1	78.7	86.3	88.5	80.1	86.2	90.6	83.7
{ 5-20 ...	5.8	4.5	6.1	6.0	5.7	6.0	6.0	6.1	7.7	7.1	6.1
{ 20-40 ...	9.8	9.6	10.1	9.4	10.3	8.8	9.5	9.6	9.5	11.3	9.8
{ 40-60 ...	27.3	26.9	30.9	24.2	25.1	27.8	28.9	28.3	28.8	37.7	28.6
{ 60 and upwards	89.3	81.7	90.9	88.6	90.9	89.3	95.7	98.3	101.6	111.6	93.8
<b>FEMALES</b>											
{ All Ages,	21.1	22.9	21.9	23.2	21.6	24.1	24.5	24.3	23.3	26.6	23.4
{ Under 5 Years,	63.5	77.5	69.6	74.1	67.4	76.8	81.0	76.4	75.5	77.4	73.9
{ 5-20 ...	4.1	4.6	5.7	5.5	4.8	5.9	5.7	6.0	7.2	7.5	5.7
{ 20-40 ...	9.1	9.5	8.2	9.8	8.8	9.1	8.4	9.2	7.9	9.8	9.0
{ 40-60 ...	21.7	21.4	20.3	22.8	22.0	23.8	23.2	23.8	22.3	27.3	22.9
{ 60 and upwards	79.7	72.9	80.1	75.8	78.0	84.6	89.6	88.7	77.3	106.3	83.3



Infantile Mor-  
tality and Births

**Infantile Mortality.—Births.**—There were 1,399 deaths of infants under one year of age, as compared with 1,415 like deaths in 1890: the number of births were 7,213, as against 7,098 in the previous year. Thus, the proportion of deaths under one year of age per 1,000 births was 194, as against 199, and as against 167, the average number per 1,000 births for the 28 great English towns. In the large towns the rates varied from 137 in Brighton, to 227 in Preston, as may be seen in the accompanying Table prepared from the Registrar-General's Annual Summary.

PROPORTION OF DEATHS UNDER ONE YEAR OF AGE PER 1,000  
BIRTHS IN 28 GREAT TOWNS OF ENGLAND IN 1891.

The 28 Great Towns .....	167		
Brighton .....	137	Newcastle-on-Tyne ..	174
Portsmouth .....	139	Sunderland .....	176
Derby .....	142	Leeds .....	177
Bristol .....	146	Plymouth .....	178
Birkenhead .....	148	Bradford .....	181
Cardiff .....	153	Huddersfield .....	185
London .....	154	Liverpool .....	188
Norwich .....	159	Wolverhampton ...	190
Bolton .....	165	Manchester .....	192
Nottingham .....	169	Oldham .....	192
Halifax .....	169	Salford .....	194
Sheffield .....	170	Blackburn .....	204
Birmingham .....	171	Leicester .....	214
Hull .....	172	Preston .....	227

Of the total of 7,213 births, 304 or 4·2 per cent. were illegitimate. The illegitimacy rate was thus the same as for the year 1890, and 0·2 below the average percentage for the previous ten years (see Table C). The only *district* which showed an increase on the rate for the previous ten years was Broughton. The district illegitimacy rates per cent. of the births were as follows:—

Regent Road, 4·5; Greengate, 4·6; Pendleton, 3·7; Broughton, 3·8. The proportion of deaths of illegitimates under one year of age per 1,000 births was 342, as against 367 in 1890, and as against 356, the average for the previous ten years. The total district mortality rates for legitimates and illegitimates under one year of age together, per 1,000 births, were: Regent Road, 202; Greengate, 226; Pendleton, 183; Broughton, 159.

Old-age  
Mortality

**Senile Mortality.**—Of the total 5,159 deaths at all ages and from all causes, 978, or 18·9 per cent., were of persons who

TABLE C.

BIRTHS IN THE BOROUGH OF SALFORD AND IN ITS REGISTRATION SUB-DISTRICTS, AND DISTINGUISHING DEATHS OF LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD.

IN THE 52 WEEKS OF THE YEAR 1891.

	Births.		Percentage of Illegitimate Births to Total Births.	Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
<b>Borough.....</b>	<b>7213</b>	<b>304</b>	<b>4.2</b>	<b>1399</b>	<b>104</b>	<b>194</b>	<b>187</b>	<b>342</b>
Regent Road District ...	2975	135	4.5	601	47	202	195	348
Greengate            "	1182	55	4.6	267	22	226	217	400
Pendleton           "	1850	68	3.7	339	22	183	178	324
Broughton           "	1206	46	3.8	192	13	159	154	283

CORRESPONDING DATA FOR THE TEN YEARS 1881-1890.

<b>Borough.....</b>	<b>70443</b>	<b>3069</b>	<b>4.4</b>	<b>12825</b>	<b>1093</b>	<b>182</b>	<b>174</b>	<b>356</b>
Regent Road District ...	29203	1358	4.7	5722	487	196	188	359
Greengate            "	12159	610	5.0	2403	221	198	189	362
Pendleton           "	17225	712	4.1	2960	251	172	164	352
Broughton           "	11856	389	3.3	1740	134	147	140	345



Old-age  
Mortality.

had attained or passed beyond 60 years of age, as against 17·5 per cent. in the year 1890, and as against 15·7 per cent. in the year 1889. That this increased mortality of aged persons was due, in chief measure, to the fatality of acute lung diseases may be readily seen from the following short comparative table :—

	1889. Deaths of Persons of 60 years and over.	1890. Deaths of Persons of 60 years and over.	1891. Deaths of Persons of 60 years and over.
Bronchitis .....	157	193	235
Pneumonia.....	34	113	68
Totals.....	191	306	303

Thus for the last two years, half as many people again died in old age from acute lung diseases as died in the year 1889, and this fact is in itself almost sufficient to explain the increased death-rates in the two years for that period of life.

## Causes of deaths

**Classification of Causes of Death.**—Of the 5,159 deaths from all causes and at all ages, there were of—

Zymotic diseases, 737 deaths, or 14·2 per cent. of the total deaths.

Constitutional „ 912 „ 17·6 „ „ „ „

Developmental „ 406 „ 8·1 „ „ „ „

Local „ 2489 „ 48·2 „ „ „ „

Other „ 615 „ 11·9 „ „ „ „

In further division of the zymotic class into the six ordinary infectious diseases and diarrhoea, 559 were referable to the former, being 10·8 per cent of the total deaths ; and 178 to the latter, or 3·4 per cent. of the total deaths. The diarrhoea rate was thus much less than in either of the two preceding years, when the number of deaths were 269 in 1890, and 343 in 1889. In the past two years, however, the summer months were particularly distinguished for the comparative lowness of their temperature in this part of the country.

The mortality from the acute lung diseases has already been shown to have been excessive. It was, moreover, very slightly less than for the year 1890, the total number of deaths from respiratory diseases in that year having been 1,501, and in 1891 the number being 1,476. The large amount of mortality from pneumonia and bronchitis was, as in the year 1890, largely attributable to the recurrence of epidemic influenza. This disease prevailed all through the early months of the year, and did not finally disappear before the month of June ; it recurred, in a slight degree only,

TABLE D.

ANALYSIS OF MORTALITY—ANNUAL RATES PER 1,000 LIVING IN EACH OF THE REGISTRATION SUB-DISTRICTS OF SALFORD IN THE 52 WEEKS OF THE YEAR 1891 AND THE AVERAGE ANNUAL RATES IN THE PREVIOUS QUINQUENNIUM.

REGISTRATION SUB-DISTRICTS	ANNUAL RATE OF MORTALITY AT ALL AGES FROM ALL CAUSES AND FROM FIVE CLASSES OF DISEASE.											
	All Causes		Zymotic		Constitutional		Developmental		Local		Other Classes	
	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891
REGENT RD	27.5	26.8	5.7	3.4	4.2	4.3	2.0	2.3	12.6	13.1	2.9	3.7
GREENGATE	31.5	32.3	6.6	3.7	5.4	6.3	2.0	2.2	14.7	16.6	2.9	3.5
PENDLETON	23.8	25.5	4.7	4.7	4.8	4.6	1.7	2.0	10.6	11.6	2.1	2.6
BROUGHTON	19.5	19.5	3.9	3.0	3.4	3.7	1.3	1.4	9.1	9.3	1.7	2.1
BOROUGH...	25.7	26.0	5.3	3.7	4.4	4.6	1.8	2.0	11.8	12.5	2.5	3.1

REGISTRATION SUB-DISTRICTS	FROM ALL CAUSES				AT ALL AGES FROM							
	Under 1 Year per 1000 Births.		Over 60 years.		Six Zymotics		Diarrhœa.		*Acute Lung Diseases.		Phthisis	
	Five Years 1886-90	1891	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891	Five Years 1886-90	1891
REGENT RD	208	202	94.1	369	3.4	2.0	1.9	1.1	6.4	7.8	2.2	2.1
GREENGATE	200	226	108.4	198	4.1	2.3	1.9	1.0	7.6	10.5	3.0	3.2
PENDLETON	180	183	88.1	246	3.1	3.7	1.2	0.7	4.8	6.4	2.2	2.0
BROUGHTON	156	159	83.9	165	2.5	2.1	1.1	0.6	4.0	4.7	1.7	1.8
BOROUGH...	191	194	93.4	978	3.3	2.5	1.6	0.9	5.7	7.3	2.2	2.2

REGISTRATION SUB-DISTRICTS	ANNUAL RATE OF MORTALITY UNDER FIVE YEARS PER 1000 LIVING AT THAT AGE.											
	All Causes.		Nervous Diseases.		Six Zymotics		Diarrhœa.		*Acute Lung Diseases.		Tubercular Disease.	
	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	Deaths. 1891	Five Years 1886-90	Deaths. 1891
REGENT RD	90.0	957	10.0	71	15.3	114	12.9	80	17.5	250	7.2	99
GREENGATE	98.2	423	12.5	25	18.7	54	14.5	31	17.3	112	9.8	70
PENDLETON	74.6	611	9.5	34	13.2	151	8.0	35	13.0	141	10.5	80
BROUGHTON	60.4	297	7.7	36	10.1	44	8.7	21	12.0	63	5.6	35
BOROUGH...	81.5	2288	9.8	166	14.3	363	11.1	167	15.3	566	8.1	284

\*True Croup is not included amongst "Acute Lung Diseases" in this table, although it forms part of the Sub-order "Respiratory diseases" of the Registrar General. It is however included in the "Local Class" of diseases at the head of the table.

† See Foot note to Table E, page 21.



Causes of deaths towards the end of the year in the months of November and December. The number of deaths directly attributable to epidemic influenza was much more considerable than in the year 1890, and, as will be seen from the accompanying table, the mortality was greatest in the Regent Road and Pendleton Districts, where, indeed, the disease prevailed most extensively. The number of deaths from epidemic influenza in 1890 was 21, but in the year 1891 the number of deaths was 100. Thus we are led to suppose that the disease was more prevalent in the one year than the other. What the number of *cases* of the disease was cannot, however, be easily estimated, as the disease is not a notifiable one, but the total number of cases was undoubtedly a very large one. The following table shows the distribution of deaths from epidemic influenza during the year in the four districts of the Borough, and according to age-classes:—

EPIDEMIC INFLUENZA MORTALITY, 1891.

	TOTAL.	0-5	5-20	20-40	40-60	60—
Regent Road.....	32	3	2	9	7	11
Greengate .....	21	1	1	3	8	8
Pendleton .....	27	3	...	3	10	11
Broughton.....	20	3	1	3	10	3
Borough .....	100	10	4	18	35	33

From this it will be seen that the heaviest amount of mortality was upon persons who had passed the period of middle life, and were without such powers of recuperation, as persons short of that period of life generally possess. To this fact, and probably also to injudicious early exposure to cold after illness, may be attributed a large measure of mortality from the disease.

The deaths from phthisis numbered 436, as against 425 in the year 1890, and as against 473, the average number for the previous ten years 1881 to 1890. They were equal to a mortality-rate of 2.2 per 1,000 of population, as against 1.9 per 1,000 in 1890, and as against 2.2 per 1,000, the mean rate for the quinquennial period 1886-90.

Of infants under one year of age, 119 were reported to have died from convulsions, 32 between the ages of one and five years, and 2 over five years of age, making a total of 153 deaths from this cause, as against 143 in the year 1890.



TABLE E.

AVERAGE ANNUAL RATES OF MORTALITY PER 1,000 LIVING AT CERTAIN AGE-GROUPS IN THREE SUCCESSIVE QUINQUENNIA, AND THE DEATHS AT THOSE AGES IN THE YEAR 1891.

CAUSES OF DEATH.	All Ages.				Under 5 years.				5-20 years.			
	Quinquennial Means.			Year. 1891	Quinquennial Means.			Year. Deaths, 1891.*	Quinquennial Means.			Year. Deaths, 1891.*
	1876-80.	1881-85.	1886-90.		1876-80.	1881-85.	1886-90.		1876-80.	1881-85.	1886-90.	
All Causes .....	27.6	23.4	25.7	26.0	95.4	75.8	81.9	2288	6.4	5.3	6.5	333
Smallpox .....	0.5	0.0	0.0	...	1.0	0.1	...	...	0.5	0.0	0.0	...
Measles .....	0.8	0.7	0.9	0.6	5.1	4.6	5.5	120	0.1	0.1	0.1	9
Scarlatina .....	1.2	0.5	0.8	0.2	5.8	2.4	3.3	19	1.0	0.4	0.8	16
Diphtheria .....	0.1	0.1	0.5	0.4	0.5	0.5	2.2	51	0.1	0.1	0.6	20
Croup (not spasmodic).....	0.2	0.2	0.2	0.1	1.5	1.4	1.3	19	0.1	0.1	0.1	5
Whooping Cough .....	0.9	0.7	0.7	0.9	6.2	4.9	4.5	173	0.1	0.1	0.1	8
Cont'd Fevers. { Typhus .....	0.1	0.0	0.0	...	0.0	0.0	...	...	...	0.0	0.0	...
{ Enteric .....	0.4	0.3	0.4	0.4	0.8	0.3	0.2	...	0.4	0.4	0.5	36
{ Continued .....	0.1	0.0	0.0	...	0.4	0.1	0.0	...	0.1	0.0	0.0	...
Diarrhœa and Dysentery ..	1.8	1.4	1.6	0.9	11.2	8.5	9.9	167	0.1	0.0	0.0	2
Puerperal Fever .....	0.1	0.1	0.1	0.1	0.0	...	...	...	...	0.0	0.0	...
Other Zymotics .....	0.6	0.4	0.3	0.2	3.0	2.0	1.4	24	0.1	0.0	0.0	...
Phthisis .....	2.7	2.6	2.2	2.2	0.7	1.0	0.4	18	1.2	1.1	1.0	49
Other Tubercular Diseases	1.2	1.1	1.3	1.6	6.9	6.3	7.7	266	0.3	0.4	0.5	45
Diseases of { Brain .....	3.4	3.1	2.7	2.2	13.9	11.2	8.6	166	0.5	0.6	0.5	21
{ Heart .....	1.0	1.1	1.3	1.1	0.2	0.2	0.1	10	0.2	0.3	0.3	11
{ Lungs .....	6.0	5.1	5.7	7.3	19.4	15.2	16.3	566	0.6	0.5	0.7	53
{ Digestive System .....	1.0	0.9	1.0	1.1	1.6	2.1	2.6	109	0.2	0.2	0.2	15
Other Diseases .....	5.5	5.0	5.9	6.7	17.2	15.2	17.7	580	0.8	0.8	0.9	43
CAUSES OF DEATH.	20-40 years.				40-60 years.				Over 60 years.			
	Quinquennial Means.			Year. Deaths, 1891.*	Quinquennial Means.			Year. Deaths, 1891.*	Quinquennial means.			Year. Deaths, 1891.*
	1876-80.	1881-85.	1886-90.		1876-80.	1881-85.	1886-90.		1876-80.	1881-85.	1886-90.	
All Causes .....	10.6	9.4	9.3	617	26.0	24.0	27.0	943	85.5	81.7	93.4	978
Smallpox .....	0.6	0.0	0.0	...	0.3	0.0	0.0	...	0.1	0.0	...	...
Measles .....	...	...	0.0	1	...	...	...	...	...	...	...	...
Scarlatina .....	0.1	0.0	0.0	1	...	0.0	0.0	...	...	...	...	...
Diphtheria .....	...	0.0	0.0	4	...	0.0	0.0	2	...	0.0	0.0	1
Croup (not spasmodic).....	...	0.0	...	...	...	...	...	...	...	0.0	...	...
Whooping Cough .....	...	...	...	...	...	...	...	...	...	...	...	...
Cont'd Fevers. { Typhus .....	0.1	0.1	0.0	...	0.1	0.1	0.0	...	...	0.1	...	...
{ Enteric .....	0.3	0.3	0.5	31	0.3	0.3	0.4	8	0.5	0.1	0.1	1
{ Continued .....	...	0.0	0.0	...	0.1	0.0	...	...	0.3	0.1	...	...
Diarrhœa and Dysentery...	0.1	0.0	0.0	2	0.2	0.1	0.2	1	1.7	1.5	1.8	6
Puerperal Fever .....	0.1	0.2	0.2	22	...	0.0	0.1	3	...	...	...	...
Other Zymotics .....	0.1	0.1	0.1	4	0.3	0.3	0.2	2	0.8	0.5	0.5	3
Phthisis .....	4.3	4.0	3.4	207	4.9	4.2	4.2	144	1.9	1.6	1.9	18
Other Tubercular Diseases	0.1	0.1	0.1	5	0.1	0.1	0.1	6	0.1	0.0	0.0	2
Diseases of { Brain .....	0.6	0.6	0.6	34	2.8	2.8	3.0	96	11.9	13.9	13.5	122
{ Heart .....	0.7	0.7	0.7	48	2.4	2.5	3.2	84	6.5	7.6	8.9	69
{ Lungs .....	1.3	1.2	1.5	127	7.5	6.9	8.0	367	29.5	27.0	29.4	339
{ Digestive System .....	0.6	0.4	0.4	25	1.8	1.6	1.7	38	4.3	4.0	3.6	35
Other Diseases .....	1.6	1.7	1.7	106	5.1	5.0	5.9	192	27.9	25.2	33.7	382

\* The Rates at the different Age-Groups for 1891 cannot be given in this Report, as the Registrar-General has not yet published the number of persons living at those ages at the Census of 1891, but the rates will be published in my next Annual Report, with those of 1892.



## Causes of deaths

The diarrhoea mortality for the year 1891 was less than for either of the two previous years, as has already been pointed out. But the diarrhoea-mortality among children under five years of age in the three years is also worthy of note, there having been 167 deaths in 1891, 227 deaths in 1890, and 298 deaths in 1889. The child death-rate from diarrhoea was, therefore, during the year 3·2 per cent. of the total deaths, as against 4·1 per cent. in 1890, and as against 6·1 per cent. in 1889. It was, moreover, 94·0 per cent. of the total deaths from this disease, as against 80·7 per cent. in 1890, and 86·8 per cent. in 1889.

## Deaths from special diseases and groups of diseases

**Mortality from Special Diseases.**—Tables F1 and F2 show the causes of deaths for the year; but the former also shows the deaths from like causes for the preceding ten years. In Table F2 the classification of deaths is made for the four sub-registration districts of the borough, as well as for the borough as a whole, in six groups of ages. These tables are condensed from the larger and more detailed Table F3, and are thus more convenient for comparison with the tables of former years, and for general reference.

The following deduction from these tables shows the greater or less fatality of diseases in 1891 as compared with their corrected decennial average numbers in the borough:—

Cause of Death.	Diminution in 1891.	Excess in 1891.
Small-pox .....	3 .....	—
Measles .....	23 .....	—
Scarlet fever .....	88 .....	—
Typhus fever.....	6 .....	—
Whooping cough .....	— .....	41
Diphtheria .....	— .....	14
Ill-defined fever .....	4 .....	—
Enteric fever.....	— .....	1
Diarrhoeal diseases .....	113 .....	—
Phthisis and other tuberc: diseases.....	— .....	47
Premature birth ... ..	— .....	19
Brain and nervous diseases .....	130 .....	—
Heart diseases .....	12 .....	—
Respiratory diseases.....	— .....	386
Urinary diseases .....	10 .....	—
Atrophy and other ill-defined causes ...	— .....	119
All other causes .....	— .....	86
	<hr/> 389	<hr/> 713
Balance of excess in 1891...		324
Balance of excess in 1890...		340

TABLE F1.

CAUSES OF DEATH REGISTERED IN EACH OF THE TEN YEARS 1881-90,  
IN 1891, AND THE AVERAGE DECENNIAL NUMBER, CORRECTED FOR  
INCREASE OF POPULATION.

	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	Corr'ted Average	1891
All Causes .....	4000	4265	4287	4486	4283	4672	4856	4775	4877	5533	4835	5159
Small Pox .....	7	18	...	...	1	...	...	8	...	...	3	...
Measles .....	38	167	156	100	178	47	320	132	220	103	153	130
Scarlet Fever .....	84	81	82	144	62	169	155	101	184	122	124	36
Typhus Fever .....	7	12	3	10	10	1	1	7	2	4	6	...
Whooping Cough .....	160	152	105	131	129	127	64	222	59	182	140	181
Diphtheria .....	20	18	24	22	17	12	21	61	206	206	64	78
Ill-defined Fever .....	9	5	6	8	5	5	2	3	2	...	4	...
Enteric Fever .....	42	46	64	81	48	61	82	90	112	83	75	76
Simple Cholera .....	4	3	...	3	2	8	1	1	3	5	3	1
Diarrhoea, Dysent: .....	160	237	210	374	244	393	339	184	340	256	288	177
Venereal Affections .....	21	38	56	53	41	35	27	41	34	30	40	21
Erysipelas .....	15	25	19	15	21	7	14	13	15	7	16	6
Pyæmia .....	4	7	9	6	1	3	8	7	7	16	7	6
Puerperal Fever .....	15	13	9	8	11	7	8	18	11	20	12	25
Other Zymotics .....	11	4	6	5	4	3	4	8	4	3	5	...
Parasitic Diseases .....	2	2	4	4	5	7	9	4	5	5	8	5
Dietic Dis: Intemp: .....	22	26	17	15	21	25	17	20	17	17	20	21
Rheumatic Fever .....	6	11	15	19	13	20	26	20	17	16	17	6
Cancer .....	89	77	73	93	96	90	94	103	109	100	96	103
Tabes Mesenterica .....	76	98	82	74	84	119	98	79	80	107	95	112
Tuberc: Mening: .....	75	82	96	93	95	95	60	75	115	171	101	165
Phthisis .....	451	437	489	477	487	489	433	446	365	425	473	436
Scrofula .....	16	19	27	31	41	70	49	35	50	78	44	47
Constit: Dis: (other) ...	27	23	33	40	28	23	35	39	60	37	37	43
Prem: Birth .....	117	106	97	121	115	144	124	113	105	128	123	142
Devel: Dis: & Cong: Def: ..	9	19	20	20	25	20	23	25	21	11	19	15
Old Age .....	108	132	144	119	123	145	175	203	216	257	170	249
Apoplexy and Paralysis ...	150	150	182	160	161	161	192	166	172	182	176	180
Epilepsy .....	18	18	27	16	18	16	27	18	27	11	21	21
Convulsions .....	197	269	171	178	190	189	203	217	182	143	204	153
Brain & Nerv: Dis: (other) ..	178	212	188	180	162	160	182	173	107	58	168	85
Heart Diseases .....	192	191	211	194	220	241	251	224	249	261	234	222
Croup .....	28	46	54	52	36	32	46	56	51	28	45	24
Bronchitis .....	636	495	544	524	559	629	556	569	502	660	596	737
Pneumonia .....	292	314	317	317	350	334	416	413	375	743	406	588
Lung & Respr: Dis: (other) ..	56	49	71	54	54	41	72	83	63	70	64	127
Teething .....	5	3	13	32	7	1	2	2	12	37	12	61
Diges: Org: Dis: .....	142	153	181	168	151	171	169	172	181	219	179	161
Urinary Org: Dis: .....	64	63	65	75	68	99	72	96	83	86	81	71
Parturition .....	39	48	12	30	33	33	35	36	39	25	35	25
Gener: Orgs: Dis: .....	7	7	11	6	6	7	13	18	7	3	9	4
Other Local Diseases .....	11	5	19	13	33	43	35	30	27	36	26	30
Accident .....	86	80	90	91	98	110	123	112	111	123	107	144
Homicide .....	3	3	3	2	1	1	3	9	2	2	3	...
Suicide .....	7	8	12	8	7	15	14	25	13	16	14	14
Atrophy .....	208	187	186	218	174	214	209	242	243	323	231	303
Ill-defined Causes .....	86	106	84	102	48	49	47	56	72	118	81	128



1891.	0-1 Years.					1-5 Years.					5-20 Years.				
	Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.	Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.	Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.
All Causes .....	601	267	339	192	1399	356	156	272	105	889	124	53	87	69	333
Small Pox .....															
Measles .....	5	4	9	3	21	29	18	42	10	99	3	4	2	2	9
Scarlet Fever .....						6	4	8	1	19	3		8	5	16
Typhus .....															
Whooping Cough .....	19	9	26	8	62	39	12	47	13	111	2		4	2	8
Diphtheria .....	2	2	1	1	6	14	5	18	8	45	3	3	6	8	20
Ill-defined Fever .....															
Enteric Fever .....											18	7	4	7	36
Simple Cholera .....															
Diarrhoea, Dysent : .....	68	26	28	20	142	12	5	7	1	25	1	1			2
Venereal Affections .....	6	8	3	2	19										
Erysipelas .....	2				2	2				2					
Pyæmia .....			1		1										
Puerperal Fever .....															
Other Zymotics .....															
Parasitic Diseases .....	2		1	1	4										
Dietic Dis : Intemp : .....															
Rheumatic Fever .....											1		1	1	3
Cancer .....											1				1
Tabes Mesent : .....	23	19	11	8	61	15	13	7	4	39	3		4	4	11
Tubercul : Mening : .....	16	11	18	4	49	34	17	25	12	88	8	5	5	7	25
Phthisis .....	2	3	4	2	11	2		2	3	7	19	10	12	8	49
Scrofula .....	4		6	1	11	3	7	7	1	18	1	1	5	2	9
Constit : Dis : (other) .....	4		2		6	2	1	3	2	8	2			1	3
Prem : Birth .....	75	20	33	14	142										
Devel Dis : & Cong : Def : .....	5		6	4	15										
Old Age .....															
Apoplexy and Paralysis .....													1	1	2
Epilepsy .....		1			1			1		1	4	2	1		7
Convulsions .....	49	19	23	28	119	15	3	7	7	32	1		1		2
Brain & Nerv : Dis : (other) .....	2	1	1	1	5	5	1	2		8	3	1	6		10
Heart Diseases .....		1	1	4	6	3		1		4	3	2	3	3	11
Croup .....		2			2	5	3	9		17	3	1	1		5
Bronchitis .....	76	41	52	17	186	35	20	13	13	81	1	1	2		4
Pneumonia .....	55	25	24	15	119	79	25	46	14	164	17	8	11	7	43
Lung & Respir : Dis : (other) .....	1	1	1	2	5	4		5	2	11	2	1	1	2	6
Teething .....	8	9	6	2	25	15	7	6	8	36					
Diges : Org : Dis : of .....	8	9	14	1	32	8	2	5	1	16	11	1	1	2	15
Urinary Org : Dis : of .....	1	1			2	1				1	2			1	3
Parturition, dis : of .....		1			1							1	1	1	3
Gener : Orgs : dis : of .....															
Other Local dis : .....		2	1	2	5	2	2	3	2	9	3		1	4	8
Accident .....	18	8	12	2	40	11	3	5	1	20	9	3	4	1	17
Homicide .....															
Suicide .....											1				1
Atrophy .....	135	40	48	46	269	15	8	2	1	26		1			1
Ill-defined Causes .....	15	4	7	4	30			1	1	2	2	1			3



20—40 Years.					40—60 Years.					60 Years and Upwards.					Borough All Ages for year.
Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.	Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.	Regent Rd.	Greengate.	Pendleton.	Broughton.	Borough.	
258	108	157	94	617	419	214	194	116	943	369	198	246	165	978	5159
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	130
...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	36
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	181
2	...	...	2	4	1	...	...	1	2	...	1	...	...	1	78
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	2	8	7	31	3	2	2	1	8	...	...	...	1	1	76
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
1	...	...	...	1	1	...	...	...	1	2	...	3	1	6	177
...	...	...	...	...	1	...	...	...	1	1	...	...	...	1	21
...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	6
1	1	1	1	4	1	...	...	...	1	...	...	...	...	...	6
9	2	6	5	22	1	...	1	1	3	...	...	...	...	...	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	5
3	...	2	1	6	2	4	7	...	13	2	...	...	...	2	21
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	1	1	3	...	...	...	...	...	...	...	...	...	...	6
3	3	3	5	14	23	4	9	11	47	14	6	13	8	41	103
...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	112
1	1	1	...	3	...	...	...	...	...	...	...	...	...	...	165
82	42	52	31	207	60	38	28	18	144	1	6	5	6	18	436
1	...	...	...	1	4	1	...	1	6	1	...	1	...	2	47
7	...	2	...	9	2	3	3	1	9	3	2	3	...	8	43
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	142
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	...	4	1	3	1	9	95	48	61	36	240	249
4	3	3	1	11	28	14	17	8	67	43	21	17	19	100	180
2	...	3	1	6	1	1	1	...	3	3	...	...	...	3	21
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	153
10	3	2	2	17	13	3	7	3	26	6	6	5	2	19	85
16	9	18	5	48	33	12	28	11	84	22	7	20	20	69	222
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
18	8	4	1	31	102	60	21	17	200	88	64	52	31	235	737
27	12	20	13	72	55	28	25	14	122	24	8	18	18	68	588
12	4	4	4	24	14	8	12	11	45	12	8	12	4	36	127
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61
9	3	7	6	25	15	10	9	4	38	20	5	5	5	35	161
5	3	5	3	16	11	8	5	2	26	6	4	9	4	23	71
9	2	5	1	17	1	1	1	1	4	...	...	...	...	...	25
...	...	...	1	1	1	1	...	1	3	...	...	...	...	...	4
3	...	...	...	3	3	1	...	1	5	...	...	...	...	...	30
8	6	4	2	20	10	5	7	4	26	6	4	7	4	21	144
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	2	1	...	5	2	3	...	...	5	2	...	...	1	3	14
...	...	...	...	...	1	...	1	...	2	2	1	1	1	5	303
6	2	3	...	11	26	6	7	4	43	16	7	12	4	39	128



**TABLE F3.**  
DEATHS REGISTERED IN SALFORD, FROM ALL CAUSES DURING THE YEAR 1891.

DISEASES.	AGES IN YEARS.																												
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	Total.		1 to 5	5 to 20	20 to 40	40 to 60	60 to 80 and upwards.
I. SPECIFIC FEVERS, OR ZYMOTIC DISEASES.....	253	148	67	54	32	54	19	18	28	18	8	11	7	4	2	3	6	1	2	...	1	1	737	301	91	65	16	11	
II. PARASITIC DISEASES.....	4	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	5	21	...	...	...	...		
III. DIETIC DISEASES.....	138	90	36	22	12	32	28	41	54	52	64	68	65	58	42	41	38	16	9	6	...	...	912	160	101	238	206	60	
IV. CONSTITUTIONAL DISEASES.....	157	...	...	...	...	...	...	...	...	...	...	...	...	1	...	8	22	38	70	61	30	19	406	...	...	...	...	9240	
V. DEVELOPMENTAL DISEASES.....	508	229	75	39	37	38	32	49	43	59	67	102	113	162	184	164	201	159	135	56	27	10	2489	380	119	271	623	588	
VI. LOCAL DISEASES.....	40	6	5	7	2	8	6	4	5	5	11	4	7	4	10	10	11	5	3	4	1	...	158	20	18	25	31	24	
VII. DEATHS FROM VIOLENCE.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
VIII. DEATHS FROM ILL-DEFINED & NOT SPECIFIED CAUSES.....	299	20	8	...	...	2	...	2	2	2	2	5	10	9	9	17	15	18	7	3	...	1	431	28	4	11	45	44	
TOTALS.....	1399	493	191	122	83	134	85	114	134	137	153	193	207	240	252	244	294	238	226	130	59	31	5159	889	333	617	943	978	
I.-Zymotic Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
I. Miasmatic Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sm: Pox { Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Unvaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
No Statement	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	21	56	22	14	7	9	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever	...	6	1	6	6	14	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough	62	54	29	18	10	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria	6	9	11	16	9	16	4	...	...	3	...	1	...	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	
Simp: Contd: Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Miasm: Dis: (other)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2. Diarrheal Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Simp: Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhoea, Dysentery	142	22	3	...	...	1	...	1	...	1	...	...	...	1	...	...	1	1	2	...	1	1	1	177	25	2	1	1	6
3. Malarial Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Ague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	





TABLE F3.—(Continued.)

DISEASES.	AGES IN YEARS.																						Total.	1 to 5	5 to 20	20 to 40	40 to 60	60 and upwards.
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 and upwards.						
<b>VI.—Local Diseases.</b>																												
1. Dis. of NERVOUS SYSTEM.																												
Brain and Mem : Inflamm :	2	1	...	1	1	...	2	5	1	2	1	3	2	2	3	1	1	1	1	...	...	...	30	3	7	8	3	
Apoplexy and Paralysis	...	...	...	...	...	1	...	1	...	3	1	7	12	18	17	20	34	25	25	7	7	2	180	...	2	11	67	
Insanity, Gen : Par : Insane	...	...	...	...	...	...	...	...	...	...	5	2	1	3	3	3	5	2	3	...	...	1	30	...	2	7	10	
Epilepsy	1	...	...	...	...	...	...	...	...	...	1	2	3	...	...	...	2	1	...	...	...	...	21	1	7	6	3	
Convulsions	119	19	7	5	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	153	32	2	...	...	
Larynx : Strid : (Spasm Glottis)	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	5	...	...	...	
Sp: Ord: D: Parap: Par: Agit:	...	...	...	...	...	...	...	...	...	...	1	...	1	1	4	2	...	2	1	2	...	...	15	...	1	1	8	
Nervous Dis: (other)	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	
2. Dis. of ORG: SPECIAL SENSE.																												
Ear—Eye—Nose—Dis:	2	3	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	9	4	2	...	1	
3. Dis. of CIRCULATORY SYS:																												
Pericarditis	...	...	...	...	...	1	1	2	1	1	...	...	...	...	...	...	...	1	...	...	...	...	8	1	4	2	...	
Endocarditis (Acute)	...	...	...	...	...	...	1	1	...	...	1	...	2	1	...	...	...	...	...	...	...	...	5	...	1	1	3	
Valvular Dis:	5	1	...	...	...	1	1	2	3	4	6	10	9	13	7	9	14	7	7	2	...	...	102	2	4	23	38	
Heart Diseases (other)	1	...	...	...	...	1	1	1	3	2	3	10	6	10	16	9	9	12	9	5	2	...	100	1	2	18	41	
Aneurism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	37	
Embolism, Thrombosis	...	...	...	...	...	...	...	...	...	1	2	1	...	1	...	...	...	...	...	...	...	...	5	...	...	4	1	
Blood Vessels (other Dis: of).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	
4. Dis. of RESPIRATORY SYS:																												
Laryngitis	1	1	1	...	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	6	4	...	...	...	
Croup	2	4	5	5	3	4	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	24	17	5	...	...	
Asthma, Emphysema	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	
Bronchitis	186	53	18	4	6	3	...	1	2	2	12	15	25	47	65	63	76	60	58	25	13	3	737	81	4	31	200	
Pneumonia	119	97	35	18	14	16	12	15	14	22	16	20	26	29	34	33	27	18	11	5	3	4	588	164	43	72	122	
Pleurisy	1	...	...	...	...	...	...	...	...	2	...	...	...	1	3	3	1	1	...	...	...	...	14	...	...	4	7	
Respiratory Dis: (other)	3	3	1	2	1	1	2	3	5	6	4	4	7	8	12	9	9	8	10	5	2	...	105	7	6	19	36	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<b>5. Dis: OF DIGESTIVE SYSTEM.</b>																												
Teething .....	25	33	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61	36	...	...	...	...
Sore Throat (Quinsy) .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stomach (Diseases of) .....	7	2	1	...	...	...	...	1	...	...	...	...	...	2	2	...	2	1	...	...	...	...	23	3	1	4	5	3
Enteritis .....	16	6	2	1	2	1	...	2	...	1	1	1	1	2	...	...	1	1	1	...	...	...	39	11	3	3	3	3
Intestine (Obst: Dis: of) .....	4	...	...	...	...	...	1	1	1	1	...	...	1	1	2	...	2	5	4	1	...	...	24	2	2	2	4	12
Peritonitis .....	1	...	...	1	...	...	1	7	2	4	...	2	2	2	1	1	3	2	...	...	...	...	27	1	8	8	4	5
Ascites .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Liver (Cirrhosis of) .....	...	...	...	...	...	...	...	...	...	...	...	6	3	6	3	4	5	3	2	...	...	...	32	...	6	16	10	...
Jaundice, Liver Dis: (other) .....	3	...	...	...	...	...	...	...	...	...	1	1	...	3	1	2	1	1	...	...	...	...	13	...	2	6	2	...
Digest: Syst: (other Dis: of) .....	1	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	...	...	...
<b>6. Dis: OF LYMPHATIC SYSTEM.</b>																												
Lymph: Spleen Dis: .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>7. Dis: OF GLAND-LIKE ORG: OF UNCERTAIN USE.</b>																												
Bronchocele, Addison's Dis: ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>8. Dis: OF URINARY SYSTEM.</b>																												
Nephritis .....	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	1	...	...
Bright's Dis: Albuminuria .....	1	...	...	...	...	...	1	1	2	...	3	7	6	7	3	3	7	5	4	2	...	...	52	...	2	12	19	18
Bladder, Prost: (Dis: of) .....	...	...	...	...	...	...	...	...	1	1	...	...	1	2	1	1	...	3	...	...	...	9	...	...	2	4	3	...
Urinary Org: (Dis: of) .....	1	...	...	...	...	...	...	...	1	...	...	...	...	2	1	...	2	...	...	...	...	7	...	...	1	3	2	...
<b>9. Dis: OF REPRODUCTIVE SYS:</b>																												
<b>A. Organs of Generation.</b>																												
Male Organs .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	1	3	...
Female Organs .....	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>B. of Parturition.</b>																												
Abortion, Miscarriage .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Puerperal Convulsions .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Plac: Prev: Flooding .....	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
Childbirth (other Accid: of) ...	1	...	...	...	...	...	...	3	1	3	6	5	2	1	...	...	...	...	...	...	...	22	...	3	15	3	...	...
<b>10. Dis: OF BONES &amp; JOINTS.</b>																												
Caries, Necrosis .....	...	...	2	...	1	2	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	8	3	4	...	1	...	...
Arthr: Ost: Periostitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bone, Joint, (Diseases of) .....	2	1	...	1	...	...	1	1	2	...	...	1	...	...	2	...	...	...	...	...	...	11	2	2	3	2	...	...
<b>11. Dis: OF INTEGUMENT: SYS:</b>																												
Carbuncle, Phleg: Cellulitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Integ: Diseases (other) .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	1	...





## SUMMARY OF TABLE F3, 1890 AND 1891.

	No. of Deaths, 1890.	No. of Deaths, 1891.
<b>I.—Specific Febrile, or Zymotic Diseases:</b>		
1. Ordinary Zymotic Diseases .....	703	501
2. Diarrhoeal Diseases .....	261	178
3. Malarial " .....	...	...
4. Zoogenous " .....	...	...
5. Venereal " .....	30	21
6. Septic " .....	43	37
<b>II.—Parasitic Diseases .....</b>	<b>5</b>	<b>5</b>
<b>III.—Dietic Diseases .....</b>	<b>17</b>	<b>21</b>
<b>IV.—Constitutional Diseases .....</b>	<b>934</b>	<b>912</b>
<b>V.—Developmental Diseases .....</b>	<b>396</b>	<b>406</b>
<b>VI.—Local Diseases:</b>		
1. Diseases of Nervous System .....	394	439
2. Diseases of Organs of Special Sense .....	9	9
3. Diseases of Circulatory System .....	261	222
4. Diseases of Respiratory System .....	1501	1476
5. Diseases of Digestive System .....	256	222
6. Diseases of Lymphatic System .....	...	...
7. Diseases of Gland-like Organs of uncertain use .....	1	...
8. Diseases of Urinary System .....	86	71
9. Diseases of Reproductive System:		
(a) Diseases of Organs of Generation .....	3	4
(b) Diseases of Parturition .....	25	25
10. Diseases of Bones and Joints .....	20	19
11. Diseases of Integumentary System .....	6	2
<b>VII.—Violence:</b>		
1. Accident or Negligence .....	123	144
2. Homicide .....	2	...
3. Suicide .....	16	14
4. Execution .....	...	...
<b>VIII.—Ill-defined and not specified causes .....</b>	<b>441</b>	<b>431</b>
<b>TOTAL .....</b>	<b>5533</b>	<b>5159</b>



Zymotic  
mortality

**Mortality from certain Zymotic Diseases.**—The following tables are intended to show shortly the annual rates of mortality per 1,000 persons living in respect of certain zymotic diseases in Salford; their comparison with the annual rates and the means of the preceding five years; and their comparison, as far as possible, with the like rates for England and Wales, the 28 great English towns, and for London.

Of the diseases which have thus been tabulated, those which show a diminished death-rate for the year 1891, as against the mean rate for the preceding five years in Salford, are scarlet-fever, diphtheria, measles, diarrhoea, typhus-fever, enteric and the combined continued fevers. The only disease of this class which shows an excess over the quinquennial mean is whooping-cough. All this is very satisfactory. But, unfortunately, the quinquennial means for Salford are higher than those with which they can be correctly compared, and the same must be said in respect of the year 1891 itself, with the single consoling exception of typhus-fever. Still the fact that within the borough itself there are signs of decreasing mortalities from these particular zymotic diseases as compared with past years is an encouragement which must not be lost sight of, and it must serve to induce even greater efforts to control the spread of those diseases which are so commonly fatal to old and young alike. Moreover, it will be seen later on in this report, that the decreasing death-rate from these diseases is synonymous with a decreased prevalence of disease, and the encouragement to persevere in the removal of sources of infection is thus seen to be a very real one.

**SCARLET FEVER MORTALITY. RATES PER 1,000 OF THE POPULATION.**

	1886.	1887.	1888.	1889.	1890.	Mean.	1891.
England and Wales...	0·21	0·27	0·22	0·23	0·23	0·23	0·17
28 Great English Towns	0·25	0·39	0·29	0·30	0·31	0·31	0·18
London .....	0·17	0·34	0·28	0·18	0·19	0·23	0·14
<b>Salford .....</b>	<b>0·90</b>	<b>0·82</b>	<b>0·52</b>	<b>0·95</b>	<b>0·62</b>	<b>0·76</b>	<b>0·18</b>

**DIPHTHERIA MORTALITY. RATES PER 1,000 OF THE POPULATION.**

	1886.	1887.	1888.	1889.	1890.	Mean.	1891.
England and Wales ...	0·14	0·15	0·17	0·19	0·18	0·17	0·17
28 Great English Towns	0·16	0·18	0·21	0·26	0·24	0·21	0·21
London ...	0·20	0·23	0·30	0·37	0·31	0·28	0·32
<b>Salford .....</b>	<b>0·06</b>	<b>0·11</b>	<b>0·32</b>	<b>1·06</b>	<b>1·05</b>	<b>0·52</b>	<b>0·39</b>

WHOOPING COUGH MORTALITY. RATES PER 1,000 OF THE  
POPULATION. Zymotic Mortality.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

England and Wales ...	0·44	0·38	0·40	0·40	0·45	<b>0·41</b>	0·44
28 Great English Towns	0·54	0·62	0·58	0·48	0·59	<b>0·56</b>	0·63
London .....	0·68	0·70	0·70	0·40	0·73	<b>0·64</b>	0·67
<b>Salford</b> .....	<b>0·67</b>	<b>0·34</b>	<b>1·15</b>	<b>0·30</b>	<b>0·93</b>	<b>0·68</b>	<b>0·91</b>

MEASLES MORTALITY. RATES PER 1,000 OF THE POPULATION.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

England and Wales ...	0·41	0·58	0·33	0·49	0·42	<b>0·45</b>	0·42
28 Great English Towns	0·54	0·79	0·47	0·67	0·63	<b>0·62</b>	0·51
London .....	0·50	0·69	0·56	0·53	0·73	<b>0·60</b>	0·42
<b>Salford</b> .....	<b>0·25</b>	<b>1·68</b>	<b>0·69</b>	<b>1·13</b>	<b>0·52</b>	<b>0·85</b>	<b>0·65</b>

DIARRHŒA MORTALITY. RATES PER 1,000 OF THE POPULATION.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

England and Wales ...	0·84	0·69	0·43	0·61	0·56	<b>0·63</b>	0·45
28 Great English Towns	1·16	0·97	0·60	0·82	0·77	<b>0·86</b>	0·65
London .....	0·95	0·90	0·52	0·62	0·61	<b>0·72</b>	0·58
<b>Salford</b> .....	<b>2·09</b>	<b>1·78</b>	<b>0·96</b>	<b>1·75</b>	<b>1·30</b>	<b>1·58</b>	<b>0·89</b>

TYPHUS FEVER MORTALITY. RATES PER 1,000 OF THE  
POPULATION.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

London .....	0·00	0·00	0·00	0·00	0·00	<b>0·00</b>	0·00
<b>Salford</b> .....	<b>0·00</b>	<b>0·00</b>	<b>0·04</b>	<b>0·01</b>	<b>0·02</b>	<b>0·01</b>	<b>0·00</b>

ENTERIC FEVER MORTALITY. RATES PER 1,000 OF THE  
POPULATION.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

London .....	0·15	0·15	0·16	0·12	0·13	<b>0·14</b>	<b>0·13</b>
<b>Salford</b> .....	<b>0·32</b>	<b>0·43</b>	<b>0·47</b>	<b>0·58</b>	<b>0·42</b>	<b>0·44</b>	<b>0·38</b>

TOTAL CONTINUED FEVER MORTALITY. RATES PER 1,000  
OF THE POPULATION.

1886. 1887. 1888. 1889. 1890. Mean. 1891.

England and Wales ...	0·21	0·20	0·18	0·18	0·18	<b>0·19</b>	0·18
28 Great English Towns	0·23	0·22	0·20	0·20	0·19	<b>0·21</b>	0·20
London .....	0·17	0·16	0·17	0·14	0·14	<b>0·16</b>	0·14
<b>Salford</b> .....	<b>0·36</b>	<b>0·45</b>	<b>0·52</b>	<b>0·60</b>	<b>0·44</b>	<b>0·47</b>	<b>0·38</b>



Uncertified  
Deaths

**Uncertified Deaths.**—Of the 5,159 deaths during the year at all ages and from all causes, 4,711 were certified by registered medical practitioners, 269 were certified by the Coroner, and 179 deaths were uncertified by either medical practitioners or by the Coroner. The uncertified deaths were more by 30 than in the preceding year, but 15 fewer than the average for the preceding ten years, and gave a proportion of 3·5 per cent. of the total deaths as against the ten-year average of 4·3 per cent. It is certainly to be regretted that the rate of uncertified deaths was not as low as for the year 1890, when though there were many more total deaths there were fewer uncertified ones, and the rate per cent. of uncertified deaths was 2·7. But this is no fault on the part of the Sanitary Authority: it arises in chief part from social causes, and probably want of sufficiently early medical attendance. The following table shows the figures relating to this subject for the year 1891, and for the preceding ten years 1881 to 1890.

TABLE G.

CERTIFICATION OF THE CAUSES OF DEATH IN THE BOROUGH OF  
SALFORD, AND ITS FOUR REGISTRATION SUB-DISTRICTS,  
IN THE YEAR 1891.

	Total Deaths.	Certified by		Not Certified.	Proportion per cent. of Total Deaths.		
		Registered Medical Practitioners.	Coroner.		Certified by		Not Certified.
					Registered Medical Practitioners.	Coroner.	
Borough .....	5159	4711	269	179	91·4	5·2	3·5
Regent Road District	2127	1944	101	82	91·2	4·8	3·9
Greengate .....	996	875	81	40	88·0	8·2	4·0
Pendleton .....	1295	1198	65	32	92·5	5·4	2·5
Broughton .....	741	694	22	25	93·7	3·0	3·4
CORRESPONDING DATA FOR THE TEN YEARS 1881-90.							
Borough .....	45434	41426	2067	1941	91·2	4·6	4·3
Regent Road District	19435	17681	872	882	91·0	4·5	4·5
Greengate .....	9116	8136	544	436	89·4	6·0	4·8
Pendleton .....	10582	9705	449	428	91·8	4·3	4·0
Broughton .....	6301	5904	202	195	93·7	3·2	3·1



TABLE OF DEATHS DURING THE YEAR 1891, IN THE URBAN SANITARY  
AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES,

Localities.		Population at all ages.		Registered Births.	Mortality from all causes at subjoined ages.						
		Census, 1891	Estimated to the middle of 1891.		At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.
Total for Borough, exclusive of Public Institutions		196397	198717	7213	4432	1356	828	170	195	1140	743
Deaths in Salford Institutions.	Union Infirmary .....	634	...	...	463	23	8	3	19	208	202
	Workhouse .....	908	...	79	17	6	...	...	1	1	9
	Wilton Fever Hospital .	60	...	...	92	...	21	26	20	25	...
	Hope Sheds .....	...	...	...	...	...	...	...	...	...	...
	Royal Hospital and Dispensary .....	137	...	...	109	3	12	10	9	51	24
The subjoined numbers have also to be taken into account											
Deaths occurring outside Salford among persons belonging thereto.	Children's Hospital, Pendlebury .....	160	160	...	43	9	22	12	...	...	...
	Manchester Royal Infirmary .....	315	315	...	28	...	1	...	5	16	6
	Monsal Hospital.....	192	192	...	...	...	..	...	...	...	..
	St. Mary's Hospital...	...	...	...	6	2	...	...	2	2	...
	Cheetham Hospital...	...	...	...	...	...	...	...	...	...	...
Deaths occurring in Salford among persons not belonging to the town .....				31	...	3	2	3	17	6	
The subjoined numbers are the <b>Corrected Deaths</b> in the											
Borough of Salford .....		Pop. 1891 198136	Pop. 1891 198717	7213	5159	1399	889	219	248	1426	978
Registration Sub-Districts.	Regent Road .....	79025	79257	2975	2127	601	356	79	102	620	369
	Greengate .....	30707	30797	1182	996	267	156	33	36	306	198
	Pendleton .....	50540	50688	1850	1295	339	272	60	66	312	246
	Broughton .....	37864	37975	1206	741	192	105	47	44	188	165



DISTRICT OF SALFORD, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES,  
AND THE BIRTHS THEREIN DURING THE YEAR.

Mortality from subjoined causes, distinguishing deaths of children under five years of age.																					
	Small-pox.	Measles.	Scarlet-fever.	Diphtheria.	Croup.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Doubtful.	Diarrhoea and Dysentery.	Engl. Cholera.	Rheumatic Fev.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	Other Diseases.
Under 5...	120	11	39	19	172					156			3	1			18	531	10	49	1055
5 upwards	10	10	16	5	8		36			9		6	2	4	23		332	635	178	64	910
Under 5...					1					5								7			18
5 upwards							1							1			76	127	22	3	202
Under 5...										2											4
5 upwards										1				1				3			6
Under 5...			9	11														1			
5 upwards			7	11			39										1	7	1	1	4
Under 5...																					
5 upwards																					
Under 5...																				11	4
5 upwards																	6	18	9	32	29
in judging of the mortality of the Sanitary District.																					
Under 5...			1							4			1					11			14
5 upwards							1										2		2		7
Under 5...																		1			
5 upwards																	2	1	2	8	14
Under 5...																					
5 upwards															1			1			2
Under 5...																					
5 upwards																					
Under 5...			1																		2
5 upwards							1										1	4	2	10	10
Borough, and in the four Sub-Registration Districts thereof.																					
Under 5...	120	19	51	19	173					167			4	1			18	551	10	60	1095
5 upwards	10	17	27	5	8		76			10		6	2	5	25		418	788	212	98	1164
Under 5...	34	6	16	5	58					80			4				4	246	3	29	472
5 upwards	1	3	6	3	2		35			5		2		2	10		162	341	74	40	484
Under 5...	22	4	7	5	21					31							3	111	1	11	207
5 upwards	3		4	1			11			1				1	2		96	190	30	23	211
Under 5...	51	8	19	9	73					35				1			6	135	2	17	255
5 upwards	4	8	6	1	4		14			3		2	2	1	7		97	156	69	23	287
Under 5...	13	1	9		21					21							5	59	4	3	161
5 upwards	2	6	11		2		16			1		2		1	6		63	101	39	12	182



METEOROLOGY, AND REGISTERED DEATHS FROM ALL CAUSES, AND FROM CERTAIN  
PREVALENT DISEASES IN EACH WEEK OF THE YEAR.

Week.	Temperature of the Air.			Air Pres- sure.	Horizontal Movement of Air in Miles p. hour.	Mean Humidity. Complete Saturation. =100	Rainfall in Inches.	*Deaths registered from										
Date of ending.	Highest during the Week.	Lowest during the Week.	Mean Temperature.	Extreme range of Barometric changes.				All Causes.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhus Fever.	Enteric Fever.	Diarrhoea.	Respiratory Diseases.	Phthisis.
1891.	°	°	°															
Jan. 10	40.8	21.7	31.9	0.568	0.7	88	.080	150	...	8	...	2	4	...	2	1	60	6
17	43.8	27.8	35.1	0.474	1.0	88	...	128	...	6	3	2	7	...	2	...	37	10
24	48.7	17.0	35.6	1.065	1.6	92	1.818	105	...	6	2	3	3	...	2	...	40	6
31	51.6	36.0	44.4	0.286	2.3	88	.373	130	...	1	2	5	7	...	2	2	34	13
Feb. 7	51.4	34.7	43.5	0.439	0.6	88	.145	98	...	3	...	1	5	...	2	...	34	6
14	50.1	37.2	41.5	0.402	1.0	92	.042	109	...	4	1	3	6	...	3	...	19	6
21	52.7	27.6	37.3	0.356	0.1	94	...	109	...	6	...	1	10	...	1	...	24	12
28	56.7	29.0	42.0	0.543	0.4	84	.050	129	...	12	1	...	6	...	2	...	44	16
Mar. 7	56.2	35.2	45.7	0.566	3.3	86	.480	107	...	12	1	...	12	...	2	2	32	7
14	42.6	26.2	34.4	0.448	1.0	80	.100	116	...	6	1	3	8	...	...	3	33	8
21	50.7	31.0	39.9	0.609	1.6	85	.242	109	...	7	1	4	8	...	1	2	27	11
28	52.8	30.6	41.1	0.509	2.9	81	.635	101	...	5	...	4	8	...	2	1	37	8
April. 4	50.3	29.8	39.4	0.378	2.1	79	1.210	123	...	6	3	1	10	...	1	...	27	11
11	55.6	33.3	42.1	0.685	1.6	81	.342	103	...	2	3	4	2	...	...	2	27	10
18	54.7	34.8	42.7	0.136	1.0	81	.048	99	...	6	...	2	5	...	3	...	27	7
25	56.0	36.7	44.3	0.152	1.3	66	.050	85	...	6	2	...	7	...	...	...	14	7
May 2	60.0	37.0	48.2	0.618	2.3	72	.890	110	...	5	...	...	4	...	2	3	31	14
9	66.8	39.8	51.1	0.591	1.7	68	.120	149	...	4	3	1	5	...	...	1	61	12
16	75.0	39.6	52.7	0.642	1.7	65	.420	174	...	1	...	2	7	...	1	1	83	8
23	64.4	33.8	45.3	0.307	1.0	72	.420	160	...	6	1	3	5	...	...	1	74	8
30	67.6	41.5	48.7	0.242	1.9	75	.870	175	...	2	...	3	2	...	1	2	84	11
June 6	75.7	48.0	58.0	0.279	2.1	70	1.920	150	...	1	2	...	4	...	...	3	61	13
13	68.3	43.0	53.1	0.405	1.2	65	.035	88	...	...	...	2	5	...	...	1	40	10
20	79.0	50.2	58.2	0.394	0.8	74	.050	94	...	2	...	1	4	...	...	2	35	10
27	79.0	53.3	63.9	0.620	2.1	69	.730	88	...	...	...	...	4	...	3	1	28	6
July 4	72.6	50.8	60.7	0.301	1.9	65	.450	66	...	1	...	...	4	...	1	1	13	6
11	68.8	51.2	57.9	0.617	1.9	73	.528	81	...	1	...	...	3	...	...	2	15	3
18	80.0	54.0	62.3	0.512	0.9	68	.180	85	...	1	...	3	3	...	...	3	14	4
25	67.8	54.0	59.5	0.331	1.8	77	1.010	68	...	...	1	2	2	...	1	7	11	3
Aug. 1	67.1	50.0	56.5	0.479	1.7	77	.494	70	...	...	...	1	3	...	...	7	19	4
8	67.2	50.8	56.5	0.581	1.4	75	1.488	70	...	...	1	2	...	...	...	8	11	5
15	67.0	53.2	59.0	0.220	1.6	80	1.407	74	...	...	1	6	...	...	1	6	14	9
22	72.3	52.8	59.5	0.553	1.3	68	.520	86	...	1	1	1	2	...	2	8	9	16
29	66.3	50.0	56.4	0.516	2.4	79	1.886	69	...	...	...	...	1	...	2	7	11	6
Sep. 5	68.8	48.0	57.3	0.997	3.6	72	.750	74	...	2	1	1	...	...	...	11	9	3
12	82.5	47.7	63.5	0.333	0.9	67	.530	66	...	...	...	...	...	...	1	5	9	6
19	83.0	49.1	61.1	0.546	1.5	76	.815	83	...	...	...	3	2	...	...	9	8	4
26	67.2	47.0	54.4	0.587	3.0	80	.768	91	...	...	...	2	1	...	2	11	20	6
Oct. 3	68.7	44.6	54.0	0.673	2.7	79	.955	89	...	1	...	...	...	...	...	17	16	10
10	63.7	40.7	54.7	1.023	5.7	78	1.458	81	...	3	...	1	...	...	2	12	11	10
17	58.8	42.2	50.3	0.475	4.2	79	1.440	81	...	...	...	...	1	...	4	9	13	10
24	57.2	41.2	48.6	0.918	2.6	91	.762	74	...	...	...	...	...	...	2	3	19	3
31	55.6	35.0	46.4	0.811	1.9	78	...	84	...	...	5	...	1	...	2	2	18	5
Nov. 7	53.7	41.0	47.5	0.258	1.0	83	...	96	...	...	...	1	1	...	2	6	27	11
14	53.4	36.0	44.2	1.642	3.5	89	1.517	78	...	...	2	...	...	4	3	17	4	
21	55.9	40.2	46.4	0.627	2.5	89	.528	76	...	...	1	2	...	7	2	12	3	
28	47.1	31.8	38.1	0.284	1.4	91	.306	83	...	...	1	1	...	6	4	21	14	
Dec. 5	56.8	30.0	45.6	0.487	3.1	87	.897	92	...	...	1	2	...	4	2	24	18	
12	54.2	34.8	43.7	1.050	4.3	85	2.528	64	...	...	...	2	...	2	1	12	6	
19	52.1	34.9	41.5	1.686	2.2	87	.924	66	...	...	1	1	...	1	1	12	9	
25	47.9	19.5	31.0	0.899	1.1	85	.040	96	...	3	...	1	...	...	1	1	32	15
1892.																		
Jan. 2	52.0	35.0	42.1	0.719	3.5	86	1.260	124	...	2	...	1	1	...	1	2	46	6

III.

RECORD OF INFECTIOUS DISEASES AND  
MEASURES TAKEN TO PREVENT  
THEIR SPREAD.





# RECORD OF INFECTIOUS DISEASES

## AND MEASURES TAKEN TO PREVENT

### THEIR SPREAD.

**Notification of Infectious Diseases.**—There were 1,164 cases of notifiable zymotic diseases recorded in the Borough during the year, as against 2,177 cases in the year 1890. These numbers are not, however, properly comparable, as the notification of membranous croup and of erysipelas was not commenced in the Borough before the beginning of the second quarter of 1890. The decrease therefore in the prevalence of zymotic disease during the year 1891 is slightly greater than appears at first sight.

Notification of  
Disease.

The highest weekly incidence of the principal notifiable zymotic diseases—namely, small-pox, scarlet-fever, diphtheria, enteric-fever, and typhus-fever,—and the lowest, were as follows:—

1891.		Fresh Cases.
Week.		
43rd .....	Highest number .....	48
23rd .....	Lowest „	6

The mean weekly incidence of *these particular zymotic diseases*, which numbered 1,093, was 21, which is less than in the year 1890, as may be seen from the following tabulation:—

The mean weekly incidence of fresh cases in 1883 was					23
„	„	„	„	„	1884 „ 33
„	„	„	„	„	1885 „ 18
„	„	„	„	„	1886 „ 36
„	„	„	„	„	1887 „ 36
„	„	„	„	„	1888 „ 35
„	„	„	„	„	1889 „ 47
„	„	„	„	„	1890 „ 39
„	„	„	„	„	1891 „ 21



## CASES NOTIFIED DURING 1891.

Weeks.	Total.	Smallpox.	ScarletFever.	Diphtheria.	Membranous Group.	Enteric Fever.	Typhus Fever.	Continued Fever.	Puerperal Fever.	Erysipelas.
1	28	...	9	6	...	12	...	...	...	1
2	23	...	10	9	...	3	...	...	...	1
3	27	...	9	10	1	6	...	...	...	1
4	30	...	6	12	...	8	...	...	1	3
5	24	...	12	5	...	5	...	...	1	1
6	22	...	14	5	...	3	...	...	...	...
7	27	...	16	4	...	4	...	...	...	3
8	25	...	9	5	...	8	...	...	1	2
9	23	...	8	6	1	6	...	...	1	1
10	21	...	10	4	1	4	...	...	...	2
11	11	...	4	6	...	1	...	...	...	...
12	18	...	7	4	1	5	...	...	...	1
13	17	...	8	6	1	2	...	...	...	...
14	25	...	11	4	...	7	...	...	...	3
15	19	...	8	5	1	5	...	...	...	...
16	14	...	5	2	...	6	...	...	...	1
17	30	...	18	4	...	7	...	...	...	1
18	16	...	8	6	1	1	...	...	...	...
19	8	...	1	4	1	1	...	...	1	...
20	7	...	1	4	...	2	...	...	...	...
21	7	...	4	3	...	...	...	...	...	...
22	16	...	8	5	...	1	...	...	1	1
23	7	...	3	...	...	3	...	...	...	1
24	13	...	8	2	1	1	...	...	...	1
25	9	...	2	4	...	2	...	...	...	1
26	9	...	5	1	...	2	...	...	1	...
27	9	...	3	3	...	3	...	...	...	...
28	12	...	3	3	...	3	...	...	...	3
29	12	...	8	3	...	...	...	...	...	1
30	13	...	7	4	...	2	...	...	...	...
31	11	...	3	6	...	1	...	...	...	1
32	28	...	11	7	...	7	...	2	...	1
33	17	...	3	3	...	10	...	1	...	...
34	22	...	14	2	...	6	...	...	...	...
35	30	...	13	4	...	13	...	...	...	...
36	12	...	7	3	...	1	...	...	...	1
37	24	...	11	6	...	5	...	...	...	2
38	18	...	9	4	...	4	...	...	...	1
39	25	...	10	4	...	11	...	...	...	...
40	34	...	13	3	...	16	...	...	...	2
41	29	...	14	1	...	14	...	...	...	...
42	32	...	12	2	...	16	...	...	1	1
43	52	...	18	8	...	22	...	1	...	3
44	26	...	10	4	...	9	...	1	...	2
45	43	...	11	3	...	23	...	...	3	3
46	45	...	14	6	...	24	...	...	...	1
47	28	...	11	2	...	13	...	...	...	2
48	41	...	16	5	1	18	1	...	...	...
49	44	...	20	4	...	20	...	...	...	...
50	32	...	12	1	...	15	...	...	1	3
51	30	...	22	4	...	4	...	...	...	...
52	19	...	3	1	...	13	...	...	1	1
	1164	...	482	222	10	378	1	5	13	53

The following figures show the total numbers of cases of notifiable diseases, *exclusive of membranous croup and erysipelas*, during each year since notification came into force within the Borough, together with their yearly rates per 1,000 of the population *as now corrected after the Census of 1891*.

Year.	No. of Cases.	Rates per 1,000 of population.
1883.....	1,195 .....	or 6.5
1884.....	1,694 .....	or 9.2
1885.....	960 .....	or 5.1
1886.....	1,902 .....	or 10.1
1887.....	1,889 ... ..	or 9.9
1888.....	1,971 .....	or 10.2
1889.....	2,476 .....	or 12.7
1890.....	2,068 .....	or 10.5
1891.....	1,101 .....	or 5.5

The following table shows the total numbers of cases in each of the four quarters of the year *from all notifiable diseases* :—

#### CASES NOTIFIED DURING THE YEAR 1891.

Quarters.	Total Cases.	Small-pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Enteric Fever.	Typhus Fever.	Continued Fever.	Puerperal Fever.	Erysipelas.
1st .....	296	...	122	82	5	67	...	...	4	16
2nd .....	180	...	82	44	4	38	...	...	3	9
3rd .....	233	...	102	52	...	66	...	3	...	10
4th .....	455	...	176	44	1	207	1	2	6	18
Year .....	1164	...	482	222	10	378	1	5	13	53

#### Amount of Hospital Isolation of Infectious Diseases.

—Of the 1,164 notified cases of infectious sickness, 532, or 45.7 per cent., were isolated by the Corporation during the year ending December 31st, 1891, as against 850, or 39.0 per cent., in the year 1890. The following table shows the district proportions of isolations of such cases occurring in them from January 1st to December 31st, 1891, in the Wilton Hospital and Hope Fever Sheds :—

Hospital Isolation.



Hospital isolation

District.	Total number of cases notified.	Total number of notified cases isolated in Hospitals.	Percentage of cases isolated in Hospital.	Number of cases sent to Hospital under mistaken diagnosis.	Percentage of mistaken cases to total cases isolated.
Regent Road .....	407	206	50.6	22	10.6
Greengate .....	150	98	64.6	8	8.2
Pendleton .....	356	157	44.1	6	3.8
Broughton .....	251	72	28.7	4	5.5
<b>Borough .....</b>	<b>1164</b>	<b>533</b>	<b>45.7</b>	<b>40</b>	<b>7.5</b>

There were thus 410 fewer cases isolated at the expense of the Corporation than in the year 1890, and 599 fewer than in the year 1889. At the same time the percentage of cases isolated to the total number notified was higher than in the year 1890, and was the same as for the year 1889 (vide p. 77).

Disinfection of Premises.

**Disinfection of Premises.**—There were 1,045 houses disinfected and cleansed by the Health Department during the year on account of infectious diseases having occurred in them, according to the rules now in force within the Borough.

The following table shows the distribution of the houses thus dealt with :—

Houses.	Regent Road.	Greengate.	Pendleton.	Broughton	Boro.
Stoved with Sulphur, and paper stripped off walls	195	105	227	142	669
Stoved with Sulphur only .....	163	45	111	57	376
<b>Totals.....</b>	<b>358</b>	<b>150</b>	<b>338</b>	<b>199</b>	<b>1045</b>

In compliance with the request named in my last Annual Report the previous unsatisfactory status of the disinfectors for the Borough has been altered. They are now a permanent staff,

and I have had no cause to regret the advice given that they should cease to be a varying and only temporarily employed body of men attached to the Health Department. When not employed in the work of disinfection these men help in the ordinary inspection of the Borough for nuisances, and add materially to the efficiency of the inspecting staff.

**Amount of Disinfection of Bedding and Clothing by the Corporation.**—There were 568 parcels of infected bedding and clothing disinfected by means of high-pressure steam at the sanitary station attached to the Wilton Hospital, as against 1,249 parcels in the year 1890, and 1,324 parcels in the year 1889. They were distributed as follows:—Regent Road, 192; Greengate, 114; Pendleton, 105; Broughton, 157. There were besides 13 lots of bedding destroyed, these being distributed as follows:—Regent Road, 2; Greengate, 1; Pendleton, 4; Broughton, 6.

Disinfection of  
Bedding, &c.

**Preventive Measures in Public Elementary Schools.**—There has been no need for any special precautions to be taken during the year in any of the public elementary schools on account of the prevalence of any of the zymotic diseases.

Protection of  
Schools.

**Prevalence and Distribution of Zymotic Diseases.**—There were, as already reported, 1,164 cases of notifiable zymotic diseases in the Borough during the year, and these were distributed to the several districts as shown in the succeeding table. But there was, besides, considerable prevalence of measles and whooping-cough, which though not notifiable are yet infectious diseases, and some notion of the extent of such prevalence may be gathered from an examination of the mortality tables. From these it may be seen that there died of measles 120 children under five years of age, and ten persons over five years of age, and of whooping cough 172 children under five years of age, and eight persons over five years of age. The greatest amount of fatality from measles appears to have been in the Pendleton and Greengate districts, and from whooping-cough in the Pendleton and Regent Road districts.

Disease Preva-  
lence.

In accordance with my previous custom, I herewith append maps showing by means of coloured dots the location of houses in the Borough where cases of scarlet-fever, diphtheria, and enteric-fever occurred during the year. The maps are three in number, one map being illustrative of the extent to which one of these diseases was prevalent. This method makes the prevalence of diseases much clearer than if the three diseases were grouped together in one map. The utility of these maps must increase year by year, as by their means it becomes possible to accurately determine the rise or fall of zymotic disease prevalence in particular districts of the Borough, and to indicate the directions in which administrative measures for coping with them are most required.



The following summary table shows in figures the facts which are more elaborately shown in detail in the maps themselves.

TABLE SHOWING THE DISTRICT DISTRIBUTION OF NOTIFIED CASES OF INFECTIOUS DISEASES DURING 1891.

	Small-pox	Scarlet-fever.	Diphtheria.	Membranous Group.	Enteric-fever.	Typhus-fever.	Continued-fever.	Puerperal-fever.	Erysipelas.	Total.
Regent Road.....	...	130	67	2	187	...	4	4	13	407
Greengate .....	...	65	31	1	40	...	2	...	11	150
Pendleton .....	...	164	73	6	87	1	...	4	21	356
Broughton .....	...	124	50	1	63	...	...	5	8	251
<b>Borough</b> .....	...	<b>483</b>	<b>221</b>	<b>10</b>	<b>377</b>	<b>1</b>	<b>6</b>	<b>13</b>	<b>53</b>	<b>1164</b>

Scarlet-fever.

**Scarlet-fever.**—There were 482 cases of this disease notified during the year, as against 985 cases in the year 1890, 1,283 cases in 1889, 1,128 cases in 1888, 1,427 cases in 1887, and 1,536 cases in 1886. There has thus been a very steady decrease in the total number of cases of this disease in the Borough during the past three years, and I am led to believe that the more stringent regulations, and provision of means for stricter and more complete disinfection of dwellings and their contents, have had something to do with this diminution in the extent of this partially preventible disease. The number of cases for the four quarters of the year were respectively 122, 80, 102 and 174; but in each quarter the number of cases was much below the average for the previous eight years, since the establishment in fact of notification of disease within the Borough. Of the total 482 cases, 134, or 30·0 per cent., were of children under five years of age, as against 40·2 per cent., which was the like proportion of cases in the year 1890.

SCARLET-FEVER SICKNESS.—RATES PER 1,000 OF THE POPULATION.

	1886.	1887.	1888.	1889.	1890.	Mean.	1891.
<b>Salford (Borough)</b> ...	<b>8·02</b>	<b>7·51</b>	<b>5·87</b>	<b>6·60</b>	<b>5·01</b>	<b>6·60</b>	<b>2·43</b>
<b>SALFORD DISTRICTS.</b> { Regent Road ...	9·19	7·20	5·05	6·18	4·70	6·46	1·64
{ Greengate .....	9·57	7·19	4·15	8·81	5·21	6·99	2·11
{ Pendleton .....	3·90	7·25	6·94	5·40	4·70	5·64	3·23
{ Broughton .....	10·45	8·73	7·60	7·20	5·91	7·98	3·26





# Map OF THE COUNTY BOROUGH

## OF Salford

*Pictorial Map showing the distribution of  
Scarlet Fever in Salford for the year 1891  
arranged in Order of the Census Enumeration  
Districts.*

*The figures indicate the numbers of the Enumeration  
Districts thus—157.*

*The coloured dots indicate the houses where cases  
occurred.*





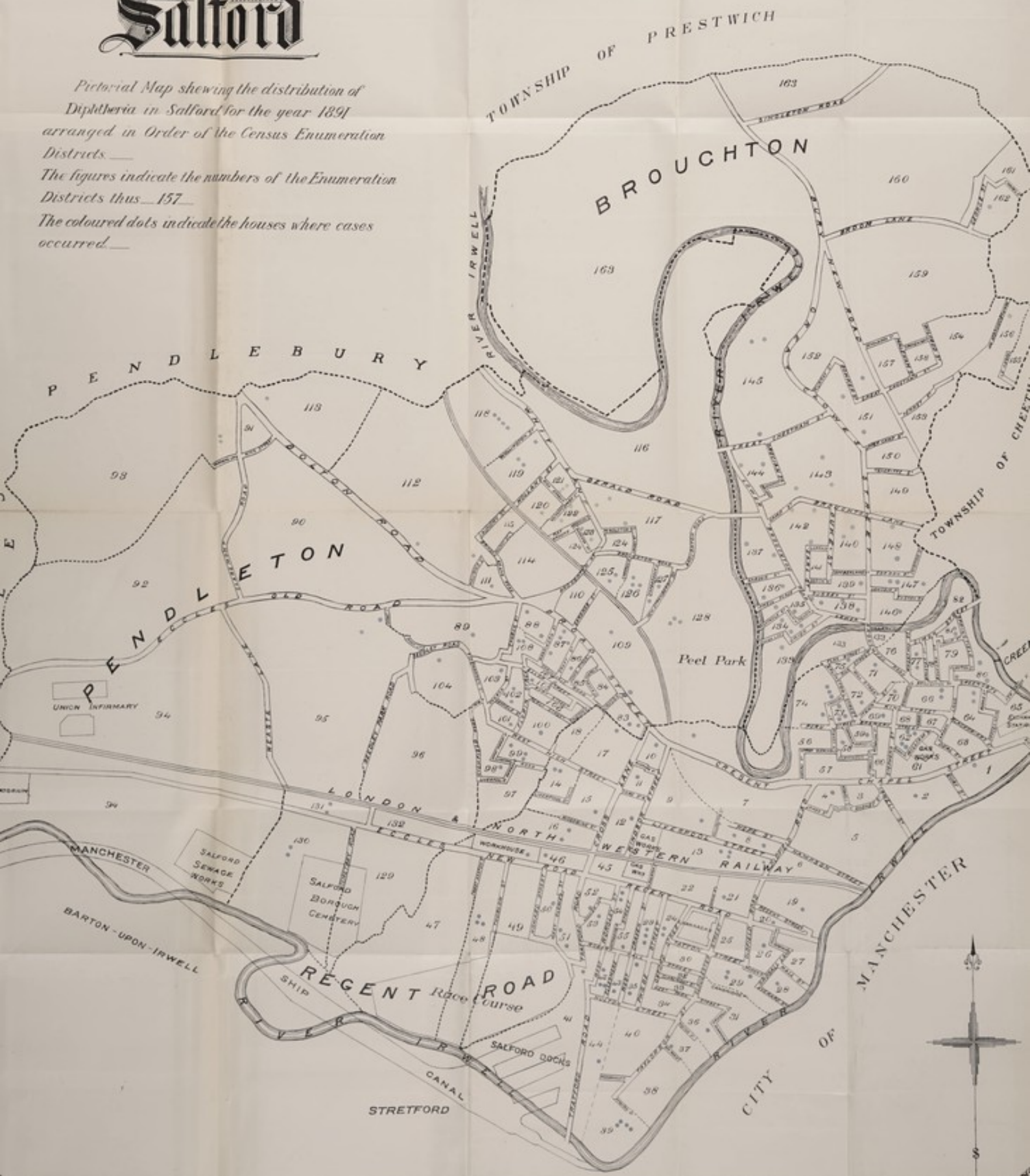




# Map OF THE COUNTY BOROUGH

## OF Salford

*Pictorial Map shewing the distribution of  
Diphtheria in Salford for the year 1891  
arranged in Order of the Census Enumeration  
Districts.—  
The figures indicate the numbers of the Enumeration  
Districts thus—157—  
The coloured dots indicate the houses where cases  
occurred.—*









# Map OF THE COUNTY BOROUGH

## OF Salford

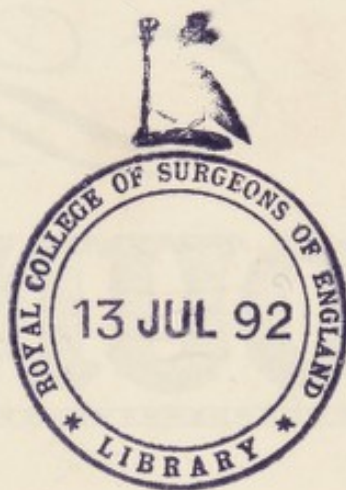
*Pictorial Map showing the distribution of  
Enteric Fever in Salford for the year 1891  
arranged in Order of the Census Enumeration  
Districts.*

*The figures indicate the numbers of the Enumeration  
Districts thus—157.*

*The coloured dots indicate the houses where cases  
occurred.*







**Diphtheria.**—There were 222 cases of diphtheria notified during the year, as against 694 during 1890, 691 cases in 1889, 176 cases in 1888, and 83 cases in 1887. Thus, though the diphtheria sickness rate has not yet fallen to its normal level, it is satisfactory to note that the Borough is gradually recovering from the severe epidemic of the disease with which it was recently visited. It is, moreover, worthy of note that a characteristic feature of the disease—its lingering nature—is manifested in the gradual decline of its presence. Diphtheria is not a disease that it once established can be quickly eradicated from a district, especially if that district be a large urban and manufacturing one. I called attention to this in my last report, and am still of opinion that the most rigorous disinfection of all premises where the disease occurs, or is even suspected, is essential for the further limitation of the areas of prevalence. The number of notifications for the four quarters of the year were respectively 82, 47, 52 and 48. Of the whole number of cases, 76, or 34·2 per cent., were of children under five years of age.

DIPHTHERIA SICKNESS. RATES PER 1,000 OF THE POPULATION.  
1886. 1887. 1888. 1889. 1890. Mean. 1891.

<b>Salford (Borough) ...</b>		<b>0·22</b>	<b>0·44</b>	<b>0·91</b>	<b>3·55</b>	<b>3·53</b>	<b>1·73</b>	<b>1·11</b>
SALFORD DISTRICTS.	Regent Road ...	0·16	0·34	0·76	3·15	3·08	1·50	0·84
	Greengate .....	0·16	0·10	0·64	3·87	3·69	1·69	1·06
	Pendleton .....	0·23	0·44	1·13	4·14	5·16	2·22	1·44
	Broughton .....	0·37	0·93	1·16	3·34	2·17	1·59	1·32

**Enteric-fever.**—There were 378 cases of this disease notified during the year, as against 383 cases in 1890, 485 cases in 1889, 572 cases in 1888, 368 cases in 1887, and 258 cases in 1886. It will thus be seen that, though the number of cases for 1891 is less than for the immediately preceding years, the number is a very considerable one. In each of the first three quarters of the year the number of cases was below the average of the previous eight years, but it was 210 or 67 above the mean for the fourth quarters. The chief increase has been as in previous years in the Trafford Road portion of the Regent Road district, which is comparatively speaking a new residential neighbourhood for the labouring classes. This is a district in which, as I have on previous occasions shewn, there has been much refuse tipped, and in which, probably from settlement, there is a particular liability to the retention of sediment in the sewers to a slight though varying extent. A considerable amount of attention has been paid during the year to the discovery of house drain defects, and their remedy; still this district will require constant and long-continued attention, with possibly the ultimate relaying of its system of sewers, as well as in some other portions of the Borough.



ENTERIC-FEVER SICKNESS. RATES PER 1,000 OF THE  
POPULATION.

	1886.	1887.	1888.	1889.	1890.	Mean.	1891.
<b>Salford</b> (Borough) ...	<b>1·53</b>	<b>1·93</b>	<b>2·97</b>	<b>2·49</b>	<b>1·95</b>	<b>2·17</b>	<b>1·90</b>
<b>SALFORD DISTRICTS</b> { Regent Road ...	2·08	1·97	2·84	3·09	2·36	2·47	2·36
{ Greengate .....	1·44	2·09	2·51	1·36	1·46	1·77	1·30
{ Pendleton .....	1·23	2·40	4·14	3·21	2·16	2·63	1·72
{ Broughton .....	0·86	1·10	2·10	1·25	1·20	1·30	1·66

Typhus-fever.

**Typhus-fever.**—There was only one case of this disease during the year, as against six in 1890, three in 1889, 31 in 1888, seven in 1887, and five cases in 1886. This freedom from the disease is eminently satisfactory. There was no spread of the disease from the single case recorded, every possible precaution having been taken. It is to be hoped that the day is not far distant when this special sickness, arising from filth and destitution, may cease to have its origin within the Borough.

TYPHUS-FEVER SICKNESS. RATES PER 1,000 OF THE POPULATION.

	1886.	1887.	1888.	1889.	1890.	Mean.	1891.
<b>Salford</b> (Borough) ...	<b>0·03</b>	<b>0·04</b>	<b>0·16</b>	<b>0·02</b>	<b>0·04</b>	<b>0·06</b>	<b>0·005</b>
<b>SALFORD DISTRICTS</b> { Regent Road ...	0·04	0·05	0·37	0·03	0·04	0·11	0·00
{ Greengate .....	0·00	0·06	0·00	0·00	0·06	0·02	0·00
{ Pendleton .....	0·04	0·02	0·06	0·00	0·02	0·03	0·02
{ Broughton .....	0·00	0·00	0·00	0·03	0·00	0·01	0·00

Puerperal-fever.

**Puerperal-fever.**—There were 32 cases of puerperal-fever during the year, as against 22 cases in the year 1890. Of the whole number 25 proved fatal. Enquiries were carefully made in respect of all the cases, but it was not found necessary in any one to place any restrictions upon the attendant midwife, in respect of future confinements.

Erysipelas.

**Erysipelas.**—Fifty-three cases of this disease were notified during the year, as against 76 in the year 1890. There were six deaths from the disease during the year. Of the patients affected four were under five years of age, and 49 over five years of age. Of the whole number of cases one followed on confinement, 15 were reported as connected with colds and chills, three with blows, three with cuts or wounds, one with a scratch by a rusty nail, one by an ordinary scratch on the thumb, two with falls and concussion, one with inflammation of the eye, two with vaccination, three in persons who had had previous attacks, and in 21 cases no cause could be assigned as exciting the disease.

The distribution of the cases was as follows:—Regent Road, 13; Greengate, 11; Pendleton, 21; Broughton, 8.

IV.

ORDINARY SANITARY WORK

OF THE

HEALTH DEPARTMENT.





## WORK OF THE HEALTH DEPARTMENT.

**Staff of Sanitary Inspectors under the Health Department.** <sup>Staff.</sup>—The sanitary inspecting staff at the present time consists of one chief inspector of nuisances, one assistant inspector, six district inspectors, eight disinfectors, one common lodging-house inspector, one smoke and food and drugs inspector, and a canal boats and assistant food and drugs inspector. Of the foregoing, the chief and assistant inspectors of nuisances, the lodging-house inspector, and three district inspectors have passed the examination for inspectors undertaken by the Sanitary Institute of Great Britain. Besides those already mentioned, the meat inspector is attached to this department of the Borough. A considerable amount of additional work has been thrown upon the sanitary staff by the Factory and Workshops Act of 1891, and it remains to be seen how far the present staff is sufficient to carry out these new duties. It may indeed be necessary to further slightly increase the staff.

**Systematic Inspection.** <sup>Inspections.</sup>—The systematic inspection of the several districts of the Borough has as usual been very considerable, and in parts has been from house to house. There have been as many as 26,875 ordinary inspections made, and 17,983 re-inspections after notices have been served for the removal of insanitary conditions, making a total of 44,858 inspections, as against 37,598 in the year 1890. This increase in work has been made possible solely by the increase of the sanitary staff in the years 1889 and 1890. Of the nature of the inspections one or two selected instances are interesting. Whereas, in the year 1890, there were 784 inspections of lodging-houses in the borough, the appointment of a lodging-house inspector has raised the number of inspections of common lodging and sub-let houses to 3,901; and there have been 1,063 inspections of bakehouses, as against 38 in 1890. There were besides 1,485 smoke observations, as against 1,270 in the previous year, and many more and regular inspections of tip-lands. On the whole I think that the record of inspection work by the department is of a sound and satisfactory nature, and necessarily much above the average of past years.

**Abatement of Nuisances under the Public Health Acts.** <sup>Nuisances.</sup>—The number of nuisances dealt with and abated under the General Public Health Acts has, as in former years, been very large and of much the same kinds—such as houses or premises kept in a filthy or unwholesome condition; house-drains out of



## Nuisances.

repair, untrapped, or having waste-pipes directly connected with them; ashpits and privies in a filthy condition, adjoining house walls, or situated under bedrooms; houses without sufficient closet accommodation; accumulations of manure or other filth; animals kept in improper situations; passages and yards with uneven surfaces, or with defective drainage; over-crowded dwellings and houses out of repair.

There has, however, also been much more peremptory action taken during the year in respect of defective drainage of premises. In cases where attention in this matter is urgent, the ordinary sanitary notice is now no longer served upon the owner or occupier, but instead a twenty-four hours drainage notice is served, with excellent results. A copy of this notice appears as Appendix to this report, and is drawn up under Section 41 of the Public Health Act, 1875, and Section 19 of the Public Health Acts Amendment Act, 1890, and usually requires the abatement of the nuisance arising from defective drainage within twenty-four hours from the service of the notice. If the work of abatement is not commenced within the time specified, then the necessary acts are proceeded with under the direction of the Borough Engineer. The number of these notices issued during the year was 53, distributed in the four districts of the Borough thus:—Regent Road, 25; Greengate, 6; Pendleton, 22; Broughton, 0.

## Vans, Tents, etc.

**Vans, Tents, Sheds, &c., used as Dwellings.**—Chief Sanitary Inspector Wilkinson reports favourably on these movable dwellings under Section 9 of the Housing of the Working Classes Act, 1885. The Corporation has during the year approved of certain Bye-laws, drawn up by the Health Committee, "for promoting cleanliness in, and the habitable condition of tents, vans, sheds, or other similar structures used for human habitations, for preventing the spread of infectious disease by persons inhabiting the same, and generally for the prevention of nuisances in connection therewith;" but these have not yet received the sanction of the Local Government Board.

Table relating to Vans, Tents, Sheds, &c., used as dwellings during the year 1891:—

No. of Vans. Definite Business.	Gypsies.	Notices Issued.	Total No. of Vans.
196	5	0	201

Of these 201 travelling vans, the occupants of 196 had some definite business, such as holding nut stalls, shooting galleries, bazaars, theatrical shows, and the like, while the remaining five were simply gypsies. Some of these have been reckoned separately



several times, owing to their having made separate visits, or gone to different localities in the Borough on more than one occasion. There have been three chief periods during the year when large numbers of van-dwellers have congregated in Salford, namely, in March for the Easter Fair, in May, and in September. The localities chosen have been Everard Street, Ordsall Lane, Liverpool Street, Cross Lane, Cromwell Road, Whit Lane, and Trinity Market. The grounds upon which the shows have been held have been fairly well kept, a verbal request being at all times sufficient to obtain the desired order and cleanliness in the surroundings. The box-like vans which, during the year 1890, were prohibited from use as sleeping-places, have been on the various grounds, but apparently have only been since used as storage wagons. Vans, Tents, etc.

**Dairies and Milkshops.**—At the end of the year there were 583 dairies and milkshops remaining on the register, this number being 12 in excess of the number for the year 1890. As, however, during the year 1891, five milkshops were discontinued, the total number of new places registered was 17. Dairies, etc.

The following is a summary table relating to this subject :—

District.	No. on Register 1890.	Discontinued in 1891.	Newly Registered in 1891.	Total Remaining in 1891.	Notices Served.	Cases of Sickness.				
						Scarlet Fever.	Enteric Fever.	Erysipelas.	Removed to Hospital.	Nursed at Home.
Regent Road...	266	2	8	272	8	2	...	...	...	2
Greengate .....	84	...	1	85	1	...	...	...	...	...
Pendleton .....	95	...	5	100	13	1	...	...	1	...
Broughton .....	126	3	3	126	20	2	1	1	1	3
<b>Borough .....</b>	<b>571</b>	<b>5</b>	<b>17</b>	<b>583</b>	<b>42</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>5</b>

Of the 42 notices which were served, 30 referred to dirty paper on the walls of shops, and 12 to the absence of proper signs over the shop doors. The present condition of the walls of shops is shown in the following tabulation :—

District.	Papered.	Limewashed.	Painted or Glazed tiles.
Regent Road.....	49	160	63
Greengate.....	10	62	13
Pendleton .....	18	60	18
Broughton.....	63	50	13



## Dairies, etc.

These milk stores have been found to be fairly well kept, and in a cleanly condition, on repeated inspections being made of them.

Five cases of scarlet-fever occurred in three houses, and one of enteric-fever and one of erysipelas in two other houses, all having milkshops attached to them; but in no case was isolation of the sick bad, nor did there appear to be any spread of disease from them to the outside public.

## Bakehouses.

**Supervision of Bakehouses.**—There were at the end of the year 100 bakehouses remaining on the register, this number being a further decrease of eight on previous years. During the past two years there has been a total decrease of 13 bakehouses.

The following is the summary table relating to bakehouses:—

District.	No. of Houses.	No. of Ovens.	Kind of Ovens.			Employees.			Notices Served.	Summonses Issued.
			Waggon.	Flue.	Iron.	Men.	Women.	Boys.		
Regent Rd.	52	66	42	13	11	110	22	4	11	...
Greengate ..	10	15	14	1	...	27	...	4	6	...
Pendleton...	22	34	23	10	1	41	13	3	1	...
Broughton..	16	18	11	5	2	26	8	...	3	...
<b>Borough...</b>	<b>100</b>	<b>133</b>	<b>90</b>	<b>29</b>	<b>14</b>	<b>204</b>	<b>43</b>	<b>11</b>	<b>21</b>	<b>...</b>

The twenty-one notices which were served during the year were for the cleansing and lime-washing of interior walls, and for sanitary defects of premises, all of which notices were promptly complied with, so that it was unnecessary to issue any summonses for negligence on the part of either tenants or landlords. Nor has it been necessary to issue any summons for any other contravention of the bakehouse regulations in force within the borough. The principal decrease in the number of employees in bakehouses has been among men, there being eighteen fewer employed than in the year 1890, while the number of women is only less by one, and of boys by two.

## Noxious Trades.

**Noxious Trades.**—There has, on the whole, been good evidence during the year of more careful working in these trades than in previous years, and the amount of nuisance at any one time caused by them has been small. There have, however, been

complaints of one rubber-works, which was conducted in one department so as to cause a serious nuisance, of one oil and tallow works, and of one tripe-dressing establishment. The complaint in respect of the rubber-works arose in respect of the preparation of a chemical substitute, as an experiment before the putting down of a more extensive plant, but the complaint has not since been repeated.

The following is a list of the trades herein referred to, and the districts in which they are carried on :—

Nature of Trades.	No. of Trades in the Districts and Borough.					Discontinued. Newly Registered.	
	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	Borough.		
Soap Boiling ...	1	1	1	...	3	...	...
Tripe Dressing ..	10	5	4	...	19	3	1
Oil and Tallow...	2	4	1	...	7	...	...
Tanneries, &c...	1	1	1	...	3	...	...
Varnish and Tar.	1	3	1	...	5	...	...
Chemical.....	3	2	2	...	7	...	...
Telegraph Cable	...	2	..	...	2	...	...
Rop Cleaning	3	1	...	...	4	...	...
Floor Cloth.....	1	2	...	...	3	...	...
Rubber .....	1	2	2	1	6	...	...
Paper .....	1	...	1	1	3	...	...
<b>Totals</b> .....	<b>24</b>	<b>23</b>	<b>13</b>	<b>2</b>	<b>62</b>	<b>3</b>	<b>1</b>

From the foregoing table it will be seen that there has been a total decrease of two establishments, three tripe-dressing places having been discontinued and one similar place newly registered, after proper inspection and certain alterations consequent thereon.



Brick-burning.

**Brick-burning.**—During the year one brick-burning business has been given up, and another new one has been started. The number of such businesses is therefore the same as it was at the end of the year 1890. There have been no complaints of nuisance arising from the conduct of any of them, although a few of them are within the distance of sixty yards from dwelling-houses, nor has it been necessary for the Health Department to serve any notice with regard to them independently of complaint being made to it.

The distribution of these businesses is as follows:—

District.	No. in 1890.	Discontinued in 1891.	Newly Established.	Still under Supervision.
Regent Road.....	2	...	...	2
Greengate .....	...	..	...	...
Pendleton .....	7	1	1	7
Broughton .....	...	...	...	...
<b>Borough</b> .....	<b>9</b>	<b>1</b>	<b>1</b>	<b>9</b>

Common Lodging-houses

**Supervision of Common Lodging-houses.**—Lodging-house Inspector Crossley reports that, at the end of the year, there were 46 houses on the register, containing 244 rooms, and having accommodation for 1,362 persons, as against accommodation for 1,437 persons in 1890. This reduction in bed accommodation has been brought about by an entirely new measurement of the registered rooms, the compilation of new registration books, the issue of new cards stating the number of persons allowed in each room, and generally a much more strict and regular supervision of all the common lodging-houses of the Borough. There have been two changes of tenancy during the year. Fifty notices were served during the year; one on a landlord in the Greengate district on account of defective drainage and accumulation of water under the ground floor of the house; 22 on tenants in the Regent Road district for limewashing and cleansing purposes; four in the Greengate district on account of defective closets and dirty bedding with vermin, together with 19 for limewashing and cleansing; and four in the Pendleton district for cleansing. There were 1,977 day inspections of lodging-houses and 458 night inspections, as against 373 in the year 1890,

as may be seen on reference to the register of work done on <sup>Common</sup> Lodging-houses, page 71.

The average accommodation of persons has been as follows:—

	Nightly Lodgers.				Weekly Lodgers.		
	Male.	Female.	Total.		Male.	Female.	Total.
Regular .....	415	50	465	.....	2905	350	3255
Casual .....	232	20	252	.....	1624	140	1764
	—	—	—	.. ...	—	—	—
Totals .....	647	70	717	.....	4529	490	5019

No cases of infectious sickness occurred in any of the common lodging-houses during the year.

The following is a summary table relating to the Common Lodging-houses of the Borough:—

District.	No. of Houses registered in 1891.	No of Rooms	Bed Accommodation.	Complaints.	Infectious Diseases notified in houses.	Notices served on	
						Landlords.	Tenants.
Regent Road ...	23	127	620	...	...	...	22
Greengate .....	19	91	647	2	...	1	23
Pendleton .....	4	26	95	...	...	...	4
Broughton .....	...	...	...	...	...	...	...
<b>Borough ...</b>	<b>46</b>	<b>244</b>	<b>1362</b>	<b>2</b>	<b>...</b>	<b>1</b>	<b>49</b>

**Houses Sub-let in Lodgings.**—There were 634 sub-let <sup>Sub-let Houses.</sup> houses on the register at the end of the year, containing 1,942 rooms. Of the total number of houses let in lodgings 562 were found to be unregistered, and 54 were discontinued as such and not registered. The more stringent supervision of houses of this class is of immense importance to the Borough, as the more serious cases of overcrowding occur in them. But, at the same time, the careful watching of such houses is quite the most onerous



Sub-Let Houses. part of the inspector's duty, since the change of tenancy is very frequent, and discontinuance of and commencement of sub-letting often takes place in the same house two or three times in a single year. During the year, however, there were 1,491 day and 65 night inspections of these registered houses, and careful and constant inspection of them will be continued. The whole of these houses have been carefully measured and the rooms apportioned for the number of inmates they may contain. A large number of notices have been served on tenants to register their houses, namely, 98 in the Regent Road district, 56 in the Greengate district, 46 in the Pendleton district, and 30 in the Broughton district. In addition to these, notices were also served to abate overcrowding, namely, four in the Regent Road district, and one each in the Greengate and Pendleton districts. The number of houses in which cases of infectious diseases occurred was 29, as against 41 in the year 1890, and the number of cases 37, as against 52. Of the houses so infected, 21 were registered, and eight were unregistered; and, of the cases, 29 occurred in registered, and eight in unregistered houses. Of the total 37 cases, 31 were removed to the Infectious Diseases Hospital, and six were treated at home, as against 29 sent to the Hospital, and 23 treated at home in 1890.

The following summary tables relate to the foregoing matters:—

TABLE I.

District.	No. of houses now registered.	No. of rooms.	Houses found un-registered during the year.		Complaints.	Notices served on	
			Since registered.	Since discontinued.		Land-lords.	Tenants.
Regent Road.....	316	956	269	36	5	...	5
Greengate .....	195	690	170	10	4	...	1
Pendleton .....	92	208	92	6	5	...	1
Broughton .....	31	88	31	2	2	...	...
<b>Borough.....</b>	<b>634</b>	<b>1942</b>	<b>562</b>	<b>54</b>	<b>16</b>	<b>...</b>	<b>7</b>

## CASES OF INFECTIOUS DISEASES OCCURRING IN SUB-LET HOUSES

Sub-Let Houses

TABLE II.

DISTRICT	Number of Infected Houses.	Number of Cases of Infectious Sickness.						
		Class of Houses.		Scarlet Fever.	Enteric Fever.	Diphtheria.	In registered Houses.	In Unregistered Houses.
		Registered.	Un-registered.					
Regent Road .....	17	13	4	1	18	1	16	4
Greengate .....	7	7	...	7	1	4	12	...
Pendleton .....	4	1	3	1	3	...	1	3
Broughton .....	1	...	1	1	...	...	...	1
<b>Borough</b> .....	<b>29</b>	<b>21</b>	<b>8</b>	<b>10</b>	<b>22</b>	<b>5</b>	<b>29</b>	<b>8</b>

TABLE III.

District.	Nursed at Home.			Removed to Hospital.		
	Scarlet Fever.	Enteric Fever.	Diphtheria.	Scarlet Fever.	Enteric Fever.	Diphtheria.
Regent Road ...	...	4	...	1	14	1
Greengate ... ..	...	...	...	7	1	4
Pendleton .....	...	2	...	1	1	...
Broughton.....	...	...	...	1	...	...
<b>Borough</b> ...	...	<b>6</b>	...	<b>10</b>	<b>16</b>	<b>5</b>

### Registration of Small Dwelling-Houses under Sec. 90 of the Salford Tramways and Improvement Act, 1875.—

Small houses under Local Act, 1875.

There was no change in the number of these dwellings during the year; there still remaining 62 of the original 73 which were specially registered. There have been 275 inspections of them made during the day-time, and 90 at night-time during the year. Only one case of infectious sickness occurred in one of these dwellings, namely, a case of diphtheria which was isolated at home.

There has been a marked improvement in the appearance of these houses during the year, to which the owners have largely contributed, they having thoroughly cleansed and repaired many of the houses and dismissed objectionable tenants.



## Canal Boats.

**Canal Boats Acts.**—The Canal Boats Inspector reports that, during the year, he inspected 1,233 canal boats, as against 1,396 in the year 1890. The inspected boats contained 2,052 men, 418 women, and 234 children, making a total of 2,704 persons of all ages. The average occupancy of each boat was 2·1 persons per boat, as against 2·21 persons per boat in 1890. There were only two children found of school age, and not attending school, and in both these cases the School Board Authorities were communicated with. There were no cases of overcrowding, or of infectious sickness on boats, during the year. It was, however, necessary to caution captains of boats in ten instances, and to serve 47 notices on boat-owners, but in no case was there repetition of offence.

The following is a classified list of defects found in various canal-boats during the year :—

Boats out of repair.	Cabins in want of repair.	Boats working without certificates.	Boats of which the names or numbers were defective.	Cabins found in a dirty condition.	Cabin with defective ventilation.	Cabins with bilge water under floors causing nuisance.
86	28	9	28	61	1	11

## Adulterations.

**Proceedings under the Adulteration Acts.**—During the year 901 samples of foods and drugs were sent for analysis to the Borough Analyst, Mr. J. Carter Bell, F.I.C., as against 874 samples in the year 1890. Of these 55 samples, or 6·1 per cent., were found to be adulterated, as against 5·1 per cent. in 1890, and 8·47 per cent. the average for the preceding ten years.

The following is a statement of cases in which legal proceedings were taken under the Sale of Food and Drugs and Margarine Acts, during the year 1891 :—

Articles.	No. of Cases.	Amount of Fines respectively.	Total amount of Fines.
		£ s. d.	£ s. d.
Gin .....	...	0 10 0	...
„ .....	2	2 0 0	2 10 0
Rum .....	1	1 0 0	1 0 0
Margarine .....	...	1 10 0	...
„ .....	2	0 5 0	1 15 0
Milk .....	1	Dismissed.	...
Total .....	6	£5 5 0	£5 5 0

SAMPLES COLLECTED BY THE INSPECTOR UNDER THE "SALE OF FOOD  
AND DRUGS ACT," FROM 1875 TO 1891.

	Total.	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875...	60	37	1	1	1	...	7	4	9
1876...	119	43	2	18	34	17	...	...	5
1877...	390	114	7	159	22	30	18	37	3
1878...	418	197	10	35	31	25	24	70	26
1879...	518	306	16	130	15	28	10	13	...
1880...	506	269	12	48	5	52	71	18	31
1881...	478	376	11	1	...	61	...	8	21
1882...	465	300	7	47	13	3	58	20	17
1883...	497	436	1	29	1	12	...	2	16
1884...	507	359	10	35	7	...	64	11	21
1885...	478	399	21	14	4	13	21	...	6
1886...	483	361	6	21	...	36	1	22	36
1887...	472	355	2	...	...	25	42	43	5
1888...	883	701	6	...	30	83	...	9	54
1889...	832	652	35	...	21	85	15	17	7
1890...	874	591	41	38	24	64	12	49	55
1891...	901	611	20	20	18	134	23	74	1

PERCENTAGE OF ARTICLES RETURNED AS ADULTERATED.

	Total.	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875	66.6	62.1	100.0	0.0	0.0	...	100.0	75.0	66.6
1876...	40.3	55.8	50.0	27.8	35.3	17.6	...	...	60.0
1877...	27.4	40.3	28.6	11.3	13.6	6.7	0.0	97.3	0.0
1878...	29.9	29.4	10.0	2.9	51.6	4.0	4.2	67.1	0.0
1879...	12.0	13.1	25.0	5.4	26.6	10.7	10.0	2.3	...
1880...	20.2	25.2	75.0	6.3	0.0	17.3	11.3	11.1	9.7
1881...	16.3	18.1	9.1	0.0	...	1.6	..	37.5	23.8
1882...	15.5	19.0	14.3	2.1	53.8	0.0	1.7	10.0	17.6
1883...	6.6	6.7	0.0	3.4	0.0	8.3	...	50.0	6.3
1884...	7.1	2.8	40.0	5.7	57.1	...	0.0	27.3	61.9
1885...	5.2	4.8	4.8	1.1	0.0	15.4	0.0	...	33.2
1886...	3.9	1.1	50.0	0.0	...	25.0	0.0	0.0	8.3
1887...	8.7	9.9	0.0	...	...	8.0	2.4	7.0	0.0
1888...	6.3	2.8	100.0	...	26.6	13.3	...	0.0	20.4
1889...	10.09	7.3	22.8	...	28.5	24.7	0.0	0.0	14.2
1890...	5.1	1.9	50.0	0.0	0.0	15.6	0.0	30.6	12.7
Average,									
1881-90	8.47	7.4	29.1	1.8	16.6	11.19	0.41	16.2	19.8
1891...	6.1	1.4	35.0	10.0	0.0	22.3	0.0	9.4	0.0



*List of samples of Milk taken from Farmers' Cans during the year 1891, AT THE PLACE OF DELIVERY, by the Food Inspector, and the results of the Analyses.*

No.	Names and Addresses.	Places of Delivery.	Results of Analyses.
1	P. H. G., Alderney .....	Central Station .....	Pure .....
2	D. R., Holmes Chapel .....	" .....	Do. ....
3	D. R., Holmes Chapel .....	" .....	Do. ....
4	D. R., Holmes Chapel .....	" .....	Do. ....
5	P. H. G., Alderney .....	" .....	Do. ....
6	B. J., Worston .....	Pendleton Station .....	Do. ....
7	K. T., Langho .....	" .....	Do. ....
8	T. W., Turtun .....	" .....	Do. ....
9	C. J., Chatburn .....	" .....	Do. ....
10	H. J., Chatburn .....	" .....	Do. ....
11	J. H., Gisburn .....	" .....	Do. ....
12	R. R., Chatburn .....	" .....	Do. ....
13	W. W., Gisburn .....	" .....	Do. ....
14	T. T., Whalley .....	" .....	Do. ....
15	T. A., Gisburn .....	" .....	Do. ....
16	H. G., Marsh Lane .....	Seedley Station .....	Do. ....
17	F. S., Willaston .....	" .....	Do. ....
18	C. J., Willaston .....	" .....	Do. ....
19	B. J., Nantwich .....	" .....	Do. ....
20	F. S., Nantwich .....	" .....	Do. ....
21	H. T., Thelwall .....	Old Trafford Station .....	Do. ....
22	M. A. R., Thelwall .....	" .....	Do. ....
23	T. T., Thelwall .....	" .....	Do. ....
24	C. H., Thelwall .....	" .....	Do. ....
25	T. T., Thelwall .....	" .....	Do. ....
26	W. W., High Leigh .....	" .....	Do. ....
27	T. R., Ashley .....	" .....	Do. ....
28	M. S., Lostock .....	" .....	Do. ....
29	B. T., Mobberley .....	" .....	Do. ....
30	H. R. W., Dunham Hill .....	Exchange Station .....	Do. ....
31	H. E., Dunham Hill .....	" .....	Do. ....
32	S. M., Beeston Castle .....	" .....	Do. ....
33	P. C., Beeston Castle .....	" .....	Do. ....
34	C. E., Beeston Castle .....	" .....	Do. ....
35	W. H., Ridley .....	" .....	Do. ....
36	D. T., Broughton Hall .....	" .....	Do. ....
37	W. W. E., Beeston Castle .....	" .....	Do. ....
38	W. H., Beeston Castle .....	" .....	Do. ....
39	C. W., Duffield .....	Central Station .....	Poor .....
40	C. W., Duffield .....	" .....	Do. ....
41	L. L., Pipe Gate .....	" .....	Pure .....
42	L. L., Pipe Gate .....	" .....	Do. ....
43	B. R., Frodsham .....	Ordsal Lane Station .....	Do. ....
44	D. P., Norton .....	" .....	Do. ....
45	G. W., Ince .....	" .....	Do. ....
46	G. W., Ince .....	" .....	Do. ....
47	G. A., Helsby .....	" .....	Do. ....
48	L. E., Dunham Hill .....	" .....	Do. ....
49	L. E., Dunham Hill .....	" .....	Do. ....
50	G. F., Dunham Hill .....	" .....	Do. ....
51	J. T., Dunham Hill .....	" .....	Do. ....

*List of samples of Milk taken from Farmers' Cans during the year 1891, AT THE PLACE OF DELIVERY, by the Food Inspector, and the results of the Analyses.—Continued.*

No.	Names and Addresses.	Places of Delivery.	Results of Analyses.
52	P. J., Mickle Trafford.....	Ordsall Lane Station ...	Pure .....
53	C. W. T., Halton.....	" "	Do. ....
54	H. C., Mickle Trafford .....	" "	Do. ....
55	P. G., Mickle Trafford .....	" "	Do. ....
56	S. J., Dunham Hill .....	" "	Do. ....
57	L. T., Dunham Hill.....	" "	Do. ....
58	P. J., Monton .....	" "	Do. ....
59	H. J., Monton .....	" "	Do. ....
60	B. R., Frodsham.....	" "	Do. ....
61	B. R., Frodsham .....	" "	Do. ....
62	G. W., Ince .....	" "	Do. ....
63	G. W., Ince .....	" "	Poor .....
64	L. E., Dunham Hill.....	" "	Pure .....
65	B. R., Frodsham .....	" "	Poor .....
66	B. R., Frodsham .....	" "	Do. ....
67	B. R., Frodsham .....	" "	Do. ....
68	P. J., Mickle Trafford.....	" "	Pure .....
69	G. W., Halton .....	" "	Do. ....
70	G. W., Mickle Trafford .....	" "	Do. ....
71	J. T., Mickle Trafford.....	" "	Do. ....
72	J. F., Dunham Hill.....	" "	Do. ....
73	L. T., Dunham Hill.....	" "	Do. ....
74	B. R., Netherton .....	" "	Do. ....
75	B. R., Netherton .....	" "	Do. ....
76	B. R., Netherton .....	" "	Do. ....
77	B. R., Netherton .....	" "	Do. ....
78	B. R., Netherton .....	" "	Do. ....
79	B. R., Netherton .....	" "	Do. ....
80	B. R., Netherton .....	" "	Do. ....
81	L. E., Dunham Hill.....	" "	Do. ....
82	J. S., Dunham Hill.....	" "	Do. ....
83	J. T., Dunham Hill.....	" "	Do. ....
84	G. W., Elsbey .....	" "	Do. ....
85	G. W., Elsbey .....	" "	Do. ....
86	J. T., Dunham-o'th'-Hill .....	" "	Do. ....
87	B. R., Frodsham .....	" "	Do. ....
88	B. R., Frodsham .....	" "	Do. ....
89	P. T., Cheltenham .....	Pendleton Station.....	Do. ....
90	W. S., Rivington .....	" "	Do. ....
91	J. H., Gisburn .....	" "	Do. ....
92	F. T., Gisburn.....	" "	Do. ....
93	C. J., Cheltenham .....	" "	Do. ....
94	T. J., Langho .....	" "	Do. ....
95	P. W., Newsholme .....	" "	Do. ....
96	J. J., Langho .....	" "	Do. ....
97	W. J., Clitheroe .....	" "	Do. ....
98	C. J., Chatburn .....	" "	Do. ....
99	M. M. J., Crewe .....	Seedley Station.....	Poor .....
100	M. M. J., Crewe .....	" "	Do. ....
101	B. T., Almington.....	Ordsall Lane Station ...	Pure .....
102	B. T., Almington.....	" "	Do. ....



*List of samples of Milk taken from Farmers' Cans during the year 1891, AT THE PLACE OF DELIVERY, by the Food Inspector, and the results of the Analyses.—Continued.*

No.	Names and Addresses.	Place of Delivery.	Results of Analyses.
103	H. A., Poynton .....	Ordsall Lane Station ...	Pure .....
104	S. T., Preston Brook .....	Seedley Station .....	Do. ....
105	S. T., Preston Brook .....	" " .....	Do. ....
106	S. T., Preston Brook .....	" " .....	Do. ....
107	S. T., Preston Brook .....	" " .....	Do. ....
108	F. S. S., Willaston .....	" " .....	Do. ....
109	G. A. J., Nantwich .....	" " .....	Do. ....
110	G. A. J., Nantwich .....	" " .....	Do. ....
111	F. S. J., Crewe .....	" " .....	Do. ....
112	F. S. J., Crewe .....	" " .....	Do. ....
113	G. A. J., Nantwich .....	" " .....	Do. ....
114	F. S. S., Willaston .....	" " .....	Do. ....
115	F. S. S., Willaston .....	" " .....	Do. ....
116	S. F., Willaston .....	" " .....	Do. ....
117	F. S. J., Crewe .....	Ordsall Lane Station .....	Do. ....
118	F. S. J., Crewe .....	" " .....	Do. ....
119	F. S. S., Willaston .....	" " .....	Do. ....
120	F. S. J., Crewe .....	" " .....	Do. ....
121	P. J., Ince .....	" " .....	Do. ....
122	H. E., Dunham Hill .....	" " .....	Do. ....
123	F. E., Helsby .....	" " .....	Do. ....
124	H. E., Dunham Hill .....	" " .....	Do. ....
125	B. J., Elton .....	" " .....	Poor .....
126	B. W., Lower Peovor .....	Central Station .....	5% water .....
127	B. W., Lower Peovor .....	" " .....	6% water .....
128	B. H. A., Monton .....	Seedley Station .....	Pure .....
129	B. T., Monton .....	" " .....	Do. ....
130	S. J., Monton .....	" " .....	Do. ....
131	C. R., Heatey .....	Old Trafford Station .....	Do. ....
132	H. S. M., Thelwall .....	" " .....	Do. ....
133	H. T., Thelwall .....	" " .....	Do. ....
134	L. W., Mobberley .....	" " .....	Do. ....
135	H. T., Lostock .....	" " .....	Do. ....
136	M. W., Knutsford .....	" " .....	Do. ....
137	B. J., Thelwall .....	" " .....	Do. ....
138	C. W., Knutsford .....	" " .....	Do. ....
139	C. W., Knutsford .....	" " .....	Do. ....
140	F. J., Lostock .....	" " .....	Do. ....
141	H. S., Lostock .....	" " .....	Do. ....
142	B. W., Knutsford .....	" " .....	Do. ....
143	B. W., Knutsford .....	" " .....	Do. ....
144	C. H., Lostock .....	" " .....	Do. ....
145	B. H., Knutsford .....	" " .....	Do. ....
146	P. S. L., Knutsford .....	" " .....	Do. ....
147	W. W., Wrenbury .....	Central Station .....	Do. ....
148	W. G., Wrenbury .....	" " .....	Do. ....
149	M. H. W., Alderley .....	" " .....	Do. ....
150	W. W., Wrenbury .....	" " .....	Do. ....
151	H. T. M., Thelwall .....	Pendleton Station .....	Do. ....
152	W. P., Thelwall .....	" " .....	Do. ....
153	R. T., Thelwall .....	" " .....	Do. ....



*List of samples of Milk taken from Farmers' Cans during the year 1891, AT THE PLACE OF DELIVERY, by the Food Inspector, and the results of the Analyses.—Continued.*

No.	Names and Addresses.	Places of Delivery.	Results of Analyses.
154	M. J., Thelwall.....	Pendleton Station.....	Pure .....
155	W. J., Thelwall .....	" .....	Do. ....
156	G. H., Heatley.....	" .....	Do. ....
157	M. W., Lymm .....	" .....	Do. ....
158	J. E., Plumbley .....	" .....	Do. ....
159	T. T., Thelwall.....	" .....	Do. ....
160	C. H., Lostock.....	" .....	Do. ....
161	D. W., Ashley .....	" .....	Do. ....
162	B. A., Plumbley .....	" .....	Do. ....
163	H. R., Edgeworth .....	" .....	Do. ....
164	C. S., Chatham .....	" .....	Do. ....
165	R. T., Chatham .....	" .....	Do. ....
166	R. R., Chatham .....	" .....	Do. ....
167	T. T., Gisburn.....	" .....	Do. ....
168	H. G., Chatham .....	" .....	Do. ....
169	S. T., Whalley.....	" .....	Do. ....
170	R. R., Chatburn .....	" .....	Do. ....
171	P. H., Langho.....	" .....	Do. ....
172	P. J., Langho .....	" .....	Do. ....
173	K. J., Langho .....	" .....	Do. ....
174	P. T., Chatburn .....	" .....	Do. ....
175	T. J., Langho .....	" .....	Do. ....
176	T. A., Gisburn.....	" .....	Do. ....
177	G. A., Helsby .....	Ordsall Lane Station ...	Do. ....
178	G. W., Elton.....	" .....	Do. ....
179	G. A., Helsby .....	" .....	Do. ....
180	P. J., Mickle Trafford.....	" .....	Do. ....
181	H. E., Mickle Trafford .....	" .....	Poor .....
182	H. E., Mickle Trafford .....	" .....	Do. ....
183	P. J., Mickle Trafford.....	" .....	Pure .....
184	D. P., Norton .....	" .....	Do. ....
185	D. P., Norton .....	" .....	Do. ....
186	B. R., Frodsham.....	" .....	Do. ....
187	B. R., Frodsham .....	" .....	Do. ....
188	D. P., Norton .....	" .....	Do. ....
189	S. T., Whalley.....	Pendleton Station.....	Do. ....
190	T. T., Gisburn.....	" .....	Do. ....
191	W. B., Gisburn .....	" .....	Do. ....
192	J. H., Gisburn.....	" .....	Do. ....
193	T. T., Gisburn .....	" .....	Do. ....
194	T. J., Langho .....	" .....	Do. ....
195	H. J., Gisburn.....	" .....	Do. ....
196	P. H., Langho .....	" .....	Do. ....
197	W. A., Gisburn .....	" .....	Do. ....
198	W. W., Gisburn .....	" .....	Do. ....
199	U. D. C., Edgeworth .....	" .....	Do. ....
200	A. T., Langho .....	" .....	Do. ....
201	P. J., Langho .....	" .....	Do. ....
202	O. T., Langho .....	" .....	Do. ....
203	H. J., Gisburn.....	" .....	Do. ....
204	G. A., Newsholme .....	" .....	Do. ....



## Adulterations.

Forty-one samples of milk were sent for analysis from the workhouse and the hospitals within the borough, and tradesmen sent of their own action 18 samples for analysis together with the necessary fee.

Three cases of milk adulteration were traced by the inspector to the farmer supplying the milk, but as the milk-delivery was within the adjoining City of Manchester, the authorities there took up the cases and prosecuted on behalf of the Salford Health Department.

In fifteen instances written cautions were sent, and in seven verbal cautions were given in cases of slight adulteration only. Of the samples returned as adulterated, 25 were test samples, and the cases are being followed up by the inspector under the direction of the Town Clerk.

With regard to margarine, the inspector reports that he has had frequently to caution shopkeepers as to the careless manner in which some of them label their margarine. Sometimes the label is placed upside down, sometimes sideways, sometimes the label is hidden by a muslin rag, and in some other cases the size of the letters of the word margarine are only  $\frac{3}{4}$  inch long, instead of being  $1\frac{1}{2}$  inches. Such cases will be carefully watched with a view to further action being taken in respect of them.

Smoke from  
Factory  
Chimneys.

**Smoke Nuisance.**—The Smoke Inspector reports that he made 1,485 smoke observations during the year, as against 1,270 in the year 1890. There were 47 summonses issued against firms or their employees, and 37 of these were fined by the magistrates. There are 520 properly-constructed furnaces and steam-boilers in use in factories within the Borough, as against 519 in the year 1890. As many as 93 stokers of furnaces were personally cautioned for negligently using these, and seven owners or occupiers of bake-houses, &c., were served with notices under the Public Health Act, 1875. Manufacturers within the borough continue to show a desire to comply with the requirements of the Local Acts, and many of them have adopted a system of paying a bonus to their firemen for careful and efficient stoking.

NUMBER OF BLACKSMITHS' FORGES IN SALFORD AT THE  
END OF 1891.

Forges.	Borough Total.	Regent Road.	Greengate.	Pendleton.	Broughton
Blacksmiths.	80	29	21	19	11

NUMBER OF BOILERS AND FURNACES IN USE WITHIN THE FOUR DISTRICTS OF THE BOROUGH AT THE END OF 1891. Smoke from  
Factory  
Chimneys.

Registration Sub-Districts.	Boilers and Furnaces in use.		Notices issued by the Health Committee.	
	Properly Constructed.	Improperly Constructed.	Number Served.	Number complied with.
Regent Road ...	171	67	129	59
Greengate.....	134	69	88	60
Pendleton.....	185	55	95	59
Broughton .....	30	18	31	17
<b>Borough Total</b>	<b>520</b>	<b>209</b>	<b>343</b>	<b>195</b>

The following is a statement of cases in which legal proceedings were taken in respect of Smoke Nuisances during the year 1891:—

Particulars of Offence.	No. of Cases.	How dealt with.	Total Amount of Fines.
Negligently using furnaces constructed to consume their own smoke.....	43	33 fined, six withdrawn, four dismissed. ...	£30 5 0
Using furnaces not constructed to consume their own smoke.....	4	Four fined ....	14 0 0
Totals.....	47	37 fined, 6 withdrawn, 4 dismissed.	£44 5 0

**Prevalence of Epizootic Diseases.**—Inspector Fordham, M.R.C.V.S., reports that during the year 1891 no case of *foot-and-mouth disease*, or of *pleuro-pneumonia*, occurred within the borough of Salford.

Diseases of  
Animals.

There was only one outbreak of *swine-fever* during the year. This occurred on the 1st of August, 1891, on premises situated at the back of Coke Street, Cheetham Hill, Higher Broughton.



There were twelve swine, four of which were found to be affected with swine-fever. The whole twelve animals were slaughtered. The carcasses of the diseased animals were buried six feet deep in quick-lime. The manure was disinfected and the premises thoroughly lime-washed. Arrangements have, however, been made for the destruction of such carcasses in the future by means of cremation.

Mr. Fordham made post-mortem examinations of the carcasses of six dogs which were captured by the police, and in two instances he found distinct evidence of *rabies*. The muzzling order was still in force within the borough at the end of the year.

Meat unfit for  
Human Food.

**Unwholesome Meat.**—Over 17 tons of meat unfit for human food were seized during the year. The whole of it was destroyed in the furnace at the Salford Manure Dépôt. Subjoined are the monthly seizures of unwholesome meat, and the amounts :—

Month.	No. of Seizures.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
January .....	19	0	19	3	5
February .....	20	0	11	0	7
March .....	19	1	5	1	3
April .....	23	0	17	3	27
May .....	17	1	4	0	8
June .....	22	1	1	0	17
July .....	22	0	11	0	5
August .....	22	2	1	2	1
September .....	21	2	15	0	24
October .....	27	3	0	3	27
November .....	19	0	19	2	2
December .....	34	2	4	1	3
<b>Totals.....</b>	<b>265</b>	<b>17</b>	<b>11</b>	<b>3</b>	<b>15</b>

Table showing the kinds of unwholesome meat seized, and the weight:—

Meat unfit for Human Food.

Kind.	No. of Seizures.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Beef .....	30	8	6	1	27
Mutton .....	192	6	15	2	23
Veal .....	36	1	1	2	19
Horse Flesh .....	1	0	15	0	0
Pigs' Flesh .....	4	0	8	0	0
Game .....	...	...	...	...	...
Fish .....	2	0	5	0	2
Totals .....	265	17	11	3	15

**Cowsheds and Shippens.**—At the end of the year 1891, there were 25 cowsheds and shippens on the register, as compared with 24 at the beginning of the year. These have been regularly inspected, and found in every instance to have been kept in accordance with the bye-laws.

**Private Slaughter-houses.**—There were 38 private slaughter-houses at the end of the year, as against 41 in 1890, 46 in 1889, and 51 in 1888. The difference between the number of slaughter-houses existing in 1891 and 1890, is accounted for by two having been discontinued during the year, and by one having been pulled down for other building purposes. The regulations have been complied with by the proprietors of these establishments.



LIST OF CASES, OTHER THAN ADULTERATION AND SMOKE CASES, TAKEN  
BEFORE THE MAGISTRATES DURING THE YEAR 1891.

Particulars of Offence.	No. of Cases.	How dealt with.	Total Amount of Fines.
			£ s. d.
Exposing diseased animals } or meat for sale .....	3	All fined .....	14 7 6
Being in possession of } diseased meat .....	1	Fined .....	5 0 0
Premises in such a state } as to be a nuisance...	8	{ Four "Orders to abate." } Four withdrawn .....	.....
Assaulting Inspector of } Nuisances in the execu- } tion of his duty .....	1	Fined .....	0 15 0
Totals.....	13	{ Five fined. Four orders. Four withdrawn. £	20 2 6

TABULATED PARTICULARS OF WORK DONE BY THE HEALTH DEPARTMENT  
DURING THE YEAR ENDING JANUARY 2nd, 1892.

	Boro'	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.
No. of Complaints received.....	4785	1821	969	809	1186
{ Of Dwelling-houses .....	16550	5302	3850	5039	2359
„ Cellars .....	179	31	80	68	...
„ Schools.....	2	...	...	...	2
„ Lodging-houses .....	3468	1715	1299	401	53
„ „ „ —at night.....	533	254	206	73	...
„ Slaughter-houses.....	1513	652	167	524	170
{ Dairies and Milkshops .....	136	78	5	27	26
„ Shippens .....	544	...	5	228	311
„ Ashpits after complaint .....	194	50	...	77	67
„ Tips .....	146	...	2	108	36
„ Miscellaneous .....	2547	1151	414	708	274
„ Bakehouses—day .....	1017	461	170	226	160
„ „ —night.....	46	29	9	8	...
Re-inspections.....	17983	8286	3332	4403	1962
{ Notices issued .....	4306	1599	911	1116	680
Action taken.. { Letters written.....	3548	1193	672	869	814
{ Summonses issued .....	45	11	12	16	6
Houses Disin- { Stripped.....	565	151	108	165	141
fectd ..... { Fumigated .....	713	169	146	202	196
{ Repaired.....	1274	419	141	566	148
{ Reconstructed .....	380	150	148	45	37
House Drains { Trapped .....	607	236	73	48	250
{ Slopstone Pipes discon: from...	140	30	25	77	8
{ Downspouts connected to .....	29	10	11	3	5
{ New, provided .....	43	12	...	26	5
{ Repaired and drained .....	647	298	248	83	18
Privies and { Cleansed by tenants.....	49	1	42	2	4
Ashpits..... { Emptied after complaint .....	2665	1077	568	364	656
{ Reconstructed .....	197	30	19	34	114
{ New, provided .....	1009	544	302	122	41
Water Closets { Ventilated .....	22	...	14	2	6
{ Soil-pipes ventilated.....	37	3	3	7	24
{ Urinals provided .....	10	...	2	8	...
{ Dwelling-houses .....	79	12	38	25	4
{ Cellars .....	73	4	56	1	12
Limewashed... { Lodging-houses.....	167	92	67	8	...
{ Slaughter-houses .....	143	72	12	43	16
{ Dairies and Milkshops.....	2	...	1	...	1
{ Shippens .....	86	...	...	30	56
Closure of..... { Houses unfit for habitation.....	4	1	3	...	...
{ Cellars unfit for habitation.....	62	13	37	12	...
Cellar Areas filled up .....	3	...	3	...	...
{ Lodging-houses.....	635	317	195	92	31
Newly { Slaughter-houses .....	...	...	...	...	...
Registered.. { Dairies and Milkshops.....	16	3	5	2	6
{ Second-hand Goods Stores.....	58	18	20	17	3
Accumulations { Manure and Refuse .....	227	15	139	34	39
Removed ... { Stagnant Water .....	14	4	2	1	7
Smoke { Observations taken .....	1485	251	425	607	202
Nuisance ... { Notices served .....	44	21	7	5	11
Passages and { Flagged .....	292	47	101	58	86
Yards ..... { Repaired .....	2050	1289	349	267	145
{ Drained .....	233	75	51	51	56
Infected Bed: { Stoved .....	568	192	114	105	157
and Clothing { Destroyed .....	13	2	1	4	6
Food ..... Samp. purch. for analysis .....	901	299	209	199	194
Bad Meat..... Seizures made .....	263	258	3	1	1
Animals removed from improper situations...	114	49	10	43	12
Overcrowding of dwellings abated.....	50	19	14	17	...
Houses repaired, by owners, after notice.....	441	107	40	251	43





v.

SPECIAL SANITARY MATTERS.





## SPECIAL SANITARY MATTERS.

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### **Insanitary Dwellings of the Working Classes.—(1.)**

Insanitary  
Dwellings.

*Closure of Cellar and other Dwellings.*—It will be remembered that in July, 1889, I reported to the then temporarily constituted "Insanitary Dwellings Committee," on the existence within the Borough of some 279 separate cellar-dwellings, and I have in my two previous annual reports regularly referred to this subject. There are now only 147 cellar-dwellings in the Borough; of the other 132 cellars, 107 have been closed by order of the Corporation on my certificate as to their unfitness for human habitation, and 25 have either become disused or have been converted into workshops.

In respect to this subject, the policy of caution and gradual dislodgement of cellar-inmates has been carefully adhered to, so that the smallest amount of inconvenience has been put on these poor people in seeking for other habitations. The progress which has been made is, I think, satisfactory, while not many of the worst type of cellar-dwellings are now left to be dealt with. There were 62 cellars closed during the year, and, in addition, four cottages were closed as unfit for human habitation under the Salford Improvement Act, 1870, making a total of 66 dwellings which have been closed.

(2.) *Progress of Scheme on Official Representations of the Medical Officer of Health, dated 1890.*—The official inquiry by the Local Government Board, under the Housing of the Working Classes Act, 1890, was held at the Town Hall, Salford, on March 25th, 1891, before Mr. Samuel Joseph Smith, C.E., an inspector of the Board. Evidence was given at that inquiry by the Town Clerk, the Medical Officer of Health, and the Borough Engineer in respect of the official representations required under Part I of the Act, and of the improvement scheme of the Corporation. After the inquiry, a provisional order was made by the Local Government Board, dated May 25th, 1891, and this order was finally confirmed and received the Royal Assent on August 5th, 1891. Thus, since the date of the adoption of the scheme by the Salford Council on the 14th of November, 1890, owing to other than local requirements, about nine months elapsed before the Council were in a legal position to open negotiations for the acquisition of the areas which had been declared insanitary, and this in spite of persistent endeavours on its part to secure despatch



in the matter. Even then, further delay occurred from the difficulty of obtaining the sanction of the Local Government Board for the Salford Corporation to borrow the necessary money for the purposes of the scheme, nor had this sanction been obtained by the end of the year. The delay in carrying out the scheme is due in no part to the action of the Health Committee who initiated it, and are charged with its execution.

Demolition of  
Dwellings for  
Railway  
Schemes.

#### **Demolition of Dwellings by Railway Extension.—**

During the year some considerable amount of demolition of old property has occurred in connection with the extension of the Lancashire and Yorkshire Railway Company's lines. A block of fifteen houses in Cable Street has been demolished, and a chapel built on the site, to replace one in Gravel Lane which will have to be removed under the Railway Extension Scheme. In addition to these houses, six in Pilgrim Street, three in West Gore Street, four in Cleggs' Place, together with a cotton-mill and a marine-store warehouse in Canal Street, all being situated in the Regent Road district, have been demolished for Railway purposes. Thus, in all, twenty-eight dwelling-houses and two business establishments have been removed, and of the houses none were such as could be desired to remain.

Model Common  
Lodging-houses.

**Model Common Lodging-House Scheme.**—I dealt in my last report with the question of the desirability of the Corporation undertaking the erection of a single model common lodging-house as an example of what such a house should be, and in the hope that the example might be followed by owners of lodging-house properties which do not add to the credit of the borough.

The action of the Corporation has been in the direction of securing a suitable site in Bloom Street, Salford, and further in applying to the Local Government Board for leave to borrow £11,550, the sum which the lodging-house and land were roughly estimated to cost. The application was heard by Mr. S. J. Smith, C.E., an inspector of the Local Government Board, on June 30th, 1891, but leave to borrow the money had not been granted by the end of the year, owing to objections being made by the Board to certain particulars in the plans. All of these had been met, however, by the Health Committee, with the exception of that relating to the number of inmates proposed to be provided for. As the plans of the Health Committee allowed for nearly double the amount of cubical space required for each bed under the Model Bye-Laws of the Local Government Board, it is scarcely likely, however, that the objection will be much longer sustained.

Hospital Accom-  
modation

**Hospital Accommodation.**—The Ladywell Sanatorium, the foundation stone of which was laid on May 22nd, 1890, was rapidly proceeded with during the year, and, though not actually completed by the end of the year, gave promise of its early occupation in 1892. The large and handsome buildings of the establish-



ment undoubtedly do credit to the borough which they represent, and will take the place of old and unsuited buildings for the reception of cases of infectious illnesses. During the year the old Wilton Hospital, and the fever-sheds at Hope, have been in more or less continuous use, but the tenancy of the latter does not seem to be likely to be necessary after the first quarter of 1892.

The following table shows the distribution of cases isolated at the expense of the Corporation since 1883 :—

Year.	Wilton.	Pendlebury.	Monsall.	Total.
1883	342	...	1	343
1884	645	31	30	706
1885	482	14	14	510
1886	910	18	45	973
1887	892	33	37	962
1888	753	16	102	871
*1889	888	5	239	1132
*1890	914	4	25	943
*1891	532	0	1	533

The percentage of these isolations, to the total number of notified cases in the three hospitals, will appear as follows —

Year.	Percentage of cases in the Wilton Hospital.	Total percentage. of cases in all three Hospitals.
1883	28·6	28·7
1884	38·0	41·6
1885	50·2	53·1
Mean for 3 years	38·9	41·1
1886	47·8	51·1
1887	47·2	50·9
1888	38·2	44·1
Mean for 3 years	44·4	48·7
1889	35·8	45·7
1890	42·0	43·3
1891	45·7	45·7
Mean for 3 years	41·2	44·9

It is not unlikely that the percentage of cases isolated will be found to increase year by year when the new hospital is opened, and the advantages of it become widely known.

**Excrement and Refuse Disposal.**—Further advance has been made in the Borough in respect of one of the methods of excrement disposal within it. It will be remembered that I reported

\* Under the heading of Wilton Hospital must be included the sheds at Hope, in temporary use as an annexe of the Wilton Hospital



Refuse disposal. for the year 1890 that 65 ; new water-closets had been substituted for old midden privies, and I have now to chronicle a further decided increase in the same direction. There has in fact been a total of 1,009 new water-closets erected in the Borough during the year, the distribution of which has been as follows :—Regent Road District, 544 ; Greengate, 302 ; Pendleton, 122 ; Broughton, 41. The experience of the past has been again emphasised, namely, that where there is one water-closet to each house occupied by a family of the working-classes that one has been kept carefully and in a clean condition, but where there is only one water-closet to more than one house then it suffers from want of care. There must be, therefore, an ultimate provision of one closet to each tenement of the working-classes as the solution of one of the commonest causes of nuisance in the Borough.

Although the destructor required in the Pendleton district was not provided by the end of the year, I am glad that some progress has been made in the matter, and that there is a prospect of an early application to the Local Government Board for leave to borrow the necessary funds for the purpose of erecting a destructor in that district. It is undoubtedly much wanted, and all the more because of the facilities that district affords for the development of building operations, which will necessarily mean a larger quantity of refuse to be dealt with.

River Pollution.

**Pollution of the River Irwell, and the Salford Docks of the Ship Canal.**—There can be no doubt that during certain portions of the year 1891 there were just grounds for various complaints of smell made to the Health Department by residents in the neighbourhood of the largest docks of the Manchester Ship Canal, which are situated within the Borough of Salford.

The months during which these complaints were made and were fully justified were June, July, August, and September, and I made several inspections and reports on the subject to the Health Committee. These led to some abatement of the nuisance from the canal docks, but not to the prevention of pollution of the Irwell. The difficulties in the way of curing the latter are very considerable. The nuisance in the docks was caused chiefly by a breach of the river through a tongue of land across the mouths of the docks, thus letting the water into them during a period of flood and retaining it when the flow of the river again became ordinary. The polluted waters of the river, left stagnant in the docks, soon became offensive, and when the wind carried the effluvia from them over the adjoining neighbourhood of Trafford Road, it can be easily imagined that complaints would be numerous. In the course of time, the tongue of land has been excavated ; but it still remains to be seen whether, when the hot weather returns and the wind is in the south or south-west, the nuisance from the docks may not again give rise to justifiable complaints. But whether such complaints are or are not again



made, the case against the polluting authorities higher up the Irwell and on the banks of its tributaries will have to be seriously dealt with. Salford has done much in the past to secure abatement of pollution of the Irwell and its tributaries, and is still prepared to work in this direction. At the same time, there is now a Joint Board for the Rivers Mersey and Irwell which has commenced to take action for the abatement of pollution of these rivers, and has recently appointed a staff of inspectors. This Board is made up of representatives of the counties of Lancashire and Cheshire, the City of Manchester, and the Boroughs of Salford, Bolton, Bury, Oldham, Rochdale, and Stockport, and it is most sincerely to be hoped for that by whatever means may be adopted the pollution of the Irwell, at any rate, which will affect the docks of the Ship Canal, will be soon much reduced.

River Pollution.

**Drainage Examinations.**—With a view to secure the more certain and accurate discovery of house connections with sewer air, and the detection of house and passage drains which, owing to imperfect construction, might be adding to the sum total of causes of soil-pollution in the borough, I appealed to the Health Committee in November, 1890, to enable me to commence systematic operations in such directions. The necessary arrangements were immediately sanctioned, and the testing of house and passage drains was to be made on my request by the Borough Engineer's staff in the presence of an inspector of the Health Department. In the first instance, one smoke-testing machine was put into use, but it was soon found that the calls for it were so numerous that it would be more convenient to have one machine for each of the three townships of the borough placed at each Town-hall. Two additional machines were therefore ordered to be purchased in the month of February, 1891.

Examination of drains by the smoke-test.

Drain-testing is now carried on in the borough under the direction of the Health Department in the following circumstances:—

1. At every house in which a case of enteric-fever or of diphtheria occurs.
2. On application from any householder in the borough, who has reason to suspect insanitary conditions in his house arising from the drain or drains; and
3. Whenever the Medical Officer of Health is of opinion, in any other case than the foregoing, that a smoke-test is desirable.

Under these circumstances there have been as many as 431 smoke-tests of drains made during the year 1891, discovering 423 groups of defects in 3,055 dwellings or their immediate surroundings. There were in consequence 423 special notices served for the remedy of drainage defects, and by the end of the year 331 of these had been complied with. I found it desirable



Examination of  
Drains by  
Smoke-test.

to specially order the smoke-test to be applied in 89 cases, and was particularly gratified to note the growing favour with which this new procedure was regarded in the receipt of 41 applications from householders for the examination of their house-drains.

All these examinations disclosed the following results:—In 101 instances, main drains in passages, areas, or yards were found to be wholly or partly choked with sediment, so that they literally formed elongated cesspools, and provided for the generation of foul gases in the neighbourhood of the surrounding dwellings; in 105 were discovered badly laid drains, or such as were partly composed of broken pipes, or were furnished with defective joints, so that there was percolation of drainage matters into the surrounding subsoil; while 117 showed similar percolations or escapes of sewer air due to the defective construction of drains with bricks and flagged covers, unsocketted pipes, and defective or untrapped inlets. But, besides these, there were also found, after 169 tests, a large number of gulley-traps which were broken or not properly connected to drains, allowing either soakage of waste waters into the soil, or the escape of drain air. In 147 instances, soil-pipes were found to be defective, *i.e.*, either ineffectively trapped, wholly unventilated or improperly so, defectively connected to drains, or having leaky joints near to doors or to windows; and smoke-tests in 85 instances showed that drain air had been laid on to the houses through the direct connection with drains or soil-pipes of bath-waste, lavatory, sink-stones, or cistern overflow pipes.

Thus, I think that the new system of drain examination, which has been in operation during 1891, has been amply justified, its future assured, and the benefit to be derived from it to the Borough placed beyond the region of doubt.

## APPENDIX.



## APPENDIX

83  
APPENDIX.

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COUNTY BOROUGH OF SALFORD.

To the Owner of the houses and premises  
occupied by and being situate and  
numbered of Salford.

Take notice that under section 41 of the Public Health Act, 1875, and Section 19 of the Public Health Acts Amendment Act, 1890, the Mayor, Aldermen, and Burgesses of the County Borough of Salford, acting as the Urban Sanitary Authority for the Urban Sanitary District of the said County Borough of Salford, being satisfied of the existence of a nuisance, and it appearing to them that a nuisance exists on and in connection with the said premises above-mentioned, or the passage thereto belonging, within the said district, namely, a drain so foul and obstructed as to be a nuisance and injurious to health, and that the said nuisance is caused by the act or default of yourself as owner of the said premises, do hereby under the said before-mentioned sections of the said before-mentioned Acts, require you within [twenty-four hours] from the service of this notice to abate the same, and for that purpose to take up all defective drains on and in connection with the said premises, and in lieu thereof to lay an effective drain, and to connect such last-mentioned drain with the public sewer in Street, within the said County Borough of Salford, to the satisfaction of the said Authority ; and further take notice that if you shall make default in complying with this notice, the said Urban Sanitary Authority will proceed under the said sections of the said before-mentioned Acts to take up the said defective drain, and in lieu thereof to construct an effective drain, and to connect the latter with the said public sewer in Street, in the District of within the County Borough of Salford aforesaid, and the said Urban Sanitary Authority will charge you with all costs and expenses of executing the said necessary works, and in default of your due payment therefor will proceed to obtain payment in such manner as they may deem advisable under the said sections of the said Acts, or either of them.

Dated this day of 189

TOWN CLERK.

Town Hall, Salford.



