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CITY OF LIVERPOOL.

REPORT

ON THE

HEALTH OF LIVERPOOL

DURING 1896.

BY

E. W. HOPE, M.D., D.Sc.,

*Medical Officer of Health.*




*(Ordered by the Health Committee to be printed, 10th June, 1897.)*

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1897.



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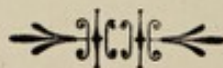
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Diagram illustrating Death Rate since 1861.

C.—Table of Deaths registered in the City.

Map shewing localities of Typhus Fever.



in each of the  
 Districts of  
 City during 18

NOT  
 2.7  
 7.8  
 1.8

REVERTO  
 39.2  
 24.3  
 139.7

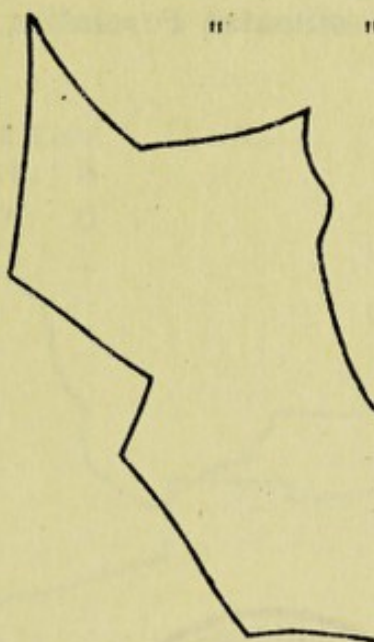
BLAC  
 8.4  
 2.1  
 4.8

SCOTLAND  
 44.1  
 34.5  
 119.0

Diagram shows

" "

" "

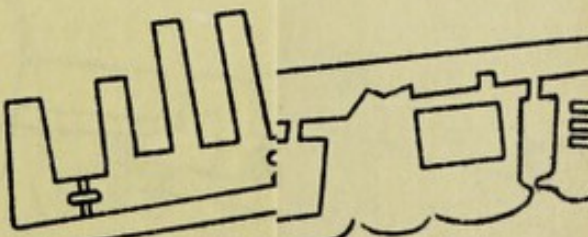


DERBY  
 2  
 4  
 5

EXCHANGE comprises—  
 Vauxhall Ward.  
 Exchange „  
 St. Anne's „

ABERCROMBY comprises—  
 Castle Street War  
 St. Peter's „  
 Great George „  
 Abercromby „

ABERCROMBY  
 34.7  
 22.4  
 74.4



R S R





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# VITAL STATISTICS.

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GENERAL AND ZYMOTIC DISEASE.

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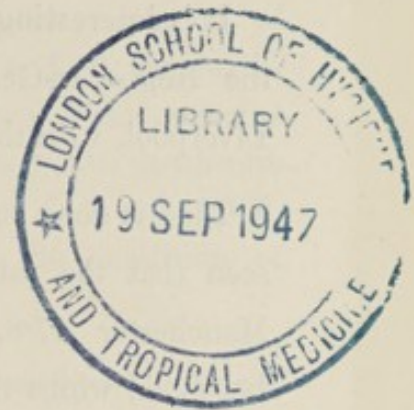
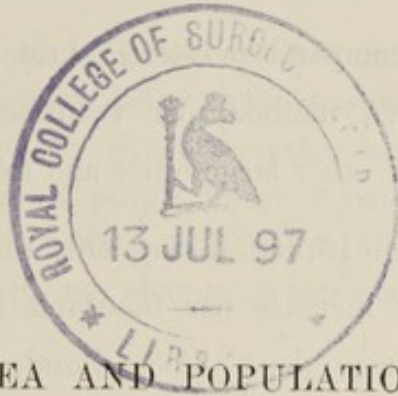


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# VITAL STATISTICS

GENERAL AND SPECIAL REPORT

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## AREA AND POPULATION.

---

THE area under the jurisdiction of the Council of the City of Liverpool, acting as the Urban Sanitary Authority, comprises 13,236 acres (20½ square miles).

The population of this area at the middle of 1896 is estimated to have been 641,063, and is made up of 140,341 estimated inhabitants of the incorporated districts, giving to those districts a population of 17·4 to the acre, and 500,722 estimated inhabitants of the former City, which is equal to a population of 96·1 to the acre.

It is probable that the estimated population of the City, viz., 641,063, is below the actual number. Various considerations support this view, for example, the estimate assumes that since the last Census in 1891, the population of the City has increased by 11,620, but the natural increase of the population, that is to say, the excess of the births over the deaths, is 32,086. Again, since the last Census, 4,210 houses have been erected, whilst 3,361 houses, mostly insanitary and many unoccupied, have been demolished, leaving a considerable balance of new houses.

It is obviously of importance in the absence of a sufficiently frequent Census, to make as careful an estimate of the population as possible, since the whole system of vital statistics, and the deductions drawn therefrom, have the total population as a basis.



It is interesting to compare the estimated rate of increase according to the Registrar-General's method, per thousand of the population of Liverpool, with that of other large cities and towns.

This is done on page 15, but taking only the great cities, it will be seen that the rate of increase per thousand for Glasgow is 70·3, of Manchester 47·8, Birmingham 48·3, London 44·8, Bradford 57·5, Leeds 95, whilst the estimated rate of increase for Liverpool during the same period is only 4·8, a conclusion which does not harmonise with the natural increase of the population already referred to.

It is perhaps a matter of satisfaction to note that the error, if it be one, is one which tells against the City, and that the death-rate is probably considerably below what it is actually stated to be.

Quite apart from conditions of sanitation, mortality varies widely at different age-periods; consequently the death-rate of a community is largely influenced by the proportions living at each age-period; the effect of a high birth-rate is considerable.

It will be seen from tables on pages 12 and 19 that the districts of highest birth-rate are those of highest death-rate.

The following table shows the actual number who died during last year in Liverpool out of every thousand living at each of the twelve age-periods indicated, and the differences which the figures show are very striking:—

1896.	Under 1 year.	1 to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 and upwards.	Total at all Ages.
Rate of Mortality per 1,000 living at ages indi- cated.	219·5	82·3	21·1	6·1	3·5	6·2	12·2	19·4	33·2	58·6	101·4	154·2	21·9
Total Number of Deaths at each Age Period ..	3,804	1,238	970	444	462	674	1,094	1,301	1,445	1,411	958	259	14,060

If, for example, we could conceive that the whole population of Liverpool consisted of persons between the ages of 20 and 30, the death-rate would be 6·2 per 1,000 ; if, on the other hand, we could conceive that it consisted entirely of people under 1 year of age, the death-rate would be about 219·5 per 1,000, and if above 60 years, 74·6 per 1,000, and this with absolutely no change whatever in the condition of municipal sanitation.

The variations in the proportions at different ages vary with extreme slowness, and have but a trifling effect in modifying aggregate results.

The deaths in public institutions of 416 non-residents, equal to a fraction of 0·6 per 1,000 have been eliminated from the table.

---

### BIRTHS.

The birth-rate in the City of Liverpool is exceptionally high. During the last ten years the mean has been 35·0, which is considerably in excess of most of the 35 great towns. Last year it was 34·2 per 1,000, a figure which was only exceeded in three other towns, viz., Gateshead, Salford and Wolverhampton, where it was 35·8, 34·9 and 34·4 respectively, the lowest birth-rate recorded being at Huddersfield, where it was 20·5 per 1,000 ; the rates for the remainder of the 35 large towns ranging between those quoted.

During the fifty-two weeks of the year 1896 (terminating on Saturday, December 27th, 1896), the Returns of the Local Registrars recorded 21,943 births within the City.

Of the total births 11,085 were males and 10,858 were females, making the total birth-rate of the City equal to 34·2 per 1,000 of the population ; the average of the previous ten years for the former City area being 35·0.

The distribution of the births in the different wards and districts of the City is indicated upon the accompanying map, and has also been arranged in the following table :—



## BIRTHS.

DISTRICTS AND WARDS.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		1896.		Corrected average Rate per 1000 during the 10 years 1886-1895.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Births.	Rate per 1000	
Scotland .....	246	229	266	240	256	269	279	268	2053	44.1	39.1
Exchange .....	174	202	174	175	189	177	170	172	1433	36.8	29.9
Abercromby.....	224	199	219	229	228	224	206	211	1740	34.7	30.0
Everton .....	560	510	565	558	523	526	568	525	4335	39.2	36.8
Kirkdale .....	312	315	271	325	286	283	288	279	2359	34.6	36.5
West Derby.....	365	370	399	389	348	341	372	366	2950	37.2	35.6
Toxteth .....	404	405	424	465	492	429	461	442	3522	32.9	34.5
											35.0
Walton.....	182	208	211	182	174	188	195	202	1542	27.9	..
West Derby (Rural) .....	121	118	131	93	126	136	123	103	951	24.3	..
Wavertree .....	45	57	57	51	67	48	71	64	460	29.8	..
Toxteth (Rural) .....	67	71	84	73	90	82	72	59	598	19.6	..
City .....	2700	2684	2801	2780	2779	2703	2805	2691	21943	34.2	..

Without an exception, the birth-rate is higher in the old parts of the City than in the rapidly extending incorporated areas. This is so opposed to what is found usually to obtain in Cities, that whilst not losing sight of the high birth-rate amongst the poorer classes, resulting from very early marriage, there remains strong presumptive evidence that the population of the older parts of the City is under estimated.

From the following Table, showing the Population, Number of Births, and Birth-rate per 1,000 during the last twenty-five years, it will be seen that the Rate has shown no tendency to diminish since 1888.

Year.	Population.	No. of Births.	Rate per 1,000.
1872	499,964	19,343	38·7
1873	505,274	18,716	37·0
1874	510,640	19,861	38·9
1875	516,063	19,869	38·5
1876	521,544	20,426	39·2
1877	527,083	20,333	38·6
1878	532,681	20,612	38·7
1879	538,338	20,844	38·7
1880	544,056	20,783	38·2
1881	551,617	20,762	37·6
1882	548,065	20,498	37·4
1883	544,547	19,907	36·6
1884	541,031	20,071	37·1
1885	537,548	19,464	36·2
1886	534,088	19,559	36·6
1887	530,649	18,414	34·7
1888	527,233	17,777	33·7
1889	523,838	17,676	33·7
1890	520,466	17,592	33·8
1891	517,145	17,832	34·5
1892	513,818	17,758	34·6
1893	510,514	18,328	35·9
1894	507,230	17,893	35·3
*1895	638,291	22,006	†34·5
1896	641,063	21,943	34·2

\* City area extended.

† Rate in former City area, 1895, 36·6; 1896, 36·7.



The following table shows the *natural* increase or decrease of population, by the increase or decrease in the number of births over deaths during the year 1896, in the several districts of the City :—

DISTRICTS AND WARDS.							Births.	Deaths.	Increase.	Decrease
Scotland	..	..	..	..	..	..	2053	1609	444	..
Exchange	..	..	..	..	..	..	1433	1451	..	18
Abercromby	..	..	..	..	..	..	1740	1127	613	..
Everton	..	..	..	..	..	..	4335	2697	1638	..
Kirkdale	..	..	..	..	..	..	2359	1333	1026	..
West Derby	..	..	..	..	..	..	2950	1698	1252	..
Toxteth	..	..	..	..	..	..	3522	2231	1291	..
Walton	..	..	..	..	..	..	1542	704	838	..
West Derby (Rural)	..	..	..	..	..	..	951	685	266	..
Wavertree	..	..	..	..	..	..	460	226	234	..
Toxteth (Rural)	..	..	..	..	..	..	598	299	299	..
City .. .. .							21943	14060	7883	..
Hospitals (Residences outside City)							..	416	..	..
Total.. .. .							21943	14476	7467	..

The following table is prepared from the Census Returns, and from Reports of the Registrar General, and indicates the estimated rate of increase per 1,000 of the population of thirty-four large towns since the last Census.

TOWNS.	Population Census, 1891.	Estimated Population, 1896.	Estimated Increase.	Rate of Increase per 1,000 of Population since 1891.
London ... ..	4,232,118	4,421,955	189,837	44·8
West Ham ... ..	204,903	261,297	56,394	275·2
Croydon ... ..	102,695	118,006	15,311	149·0
Brighton ... ..	115,873	120,499	4,626	39·9
Portsmouth ... ..	159,251	178,639	19,388	121·7
Plymouth ... ..	84,248	90,276	6,028	71·5
Bristol ... ..	221,578	230,623	9,045	40·8
Cardiff ... ..	128,915	162,690	33,775	261·9
Swansea ... ..	90,349	98,645	8,296	91·8
Wolverhampton ... ..	82,662	86,530	3,868	46·7
Birmingham ... ..	478,113	501,241	23,128	48·3
Norwich ... ..	100,970	108,630	7,660	75·8
Leicester ... ..	174,624	198,659	24,035	137·6
Nottingham ... ..	213,877	229,775	15,898	74·3
Derby ... ..	94,146	101,770	7,624	80·9
Birkenhead ... ..	99,857	109,343	9,486	94·9
Bolton ... ..	115,002	120,380	5,378	46·7
Manchester ... ..	505,368	529,561	24,193	47·8
Salford ... ..	198,139	210,707	12,568	63·4
Oldham ... ..	131,463	143,442	11,979	91·1
Burnley ... ..	87,016	102,805	15,789	181·4
Blackburn ... ..	120,064	129,459	9,395	78·2
Preston ... ..	107,573	113,864	6,291	58·4
Huddersfield ... ..	95,420	100,463	5,043	52·8
Halifax ... ..	89,832	94,775	4,943	55·0
Bradford ... ..	216,361	228,809	12,448	57·5
Leeds ... ..	367,505	402,449	34,944	95·0
Sheffield ... ..	324,243	347,278	23,035	71·0
Hull ... ..	200,044	220,844	20,800	103·9
Sunderland ... ..	131,015	140,386	9,371	71·5
Gateshead ... ..	85,692	98,436	12,744	148·7
Newcastle-on-Tyne ... ..	186,300	212,223	25,923	139·1
Glasgow ... ..	658,708	705,052	46,344	70·3
<b>LIVERPOOL ... ..</b>	<b>629,443</b>	<b>632,512</b>	<b>3,069</b>	<b>4·8</b>



## DEATHS.

---

The rate of mortality during the year 1896, viz., 21·9, indicates a very considerable decrease in the number of deaths. It is gratifying to notice that a saving of life has been effected at each one of the twelve age-periods referred to on page 10 ; in no single instance has the rate of mortality reached that of the preceding year.

The rate of mortality varies very widely in different districts of the City, and many circumstances combine to bring about this result ; the comfortable circumstances of life of the inhabitants of the suburbs, the sparse population, and the purer atmosphere, contrast markedly with the condition of the poorer localities, where, to the worries of life are added the prejudicial influences of density of population, confinement, unwholesome occupations, overcrowding, insanitary dwellings, &c., whilst in the more squalid localities the mischief is intensified by intemperance and filthy habits of life. These circumstances are common to all great cities, and Liverpool furnishes no exception to the rule.

It will be seen on studying the causes of death that the class of zymotic diseases has occasioned less mortality than in the preceding year, the chief saving having been effected in zymotic disease of the bowels, Typhoid Fever, Measles and Whooping Cough. There was not a single death from Smallpox, but Scarlet Fever shewed an increased mortality.

Deaths from Typhus Fever were 36, as against 24 in the preceding year (vide pages 26 and 27).

The total deaths registered in the City amounted to 14,476, of which 7,417 were of males, and 7,059 of females.

The death-rate of the City was equal to 21·9 per 1,000. The average in the former City area during the previous ten years was 25·8 per 1,000.

Inquests were held on the bodies of 181 infants under 12 months of age, who had been suffocated.

Inquests were held on the bodies of 178 persons, viz. :—53 men and 31 women, whose deaths were directly caused by excessive drinking, 52 men and 34 women, whose deaths were accelerated by excessive drinking, and 3 men and 5 women who died from injuries sustained while in a state of intoxication. In addition to the foregoing, 13 deaths (5 of men and 8 of women) were certified by the medical attendant to be due to alcoholism.

The following table gives the number of deaths allocated to each district :—

DISTRICTS AND WARDS.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Annual.
	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Deaths.
Scotland .....	187	204	193	168	232	195	220	210	1609
Exchange .....	198	178	177	161	193	153	209	182	1451
Abercromby .....	175	148	134	124	146	124	139	137	1127
Everton .....	361	338	325	322	345	326	342	338	2697
Kirkdale .....	189	177	156	148	201	161	167	134	1333
West Derby.....	207	220	193	214	212	219	213	220	1698
Toxteth .....	283	310	252	258	279	292	255	302	2231
Walton.....	77	88	89	78	97	97	73	105	704
West Derby (Rural) .....	97	108	98	69	73	74	89	77	685
Wavertree .....	27	23	25	16	40	29	36	30	226
Toxteth (Rural) .....	42	53	32	35	35	27	34	41	299
Workhouses and Hospitals (Residences outside the City) .....	74	43	58	45	70	24	68	34	416
City .....	1917	1890	1732	1638	1923	1721	1845	1810	14476



Deaths in Public Institutions are referred to the Wards from whence the patients came, but the following table shows that the deaths of 3,457 persons occurred in the undermentioned Institutions for the treatment of the sick :—

Parish Workhouse	...	...	...	...	1,157
Royal Infirmary	...	...	...	...	237
Children's Infirmary	...	...	...	...	119
Lying-in Hospital	...	...	...	...	9
Consumption Hospital	...	...	...	...	14
Hahnemann Hospital	...	...	...	...	17
Northern Hospital	...	...	...	...	155
Stanley Hospital	...	...	...	...	76
Royal Southern Hospital	...	...	...	...	170
Mill Road Infirmary	...	...	...	...	397
Hospital for Women	...	...	...	...	25
City Hospital North	...	...	...	...	73
Do. South	...	...	...	...	104
Do. Parkhill	...	...	...	...	48
Do. East, Mill Lane	...	...	...	...	15
Do. Priory Road	...	...	...	...	11
Walton Workhouse	...	...	...	...	454
Belmont Road Workhouse	...	...	...	...	43
St. Joseph's Home	...	...	...	...	27
Toxteth Workhouse	...	...	...	...	255
Turner Memorial Home	...	...	...	...	6
St. Augustine's Home	...	...	...	...	5
Other Public Institutions	...	...	...	...	40

From the returns made as to the residences of these persons 3,041 of the deaths in these establishments are classified in the Districts from whence the patients were removed, viz. :—429 under Scotland District, 580 under Exchange District, 336 under Abercromby District, 533 under Everton, 208 under Kirkdale, 268 under West Derby, 433 under

Toxteth, 88 under Walton, 103 under West Derby (rural), 31 under Wavertree, and 32 under Toxteth (rural); 275 were non-residents who had sought relief in Liverpool Institutions, and the remainder, 141, were waifs whose previous residences were unknown. In the absence of definite information, these latter have been recorded as deaths of non-residents.

The results of this allocation of deaths in public institutions to the districts from whence the patients had been removed, are shown in the following table, from which a calculated rate of mortality per 1,000 per annum of the inhabitants has been made. The rates are calculated upon a population increasing or decreasing in the same ratio as between 1881 and 1891. The same applies to the third column of figures showing the corrected average during the preceding ten years.

DISTRICTS AND WARDS.	1896.		Corrected Average Rate per 1,000 during the 10 years 1886—1895.	Rate per 1000, year 1895.
	Deaths.	Rate per 1000		
Scotland .. .. .	1609	34.5	34.6	38.4
Exchange .. .. .	1451	37.2	36.6	41.2
Abercromby .. .	1127	22.4	24.5	27.0
Everton .. .. .	2697	24.3	23.9	27.6
Kirkdale ... .. .	1333	19.5	22.2	24.4
West Derby .. .. .	1698	21.4	21.7	24.3
Toxteth .. .. .	2231	20.8	22.5	24.8
Walton .. .. .	704	12.7	..	15.7
West Derby (Rural) .. .	685	17.5	..	17.7
Wavertree .. .. .	226	14.6	..	16.2
Toxteth (Rural) .. .. .	299	9.8	..	10.4
City .. .. .	14060	21.9	25.8	25.4

The death-rate per 1,000 for 1896 in each of the Districts of the City is indicated upon the appended map.



The following table, taken from the Registrar-General's Reports, gives the recorded birth and death rate of thirty-six of the large towns of the United Kingdom.

The Returns of 53 weeks are dealt with in this table:—

TOWNS.	Estimated Population in the middle of the year 1896.	Births in 53 Weeks, ending 2nd Jan., 1897.	Deaths in 53 Weeks, ending 2nd Jan., 1897.	Annual Rate to 1,000 of Population.		Population per Acre.
				Births.	Deaths.	
London .. .. .	4421955	135796	83511	30·2	18·6	59·2
West Ham .. .. .	261297	8658	4268	32·6	16·1	55·5
Croydon .. .. .	118006	3009	1706	25·1	14·2	13·1
Brighton .. .. .	120499	3022	1975	24·7	16·1	47·6
Portsmouth .. .. .	178639	5006	3009	27·6	16·6	38·3
Plymouth .. .. .	90276	2643	1796	28·8	19·6	58·6
Bristol .. .. .	230623	6465	3961	27·6	16·9	49·3
Cardiff .. .. .	162690	5591	2784	33·8	16·8	26·8
Swansea .. .. .	98645	3061	1689	30·5	16·8	19·4
Wolverhampton .. .. .	86530	3023	1755	34·4	20·0	24·5
Birmingham .. .. .	501241	16603	10600	32·6	20·8	39·5
Norwich .. .. .	108630	3400	1919	30·8	17·4	14·4
Leicester .. .. .	198659	6212	3376	30·8	16·7	23·1
Nottingham .. .. .	229775	6758	4087	28·9	17·5	21·0
Derby .. .. .	101770	2901	1619	28·0	15·7	29·5
Birkenhead .. .. .	109343	3527	2193	31·7	19·2	31·3
Bolton .. .. .	120380	3831	2536	31·3	20·7	51·1
Manchester .. .. .	529561	17787	12184	33·0	22·6	41·0
Salford .. .. .	210707	7480	4848	34·9	22·6	40·7
Oldham .. .. .	143442	3971	2955	27·2	20·3	30·3
Burnley .. .. .	102805	3245	1830	31·0	17·5	26·2
Blackburn .. .. .	129459	3649	2351	27·7	17·9	18·6
Preston .. .. .	113864	3776	2403	32·6	20·8	27·8
Huddersfield .. .. .	100463	2096	1682	20·5	16·5	8·5
Halifax .. .. .	94775	2337	1669	24·3	17·3	11·1
Bradford .. .. .	228809	5939	3840	25·5	16·5	21·2
Leeds .. .. .	402449	12574	7670	30·7	18·8	18·7
Sheffield .. .. .	347278	12011	6797	34·0	19·3	17·7
Hull .. .. .	220844	7171	4245	31·9	18·9	26·8
Sunderland .. .. .	140386	4873	2828	34·2	19·8	42·6
Gateshead .. .. .	98436	3583	1910	35·8	19·1	31·4
Newcastle-on-Tyne .. .. .	212223	6701	3981	31·1	18·5	39·5
Edinburgh .. .. .	276514	7686	4751	27·3	16·9	44·3
Glasgow .. .. .	705052	24216	14619	33·8	20·4	59·5
Dublin .. .. .	349594	10680	8856	30·1	24·9	14·1
<b>LIVERPOOL .. .. .</b>	<b>641063</b>	<b>22416</b>	<b>14366</b>	<b>34·3</b>	<b>21·9</b>	<b>48·4</b>



INFANT MORTALITY.

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Infant mortality, as usual, varied very widely in different districts of the City, *e.g.*, in the Toxteth (incorporated) district, out of every 1,000 infants born, 104 died before attaining the age of twelve months, whilst in other parts of the City, out of an equal number born, more than twice as many, *viz.*, 237, died before attaining the age of twelve months.

It is in the very early ages that danger to life is greatest, and the mortality amongst infants is high, in spite of maternal solicitude.

Excessively heavy infantile mortality is, without doubt, largely owing to ignorance and neglect on the part of the parents—indeed, it is a matter of wonder to those acquainted with the habits and customs of some of the lower sections of the community, not that so many perish, but that so large a number survive.

The condition of the very squalid children begging in the streets, ragged and filthy, indicates the absence of any sense of parental responsibility.

These children, whose condition excites the astonishment of every visitor to the City, are used by their parents for the purpose of begging, and, owing to their apparently miserable plight, they are enabled to support their parents by the gifts of philanthropic but foolish people.

The following table indicates the seasonal mortality, and the incidence, in the various Wards of the City, of Infantile Mortality, and the proportion of deaths under five years to the total deaths :—

DISTRICTS AND WARDS.	Quarters.				Total Deaths.	Deaths under 5 years of age.	Per Cent- age of Deaths under 5 years to Total Deaths.	Per Cent- age of Deaths under 1 year to Total Births.
	March.	June.	Sept.	Dec.				
Scotland .. ..	391	361	427	430	1609	769	47·8	22·2
Exchange .. ..	376	338	346	391	1451	548	37·8	23·7
Abercromby .. ..	323	258	270	276	1127	345	36·1	13·2
Everton .. ..	699	647	671	680	2697	1280	47·5	18·5
Kirkdale .. ..	366	304	362	301	1333	630	47·3	17·4
West Derby .. ..	427	407	431	433	1698	750	44·2	16·8
Toxteth .. ..	593	510	571	557	2231	924	41·4	16·2
Walton .. ..	165	167	194	178	704	298	42·3	13·4
West Derby (Rural)	205	167	147	166	685	269	39·4	17·5
Wavertree .. ..	50	41	69	66	226	99	43·8	13·9
Toxteth (Rural) ..	95	67	62	75	299	100	33·4	10·4
Workhouses & Hos- pitals (Residences outside City) ..	117	103	94	102	416	52	12·5	..
City .. ..	3807	3370	3644	3655	14476	6064	41·9	17·5

Deaths in Public Institutions are referred to the Wards from whence the patients came.

## CAUSES OF DEATH.

The following table gives a classification of the actual causes of death during the four quarters of the year, grouped under 16 classes.

Full details as to the causes of death are set forth in tables (*A* and *C*) in the Appendix; in these tables the age at death and the district in which it occurred will also be found.

CLASSES.	QUARTERS.				YEAR 1896.
	March.	June.	Sept.	Dec.	
1. Zymotic and Septic Diseases .. .. .	452	446	971	442	2311
2. Diseases of Uncertain or Variable Seat ..	125	129	132	146	532
3. Constitutional Diseases .. .. .	466	464	410	469	1809
4. Diseases of the Nervous System .. .. .	383	407	343	359	1492
5.    ,,    ,,    Circulatory   ,,    ..    ..	257	214	200	290	961
6.    ,,    ,,    Respiratory   ,,    ..    ..	1056	731	459	961	3207
7.    ,,    ,,    Digestive   ,,    ..    ..	228	209	285	201	923
8.    ,,    ,,    Lymphatic   ,,    ..    ..	2	5	2	6	15
9.    ,,    ,,    Urinary   ,,    ..    ..	108	91	87	87	373
10.    ,,    ,,    Re-productive   ,,    ..    ..	23	31	18	25	97
11.    ,,    ,,    Joints, &c.    ..    ..    ..	9	9	10	8	36
12.    ,,    ,,    Integumentary System ..	9	8	9	11	37
13. Dietetic Diseases .. .. .	4	6	7	2	19
14. Developmental Diseases .. .. .	418	371	461	416	1666
15. Privation, Cold, &c. .. .. .	..	..	..	..	..
16. Causes investigated at Coroner's Inquests ..	262	246	247	228	983
Causes not specified .. .. .	5	3	3	4	15
All Causes .. .. .	3807	3370	3644	3655	14476

The Registrars' Returns show that there were 19 deaths (10 of women and 9 of men) at the age of 90 and upwards, viz., 4 males and 4 females at 90, 2 males and 1 female at 91, 1 male and 1 female at 92, 1 male and 1 female at 93, 1 female at 94, 2 females at 95, and 1 male at 97.



## ZYMOTICS.

This class of diseases occasioned 2,311 deaths during the year 1896, and accounted for 16·0 per cent. of the total mortality within the City during this period. The death rate from zymotic diseases per 1,000 was 3·6. The deaths were as follows :—

							QUARTERS.				YEAR
							March.	June.	Sept.	Dec.	1896.
Total Zymotics	..	..	..	..	..	..	452	446	971	442	2311
Smallpox	..	..	.	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	129	97	27	59	312
Scarlatina	..	..	..	..	..	..	38	31	54	94	217
Diphtheria	..	..	.	..	..	..	35	21	29	35	120
Membranous Croup	..	..	..	..	..	..	9	12	7	9	37
Whooping Cough	..	..	..	..	..	..	120	97	44	37	298
Diarrhoea	..	..	..	..	..	..	28	80	671	72	851
Fever	{	Typhus	..	..	..	.	3	13	10	10	36
		Typhoid	.	..	..	..	28	36	43	59	166
		Simple Continued ..	..	..	.	.	1	1	..	..	2
Other Zymotics	..	..	..	..	..	..	61	58	86	67	272

It cannot fail to be of interest to note the marked diminution in certain forms of these diseases, notably in those forms of it to which adult life is liable.

On pages 41 to 43 will be found tables indicating the deaths and the death rates from various forms of zymotic disease in the City, during each one of the last three decennial periods. Two of them, Smallpox and Typhus Fever, perhaps two of the most formidable diseases with which the Sanitary Authority has to contend, have become relatively rare, having slowly given ground, year by year, before the means adopted by the Municipality to suppress them. As regards Scarlet Fever, the diminution, though less striking, is still very apparent. The bulk of the patients attacked with this form of disease are children above the age of infancy, and if the diminution is not as great as in the two diseases already mentioned, there is the remarkable fact that the mortality amongst patients treated in the City Hospitals is less than amongst patients left in their homes (see page 139, *re* Hospitals). It is quite true that similar measures, had they been applicable, would have caused a similar diminution in

the zymotic diseases which are so destructive of infant life, but the natural guardian of the infant is the mother, and the safety of the infant depends in a far greater measure upon the amount of domestic care exercised, than upon the operations which the Municipality can put into force. The extent to which the Sanitary Authority can directly interfere in these cases is relatively limited, and the diminution in infantile mortality is proportionately less than in the cases where the influence of the Sanitary Authority can be more directly exercised.

Neither Measles nor Whooping-Cough is included under the Notification Act, and it is very doubtful whether any advantages would result were they to be included. Removal to hospital would, owing to the tender age of the patient, be impracticable, while another difficulty which presents itself in these cases is that the disease is most infectious in its earliest stages. As a consequence the cases of these diseases isolated in hospital are very few.

The following table shows the localities and the periods of the fatal prevalence of Zymotic diseases during 1896 :—

DISTRICTS, WARDS, &c.	Deaths from all Causes.	ZYMOTICS.				
		Quarters.				Per Centage of Zymotic Deaths to Deaths from all Causes.
		March.	June.	Sept.	Dec.	
Scotland .. .. .	1609	51	45	124	79	18·6
Exchange .. .. .	1451	23	42	80	48	13·3
Abercromby .. .. .	1127	27	26	50	18	10·7
Everton .. .. .	2697	103	88	197	82	17·4
Kirkdale .. .. .	1333	44	40	122	34	18·0
West Derby .. .. .	1698	51	59	125	61	17·4
Toxteth .. .. .	2231	71	58	150	54	14·9
Walton .. .. .	704	17	22	54	20	16·0
West Derby (Rural) .. .. .	685	37	36	29	23	18·3
Wavertree .. .. .	226	5	9	17	11	18·6
Toxteth (Rural) .. .. .	299	10	14	16	8	16·1
Workhouses and Hospitals (Residences outside City) .. .. .	416	13	7	7	4	7·4
City .. .. .	14476	452	446	971	442	16·0

Deaths in Public Institutions are referred to the Wards from whence the patients came.



## SMALLPOX.

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The City was free from Smallpox until August 10th, when a case was found in Springfield Street. The source of infection could not be traced.

On September 18th a case arrived on S.S. "Cherbourg"; one case arrived on October 12th, on S.S. "Trinidad"; two cases arrived on November 14th, on S.S. "Barracoa"; they were all removed direct from the vessels to the Hospital at Parkhill.

On November 12th, the steward of the "Oporto," was found to have developed the sickness after the vessel arrived in the Port.

On December 7th two cases, mother and child, were removed to hospital from an address in the City, a source external to the City, being the origin of infection.

All the cases were removed to Hospital, and there were no deaths from Smallpox during the year.

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## TYPHUS.

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During the last year there was some increase in Typhus Fever, the number of cases discovered amounting to 305, as against 162 in the preceding year, and the deaths were 36, as against 24 in the preceding year.

The great majority of the cases occurred in the south end of the City, and were, as usual, associated with drunkenness, squalor, and filth. A large proportion of the patients were children, some of them attending



one of the Day Industrial Schools, which thus became a channel for dissemination of the disease.

In every instance in which a case of typhus fever is discovered the patient is immediately removed to the hospital, the bedding and clothing destroyed and replaced by suitable new articles, and the house thoroughly disinfected and cleansed. Every day for a fortnight the Inspector visits the house to inquire whether any other person is sick, and not only that, but he goes through the house to satisfy himself that there is no other sick person in the house.

Inquiries are also made as to persons who may have been visiting the house whilst the sick person was in it, and an inspection is made of the homes of any such visitors, to ascertain whether any of them have contracted the illness. But notwithstanding all precautions the disease sometimes remains unrecognised until a localised outbreak attracts attention.

Difficulties in diagnosis are often considerable ; the disease is one which very rarely comes to the notice of the medical practitioner, and the extremely filthy condition of the patient adds to the difficulty of its identification.

The mildness of the early symptoms, more especially in children, and the close resemblance in the earliest phases in adults to the effects of drink, are apt to throw the observer off his guard.

There were 305 cases found during the year, 36 of which, as the table shows, resulted fatally.

AGES AT DEATH.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & up- wards.	All Ages.
—	—	—	—	2	3	7	12	8	2	2	36

List of Streets in the City wherein cases of TYPHUS FEVER occurred  
during the Year 1896.

STREETS.	Cases.	Deaths.	STREETS.	Cases.	Deaths.
Argyle .. .. .	1	1	Denbigh .. .. .	3	..
Athol .. .. .	2	..	Dickson Terrace, Soho Street	6	..
Avison .. .. .	1	..	Drinkwater Gardens ..	1	..
Back Queen Anne ..	1	..	Dryden .. .. .	2	..
Back Roscommon ..	1	..	Dublin .. .. .	1	1
Barmouth .. .. .	1	..	Eldon Place .. .. .	3	..
Beau Lane .. .. .	9	..	Elias .. .. .	3	1
Beaufort .. .. .	5	..	Essex .. .. .	6	3
Bevin Lane .. .. .	2	..	Fletcher .. .. .	2	..
Beresford Road ..	1	..	Forge Place .. .. .	2	..
Blenheim .. .. .	8	1	Gadsby .. .. .	1	1
Bolton .. .. .	2	..	Gerard .. .. .	3	..
Boundary .. .. .	2	..	Glenny .. .. .	6	..
Boundary Terrace, Virgil Street	18	3	Gore .. .. .	2	..
Bran .. .. .	2	..	Grafton .. .. .	4	..
Brick .. .. .	4	..	Greenland .. .. .	1	..
Buckingham .. .. .	3	1	Grey .. .. .	2	..
Byles .. .. .	1	..	Guest .. .. .	1	..
Cartwright Place ..	1	1	Hampton .. .. .	1	..
Clare Terrace .. ..	1	..	Haylock .. .. .	3	1
Clive .. .. .	10	1	Hilbre .. .. .	1	..
Combermere .. .. .	8	..	Hop .. .. .	1	..
Cotter Place .. .. .	3	..	Horatio .. .. .	1	..
Cotter .. .. .	2	..	Hughson .. .. .	1	..

List of Streets in the City wherein cases of TYPHUS FEVER occurred  
during the year 1896.—*Continued.*

STREETS.	Cases.	Deaths.	STREETS.	Cases.	Deaths.
Ismay .. .. .	1	1	Rose Vale . . . .	1	1
Juliet .. .. .	1	1	Rutter .. .. .	5	..
Kent Square .. .. .	1	..	Salisbury .. .. .	22	4
„ Street .. .. .	2	..	Sessions Road .. .. .	1	..
Lamport .. .. .	2	..	Shelley .. .. .	12	..
Lime Grove .. .. .	1	..	Sherwood .. .. .	7	3
Llanrwst .. .. .	8	1	Sheridan .. .. .	3	..
Mann .. .. .	16	1	Soho .. .. .	1	1
Mansfield .. .. .	1	..	Stanhope .. .. .	1	..
Mill .. .. .	1	1	Stitt .. .. .	3	..
Newhall .. .. .	1	..	Sumner .. .. .	1	..
Oakfield Road .. .. .	1	..	Sussex .. .. .	2	..
Oliver .. .. .	1	1	St. George's Hill .. .. .	1	..
Opie .. .. .	4	..	Tarbet .. .. .	1	..
Park .. .. .	1	..	Tatlock .. .. .	1	..
Paxton .. .. .	1	1	Townsend .. .. .	2	..
Phythian .. .. .	1	..	Upper Bute .. .. .	1	..
Prince Edwin .. .. .	9	2	Upper Frederick .. .. .	1	..
Prophet .. .. .	1	..	Vaughan .. .. .	1	..
Rachel .. .. .	2	..	Vronhill .. .. .	1	..
Raymond .. .. .	4	1	Wellington Road .. .. .	1	..
Richards Place .. .. .	3	1	White .. .. .	7	..
Richmond Row .. .. .	3	1	Whitley .. .. .	5	..
Roache .. .. .	2	..	Wolfe .. .. .	2	..
Rose Place .. .. .	7	..	Woodstock .. .. .	1	..



## TYPHOID.

It is gratifying to note that the number of cases of typhoid fever coming under notice during the year was very considerably less than in the preceding year, viz. :—1,063, against 1,306; and the fatal cases were 166, as against 197.

It is a very satisfactory sign that the public, more especially the well-to-do classes, are beginning to realise the importance of giving attention to the drainage system of their dwellings, and to the necessity for suitable construction and adequate flushing. The knowledge that typhoid fever is communicable by sewage-fed shell fish as well as by some other kinds of food is more widespread, but it is a curious circumstance that the great element of danger from personal contagion is still under-rated, or even disregarded, and as a consequence disastrous results ensue.

The frequency with which nurses attending typhoid fever patients in general hospitals contract the disease themselves, may be mentioned in this connection.

The attention given by the more highly-educated public is not always as well directed as might be expected. For example, the occurrence during the year of two cases in one district gave rise to extreme alarm amounting almost to panic in the vicinity, exaggerated rumours adding to the apprehensions of the timorous, many of whom vacated their houses.

It is well to remember that intelligent precautionary measures of a reasonable character are valuable, but action under the influence of terror will probably be misdirected and productive of mischief.

Upwards of 50 per cent. of the total number of cases were moved to hospitals. (See page 128).

The following gives the ages at death of the fatal cases :—

AGES AT DEATH.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & up- wards.	All Ages.
—	1	6	14	25	15	47	29	19	8	2	166

Table showing the locality and season of deaths from the various forms of Continued Fever during the year 1896.

DISTRICTS AND WARDS.	1st Quarter.			2nd Quarter.			3rd Quarter.			4th Quarter.			YEAR.		
	Typhus.	Typhoid.	Simple Continued.	Total.	Typhus.	Typhoid.	Simple Continued.	Total.	Typhus.	Typhoid.	Simple Continued.	Total.	Typhus.	Typhoid.	Simple Continued.
Scotland	1	4	...	5	2	3	...	5	5	3	...	8	9	17	...
Exchange	...	...	...	...	2	4	...	6	...	6	...	7	3	16	...
Abercromby	...	2	...	2	...	4	...	4	1	2	...	2	1	10	...
Everton ...	2	7	...	9	2	6	...	8	...	7	...	20	11	33	...
Kirkdale	...	1	...	1	...	2	1	3	...	8	...	8	1	18	1
West Derby	...	4	1	5	...	4	...	4	1	6	...	7	1	21	1
Toxteth	...	4	...	4	7	7	...	14	2	2	...	3	9	16	...
Walton ...	...	1	...	1	...	2	...	2	1	4	...	5	1	10	...
West Derby (Rural)	...	1	...	1	...	3	...	3	...	1	...	1	...	12	...
Wavertree	...	...	...	...	...	...	...	...	...	1	...	1	...	3	...
Toxteth (Rural)	...	...	...	...	...	1	...	1	...	1	...	2	...	4	...
Hospitals (Residences out of City)	...	4	...	4	...	...	...	...	...	2	...	...	...	6	...
Hospitals (Residences unknown)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL FOR WHOLE CITY	3	28	1	32	13	36	1	50	10	43	...	53	36	166	2
												69			204

In arranging this Table, all Deaths occurring in Hospitals have been transferred to the Wards from whence the patients came.



## SCARLATINA.

The number of cases of this disease reported during the year was in excess of the preceding year; the type, however, was not one of severity. It is important to notice that year by year an increasing proportion of the total number of cases of scarlatina is isolated in hospital. The results of such a course are beneficial, in the first place to the public by the removal of centres of infection, and in the next place to the patient by increasing the chances of recovery. (See page 139).

During the last three years the numbers reported have been 3,963, 2,710, and 3,584, and the removals to hospital 1,415, 1,039, and 1,589, showing that the proportions removed to hospital have been 35·7, 38·3, and 44·3 per cent. respectively, during the three years.

The important influence of isolation in hospital in preventing the spread of infectious diseases has been proved in connection with typhus fever, and there is little doubt that scarlatina is held in check by the same measure.

## DEATHS FROM SCARLATINA.

DISTRICTS AND WARDS.							QUARTERS.								YEAR.		
							March.		June.		Sept.		Dec.				
							M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.
Scotland .. .. .	..	..	..	..	..	..	3	3	2	3	3	8	6	14	14	28	
Exchange .. .. .	..	..	..	..	..	1	..	..	1	2	3	5	2	8	6	14	
Abercromby .. .. .	..	..	..	..	..	1	1	1	..	1	1	2	1	5	3	8	
Everton .. .. .	..	..	..	..	..	5	4	3	4	9	4	10	7	27	19	46	
Kirkdale .. .. .	..	..	..	..	..	4	3	2	1	6	1	6	3	18	8	26	
West Derby .. .. .	..	..	..	..	..	2	1	3	4	6	4	12	4	23	13	36	
Toxteth .. .. .	..	..	..	..	..	3	4	2	3	5	3	10	7	20	17	37	
Walton .. .. .	..	..	..	..	..	1	1	..	..	..	1	2	1	3	3	6	
West Derby (Rural) .. .. .	..	..	..	..	..	..	2	1	..	1	..	1	2	3	4	7	
Wavertree .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	2	
Toxteth (Rural) .. .. .	..	..	..	..	..	1	1	1	..	1	..	1	1	4	2	6	
Hospitals (Residences outside the City) .. .. .	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	
City .. .. .	..	..	..	..	..	18	20	16	15	34	20	58	36	126	91	217	

AGES AT DEATH.												
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
14	39	40	33	29	51	5	..	4	1	1	..	217

Deaths in Public Institutions are referred to the Wards from whence the patients came.



## MEASLES.

The following table shows the periods of the year and the localities in which deaths from Measles occurred, and also the ages at death.

DISTRICTS AND WARDS.						QUARTERS.								YEAR.		
						March.		June.		Sept.		Dec.				
						M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.
Scotland .. .. .	..	..	.	..	..	11	2	6	3	3	1	12	14	32	20	52
Exchange .. .. .	..	..	..	..	..	4	5	1	3	..	..	3	3	8	11	19
Abercromby .. .. .	..	..	..	..	..	4	2	1	3	1	1	..	1	6	7	13
Everton .. .. .	..	..	..	..	..	16	16	7	5	1	..	8	5	32	26	58
Kirkdale .. .. .	..	..	..	..	..	8	3	11	6	4	3	1	3	24	15	39
West Derby .. .. .	..	..	..	..	..	3	4	3	4	..	2	2	4	8	14	22
Toxteth.. .. .	..	.	..	..	..	1	11	8	3	3	5	1	1	13	20	33
Walton .. .. .	..	..	..	..	..	1	5	3	4	2	..	..	..	6	9	15
West Derby (Rural) ..	..	..	..	..	..	7	16	11	5	..	..	..	1	18	22	40
Wavertree .. .. .	..	..	..	..	..	.	2	..	1	..	..	..	..	..	3	3
Toxteth (Rural) .. ..	..	..	..	..	..	..	2	2	1	..	1	..	..	2	4	6
Hospitals (Residences outside the City) ..	..	..	..	..	..	3	3	2	4	..	..	..	..	5	7	12
City .. .. .	..	..	..	..	..	58	71	55	42	14	13	27	32	154	158	312
AGES AT DEATH.																
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.				
62	127	64	24	16	18	—	—	1	—	—	—	312				

Deaths in Public Institutions are referred to the Wards from whence the patients came.

## WHOOPIING COUGH.

The following table shows the periods of the year and the localities in which deaths from Whooping Cough occurred, and also the ages at death.

DISTRICTS AND WARDS.						QUARTERS.								YEAR.		
						March.		June.		Sept.		Dec.				
						M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	..	..	..	..	..	8	11	2	10	3	1	1	4	14	26	40
Exchange	..	..	..	..	..	4	4	7	5	2	2	2	1	15	12	27
Abercromby	..	..	..	..	..	1	4	3	3	2	1	1	..	7	8	15
Everton	.	..	..	..	..	12	13	9	15	3	6	3	6	27	40	67
Kirkdale	..	..	..	..	..	4	8	2	2	..	3	1	1	7	14	21
West Derby	..	..	..	..	..	7	5	5	12	2	3	2	2	16	22	38
Toxteth	..	..	..	..	..	12	13	2	1	1	2	1	1	16	17	33
Walton..	..	..	..	..	..	1	5	3	..	3	1	2	..	9	6	15
West Derby (Rural)	..	..	..	..	..	5	..	2	4	2	2	3	2	12	8	20
Wavertree	..	..	..	..	..	1	..	2	2	1	2	1	3	5	7	12
Toxteth (Rural)	..	..	..	..	..	..	1	2	3	1	1	..	..	3	5	8
Hospitals (Residences outside the City)	..	..	..	..	..	1	..	..	1	..	..	..	..	1	1	2
City	..	..	..	..	..	56	64	39	58	20	24	17	20	132	166	298
AGES AT DEATH.																
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.				
117	93	41	24	13	10	..	..	..	..	..	..	298				

Deaths in Public Institutions are referred to the Wards from whence the patients came.



## DIPHTHERIA.

The following table shows the periods of the year and the localities in which deaths from Diphtheria occurred, and also the ages at death.

DISTRICTS AND WARDS.	QUARTERS.								YEAR.		
	March.		June		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland .. .. .	2	1	..	..	3	1	..	2	5	4	9
Exchange .. .. .	..	..	..	..	..	1	..	2	..	3	3
Abercromby .. .. .	2	1	..	..	1	..	2	..	5	1	6
Everton .. .. .	5	4	1	2	4	2	3	1	13	9	22
Kirkdale .. .. .	3	2	1	1	2	..	..	..	6	3	9
West Derby .. .. .	3	2	2	4	3	2	4	3	12	11	23
Toxteth .. .. .	5	..	4	1	2	4	5	6	16	11	27
Walton .. .. .	1	..	1	2	..	..	1	2	3	4	7
West Derby (Rural) .. .. .	2	..	..	1	..	1	2	2	4	4	8
Wavertree .. .. .	..	1	1	..	..	..	..	..	1	1	2
Toxteth (Rural) .. .. .	1	..	..	..	1	2	..	..	2	2	4
Hospitals (Residences outside the City) ..	..	..	..	..	..	..	..	..	..	..	..
City .. .. .	24	11	10	11	16	13	17	18	67	53	120

## AGES AT DEATH.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60—	All Ages.
20	22	13	17	21	21	4	..	1	..	1	..	..	120

Deaths in Public Institutions are referred to the Wards from whence the patients came.



## \* CROUP.

The following table shows the periods of the year and the localities in which deaths attributed by the Medical Attendant to Croup occurred, and also the ages at death.

DISTRICTS AND WARDS.	QUARTERS.								YEAR.		
	March.		June.		Sept.		Dec.		M.	F.	Total
	M.	F.	M.	F.	M.	F.	M.	F.			
Scotland .. .. .	2	1	3	1	1	..	1	1	7	3	10
Exchange .. .. .	..	..	..	..	..	1	1	1	1	2	3
Abercromby .. .. .	1	..	..	..	1	..	..	..	2	..	2
Everton .. .. .	2	2	3	2	3	..	3	2	11	6	17
Kirkdale .. .. .	..	..	..	2	..	..	..	1	..	3	3
West Derby .. .. .	2	1	3	..	..	..	2	1	7	2	9
Toxteth .. .. .	4	6	3	4	4	3	1	1	12	14	26
Walton .. .. .	..	2	..	2	1	1	2	..	3	5	8
West Derby (Rural) .. .. .	..	..	..	..	..	..	..	1	..	1	1
Wavertree .. .. .	..	..	..	..	..	..	..	..	..	..	..
Toxteth (Rural) .. .. .	1	..	..	1	..	1	..	..	1	2	3
Hospitals (Residences outside the City) .	..	..	..	..	..	..	..	..	..	..	..
City .. .. .	12	12	12	12	10	6	10	8	44	38	82

AGES AT DEATH.												
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
12	22	16	7	4	21	..	..	..	..	..	..	82

Deaths in Public Institutions are referred to the Wards from whence the patients came.

* Membranous Croup	...	...	...	...	...	37	} 82
Croup ..	...	..	..	...	...	45	

DIARRHŒA.

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The following table shows the periods of the year and the localities in which deaths from Diarrhœa occurred, and also the ages at death.

Attention will be at once attracted to the enormous proportion of deaths from this disease which take place below twelve months of age, the mortality rapidly diminishing after the age of two years.

Most of the deaths occur during the earlier months of life—below nine months—and they bear a close relationship to the method employed in feeding.

From a careful investigation into the subject, it appears that the mortality amongst children reared upon breast milk is small, but when artificial foods are employed, unless extreme cleanliness is observed, the mortality at once begins to rise.

Thus the deaths amongst children under three months of age, either wholly or partially fed on artificial foods, are fifteen times as great as they are amongst an equal number of infants fed upon breast milk.

Between the ages of three and six months, for every infant getting breast milk as part of its diet, who dies from diarrhœa, there are six who die amongst an equal number getting no breast milk.

The method of feeding plays a most important part in the causation of diarrhœa; when artificial feeding becomes necessary, the most scrupulous attention should be paid to feeding bottles, &c.

During the summer and autumn months, circulars, giving instructions as to the rearing of children, are widely distributed.



## DEATHS FROM DIARRHŒA

DISTRICTS AND WARDS.	QUARTERS.								YEAR.				
	March.		June.		Sept.		Dec.						
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.		
Scotland .. .. .	3	..	4	6	39	47	6	10	52	63	115		
Exchange .. .. .	..	1	6	6	29	26	10	7	45	40	85		
Abercromby .. .. .	1	..	3	4	19	14	3	4	26	22	48		
Everton .. .. .	6	2	9	7	76	69	3	5	94	83	177		
Kirkdale .. .. .	..	2	1	6	48	39	3	1	52	48	100		
West Derby .. .. .	4	1	3	7	42	43	3	5	52	56	108		
Toxteth .. .. .	3	..	2	4	60	51	5	1	70	56	126		
Walton .. .. .	..	..	3	..	13	14	1	..	17	14	31		
West Derby (Rural) .. .. .	2	..	3	2	12	8	..	1	17	11	28		
Wavertree .. .. .	..	..	1	2	6	6	1	1	8	9	17		
Toxteth (Rural) .. .. .	1	1	..	1	3	5	2	..	6	7	13		
Hospitals (Residences outside the City) .. .. .	..	1	..	..	1	1	..	..	1	2	3		
City .. .. .	20	8	35	45	348	323	37	35	440	411	851		
AGES AT DEATH.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
613	132	28	7	2	6	2	..	1	5	5	15	35	851

Deaths in Public Institutions are referred to the wards from whence the patients came.



List of Streets in the City wherein Three or more Deaths from  
Diarrhœa occurred during the year 1896.

STREETS.	No. of Deaths.	STREETS.	No. of Deaths.
Arkwright .. .. .	4	Kempston .. .. .	3
Arlington .. .. .	5	Kew .. .. .	3
Athol .. .. .	3	Lamb .. .. .	5
Beatrice .. .. .	5	Lemon .. .. .	3
Beaufort .. .. .	6	Netherfield Road South ..	3
Benledi .. .. .	3	Northumberland Terrace ..	3
Bostock .. .. .	3	Opie .. .. .	3
Buckingham .. .. .	3	Portland .. .. .	3
Burlington .. .. .	4	Prince Edwin .. .. .	3
Butler .. .. .	4	Raymond .. .. .	3
Chirkdale .. .. .	3	Robsart .. .. .	3
Christopher .. .. .	3	Rockingham .. .. .	3
Circus .. .. .	3	Rutter .. .. .	3
Collingwood .. .. .	3	Sessions Road .. .. .	3
Cornwall .. .. .	3	Silvester .. .. .	3
Eldon .. .. .	5	Smithfield .. .. .	3
Essex .. .. .	4	Stockdale .. .. .	3
Fountains Road .. .. .	4	St. Arnaud .. .. .	3
Gloucester Place .. .. .	4	Tatlock .. .. .	5
Gordon .. .. .	3	Teulon .. .. .	3
Greig.. .. .	3	Vauxhall Road .. .. .	3
Great Homer .. .. .	5	Westmoreland Place .. .. .	3
Handfield .. .. .	3	Willoughby .. .. .	3
Hopwood .. .. .	3	Wolfe .. .. .	3
Hornby .. .. .	3		

In arranging the foregoing list of streets, all deaths occurring in Hospitals have been transferred to the streets from whence the patients were removed.

## OTHER ZYMOTICS.

The following table indicates the localities in which deaths from other forms of Zymotic disease occurred during the year :—

DISTRICTS AND WARDS.	Influenza.		Erysipelas.		Syphilis.		Rheumatic Fever.		Puerperal Fever.		Other Zymotics.		YEAR.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland .. .. .	..	..	1	3	5	2	2	1	..	1	2	4	21
Exchange .. .. .	1	..	1	2	5	5	2	1	..	3	2	2	24
Abercromby .. .. .	3	4	..	..	3	2	2	2	..	1	2	..	19
Everton .. .. .	4	3	2	4	8	4	3	2	..	4	5	9	48
Kirkdale .. .. .	1	..	..	1	1	..	4	4	..	3	5	4	23
West Derby .. .. .	3	5	1	3	4	3	6	4	..	3	6	5	43
Toxteth .. .. .	5	6	1	3	1	3	6	2	..	8	6	3	44
Walton .. .. .	1	4	1	1	..	2	1	..	..	2	9	3	24
West Derby (Rural) .. .. .	2	1	..	..	1	1	1	1	..	..	3	..	10
Wavertree .. .. .	..	..	..	..	..	..	1	..	..	..	1	1	3
Toxteth (Rural) .. .. .	2	1	1	..	..	..	1	..	1	..	..	..	6
Hospitals (Residences outside the City) .. .. .	1	..	1	..	..	1	2	1	..	..	1	..	7
City .. .. .	23	24	9	17	28	23	30	19	..	26	42	31	272

Deaths in Public Institutions are referred to the Wards from whence the patients came.

ANNUAL AVERAGE NUMBER OF DEATHS FROM SIX OF THE PRINCIPAL ZYMOtic DISEASES  
DURING EACH OF THE LAST THREE DECENNIAL PERIODS.

Years.	Small Pox.	Typhus.	Scarlet Fever.	Measles.	Whooping Cough.	Diarrhoea.
1866—75 .. .. .	237.4	652.8	789.4	425.7	496.8	995.3
1876—85 .. .. .	90.8	238.0	421.2	517.8	472.3	658.4
1886—95 .. .. .	8.8	37.1	257.5	399.5	322.4	600.6



ANNUAL AVERAGE NUMBER OF DEATHS FROM SIX OF THE PRINCIPAL ZYMOTIC DISEASES  
DURING EACH OF THE LAST THREE DECENNIAL PERIODS, DISTINGUISHING THOSE  
OF PERSONS ABOVE AND BELOW FIVE YEARS OF AGE.

YEARS.	SMALLPOX.		TYPHUS.		SCARLET FEVER.		MEASLES.		WHOPPING COUGH.		DIARRHŒA.	
	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.
1866-75 ...	141.7	95.7	* ...	* ...	187.7	601.7	14.4	411.3	9.9	486.9	105.7	889.6
1876-85 ...	62.5	28.3	* ...	* ...	137.0	284.2	35.4	482.4	18.6	453.7	61.9	596.5
1886-95 ...	6.2	2.6	† 33.2	† .7	87.6	169.9	28.3	371.2	15.1	307.3	60.2	540.4

\* During these years the ages at death from Typhus were not differentiated.

† During the eight years, 1888-95.

The following table shows the annual average death rate, per 100,000 of the population, during each of the last three decennial periods, and during 1896, from the undermentioned Zymotic Diseases :—

DISEASES.	1866-1875.	1876-1885.	1886-1895.	*1896.
Typhus ... ..	132·1	43·0	7·1	5·6
Small Pox ... ..	48·0	16·3	1·5	...
Scarlet Fever ... ..	159·9	76·2	49·6	33·8
Measles ... ..	86·1	93·6	77·0	48·6
Whooping Cough ...	100·5	85·4	62·1	46·4

\* Including extended area.

#### TUBERCULAR DISEASES.

These diseases are associated with insanitary surroundings, and with conditions of life which tend to lower the general health. Improved sanitation is accompanied by a diminished mortality from these forms of disease, as the accompanying table, which relates to the last three decades, indicates :—

	1866-1875.	1876-1885.	1886-1895.	*1896.
Annual Average Death-rate per 100,000 of the population, at all ages, from all forms of Tuberculosis ... ..	430·8	349·8	309·8	292·5
Annual Average Death-rate per 100,000 of the population above 5 years of age from Phthisis ... ..	362·8	278·6	244·4	233·1
Annual Average Death-rate per 100,000 of the population below 5 years of age from :— Tabes Mesenterica Hydrocephalus ... } Scrofula ... .. }	637·1	597·3	539·1	496·9

\* Former City Area only.



The group of Tubercular Diseases includes Phthisis, Scrofula, Tabes Mesenterica, and Hydrocephalus. They occasioned 1,674 deaths in the City of Liverpool during the year 1896.

## DEATHS FROM PHTHISIS.

DISTRICTS AND WARDS.						QUARTERS.								YEAR.		
						March.		June.		Sept.		Dec.		M.	F.	TOTAL
						M.	F.	M.	F.	M.	F.	M.	F.			
Scotland .. .. .						13	16	11	12	14	18	15	16	53	62	115
Exchange .. .. .						35	14	30	17	12	20	30	17	107	68	175
Abercromby .. .. .						20	8	10	14	10	12	24	13	64	47	111
Everton .. .. .						36	15	34	26	23	10	34	22	127	73	200
Kirkdale .. .. .						22	9	10	9	7	7	13	3	52	28	80
West Derby .. .. .						11	24	21	18	22	18	21	21	75	81	156
Toxteth .. .. .						21	21	25	25	22	21	21	23	89	90	179
Walton .. .. .						6	6	6	6	8	8	11	7	31	27	58
West Derby (Rural) .. .. .						5	9	5	5	6	5	4	2	20	21	41
Wavertree .. .. .						3	1	3	..	3	2	3	3	12	6	18
Toxteth (Rural) .. .. .						3	6	5	1	4	1	2	1	14	9	23
Hospitals (Residences outside the City) .						8	2	7	4	7	2	9	3	31	11	42
City .. .. .						183	131	167	137	138	124	187	131	675	523	1198
AGES AT DEATH.																
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 and upw'ds.	All Ages.					
9	9	12	21	32	70	262	352	255	133	43	1198					

Deaths in Public Institutions are referred to the Wards from whence the patients came.

## DEATHS FROM OTHER TUBERCULAR DISEASES.

DISTRICTS AND WARDS.	Scrofula.		Tubercles Mesenterica.		Hydrocephalus.		YEAR.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland .. .. .	5	1	12	13	16	20	33	34	67
Exchange .. .	5	..	9	7	4	3	18	10	28
Abercromby .. .	7	5	4	4	6	6	17	15	32
Everton .. .	14	16	23	19	16	10	53	45	98
Kirkdale .. .	5	7	9	11	9	11	23	29	52
West Derby .. .	9	10	7	10	13	16	29	36	65
Toxteth .. .	9	7	11	7	11	7	31	21	52
Walton .. .	2	4	3	3	2	8	7	15	22
West Derby (Rural) .. .	7	2	6	3	5	5	18	10	28
Wavertree .. .	1	3	..	..	1	..	2	3	5
Toxteth (Rural) .. .	6	1	2	2	4	..	12	3	15
Hospitals (Residences outside the City) ..	3	4	2	..	2	1	7	5	12
City .. .	73	60	88	79	89	87	250	226	476

Deaths in Public Institutions are referred to the Wards from whence the patients came.



The following table indicates the number of deaths from Cancer during the last six years, and the part of the body affected by the disease :—

DISEASE.	1891.			1892.			1893.			1894.			1895.			1896.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Cancer of Stomach and Bowels	42	45	87	52	39	91	43	52	95	52	44	96	85	73	158	81	56	137
„ Liver . . . . .	14	24	38	14	16	30	16	24	40	12	30	42	36	24	60	33	41	74
„ Urinary and Generative Organs . . . .	6	73	79	8	57	65	8	73	81	9	70	79	12	112	124	7	103	110
„ Breast . . . . .	..	37	37	..	32	32	..	39	39	..	34	34	..	46	46	2	54	56
„ Head and Face . . . .	16	3	19	7	3	10	13	6	19	13	5	18	19	4	23	15	3	18
„ Tongue, Neck, and Throat . . . . .	34	9	43	23	9	32	20	5	25	35	3	38	35	9	44	47	11	58
„ Other parts of the Body . . . . .	14	7	21	11	13	24	12	8	20	9	9	18	13	9	22	6	11	17
„ Parts not specified ..	9	13	22	7	12	19	12	10	22	6	14	20	15	10	25	12	13	25
Total . . . . .	135	211	346	122	181	303	124	217	341	136	209	345	215	287	502	203	292	495

The following table shows the death rate per 1,000 of the population, and the number of deaths from Fever and Diarrhœa during the last thirteen years :—

Year.	Death Rate per 1,000 of Population.	Deaths from Diarrhœa.	Deaths from Fever.		
			Typhus.	Typhoid.	Continued.
1884	*26·6	841	77	112	16
1885	*25·6	422	71	95	16
1886	*26·1	781	47	140	11
1887	*26·4	619	52	130	12
1888	*23·1	431	32	125	4
1889	*24·9	575	45	167	...
1890	*27·5	468	23	99	1
1891	26·9	330	37	92	2
1892	24·7	415	18	111	2
1893	27·3	866	44	221	5
1894	23·8	503	50	248	7
†1895	25·4	1,108	24	197	4
1896	21·9	851	36	166	2

\* Calculated on corrected population as per Census Returns of 1891.

† City Boundaries extended.



Mr. Plummer, M.A., F.R.A.S., Astronomer to the Mersey Docks and Harbour has Board, kindly supplied the following tables relating to Meteorological observations made by him at the Liverpool Observatory, Bidston:—

### LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

Latitude  $53^{\circ} 24' 5''$  N.; Longitude  $3^{\circ} 4' 20''$  W.

Height above the Mean Level of the Sea, 201 feet.

Year and Month, 1896.	Barometer. Mean.	Temperature. Mean.	Rainfall. Amount.	No. of days on which 0·01 ins. or more rain fell.	Mean Monthly Humidity. Complete Satura- tion equal 100.
	Inches.	Degrees.	Inches.		
January .....	30·311	41·6	1·220	12	86
February .....	30·284	41·2	1·064	12	86
March .....	29·741	44·3	3·186	24	79
April .....	30·141	48·7	1·144	14	78
May .....	30·273	54·5	0·390	5	71
June .....	29·928	61·2	2·081	18	72
July .....	30·002	61·1	2·553	13	73
August .....	30·029	58·3	2·503	18	77
September .....	29·702	55·8	4·456	27	81
October .....	29·721	45·0	3·566	22	81
November .....	30·155	41·1	1·068	7	83
December .....	29·717	39·8	3·402	24	87

### DIFFERENCES FROM THE AVERAGE QUANTITIES OBSERVED DURING THE LAST 30 YEARS.

1896.	BAROMETER.		TEMPERATURE.		RAINFALL.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees.	Degrees.	Inches.	Inches.
January .....	0·387	..	2·4	..	..	0·917
February .....	0·329	..	..	0·1	..	0·558
March .....	..	0·167	2·1	..	0·464	..
April .....	0·237	..	1·4	..	..	0·441
May .....	0·306	..	2·7	..	..	1·448
June .....	..	0·060	3·8	..	0·087	..
July .....	0·083	..	0·3	..	..	0·427
August .....	0·117	..	..	2·2	..	0·362
September .....	..	0·229	..	0·4	1·309	..
October .....	..	0·138	..	4·6	..	0·084
November .....	0·277	..	..	2·1	..	1·660
December .....	..	0·157	..	0·1	0·755	..

### OBSERVATIONS OF VELOCITY OF WIND.

1896.	Average Hourly Velocity for Month.	Maximum Hourly Velocity.	Date of Maximum Velocity.	Minimum Hourly Velocity.	Date of Minimum Velocity.
	Miles per hr.	Miles.		Miles.	
January ..	15·6	65	Jan. 15	1	Jan. 3, 6, 7, 8, 14, 20, 26
February ..	15·9	44	Feb. 12	1	Feb. 1, 13, 16, 27
March ..	21·4	63	Mar. 6	0	Mar. 25
April ....	17·9	51	April 12	0	April 15, 22
May ....	13·4	51	May 20	1	May 1, 2, 3, 11, 18, 27, 31
June ....	13·2	45	June 30	0	June 14
July ....	13·8	50	July 1	1	July 7, 11, 12, 17
August ..	15·6	36	Aug. 13, 24	1	Aug. 5, 14, 20
September ..	17·7	59	Sept. 23	0	Sept. 3, 10
October ..	14·1	49	Oct. 8	0	Oct. 3
November ..	13·5	35	Nov. 15, 20	0	Nov. 4, 24
December ..	17·2	48	Dec. 26	1	Dec. 15, 16, 21, 23

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## SANITARY ADMINISTRATION.

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## SANITARY ADMINISTRATION.

For the purpose of carrying out the requirements of the various Sanitary Acts of Parliament, the following staff has been employed during the year :—

*Chief Inspector	...	...	...	...	...	1
*Deputy Inspector	...	...	...	...	...	1
*Prosecuting Inspectors	...	...	...	...	...	6
*Inspectors for General Sanitary Purposes	...	...	...	...	...	25
Inspectors of Meat and Animals	...	...	...	...	...	5
„ under the Diseases of Animals Act	...	...	...	...	...	2
„ of Fish and Fruit	...	...	...	...	...	3
Inspector under the Sale of Food and Drugs Act	...	...	...	...	...	1
*Inspectors „ Workshop and Shop Hours Act	...	...	...	...	...	3
† „ Smoke	...	...	...	...	...	3
‡ „ Ambulance	...	...	...	...	...	4
„ Disinfecting	...	...	...	...	...	5
Superintendents of Disinfecting Apparatus	...	...	...	...	...	2
Chief Inspector for Common Lodging and Sub-let Houses	...	...	...	...	...	1
Inspectors for Common Lodging and Sub-let Houses	...	...	...	...	...	10
Inspector for Canal Boats	...	...	...	...	...	1
* „ „ Bakehouses	...	...	...	...	...	1
*Inspectors for Cowsheds and Milkshops	...	...	...	...	...	2
Notice Servers	...	...	...	...	...	3
Permanent Clerical Staff	...	...	...	...	...	16
Temporary Assistants	...	...	...	...	...	5

Officers are selected for these positions whose previous training and occupation have been such as to fit them for the special duties they are called upon to discharge. Those marked \* are required to hold the Certificate of the Sanitary Institute of Great Britain ; those marked † have Marine Engineers' First Class Certificates, and the ‡ Superintendent Ambulance Inspector holds Sanitary Certificate, and also the Certificate of St. John's Ambulance Association.

## PROCEEDINGS UNDER THE DISEASES OF ANIMALS ACT, 1894.

The Diseases of Animals Act relates in the main to certain diseases communicable amongst cattle, sheep and swine, and provides for the separation of diseased animals from healthy ones, and for the disinfection and cleansing of vessels, trucks, &c., in which animals have been carried.

The Board of Agriculture, under the powers of this Act, issue orders from time to time dealing with diseases of animals, or with their protection during transit.

The accompanying table gives the statistics of the proceedings taken under the Act or under the Orders of the Board of Agriculture.

								<u>1896.</u>	<u>1895.</u>
Number of Visits to Railway Stations, including inspections made on									
	Sundays	..	..	..	..	..	..	2,743	3,094
„	Inspections of pens	..	..	..	..	..	..	94,281	97,569
„	found clean	..	..	..	..	..	..	71,816	74,632
„	„ dirty and cleansed before being used	..	..	..	..	..	..	22,465	22,935
„	Informations for dirty pens used before being cleansed	..						—	2
„	Inspections of Trucks	..	..	..	..	..	..	35,983	30,412
„	found clean	..	..	..	..	..	..	32,074	27,487
„	„ dirty and cleansed before being used, or leaving the								
	City dirty	..	..	..	..	..	..	3,909	2,925
„	Informations for dirty trucks used before being cleansed	..						—	—
„	Inspections of Horse Boxes	..	..	..	..	..	..	617	203
„	found clean	..	..	..	..	..	..	286	128
„	„ dirty and cleansed before being used, or leaving the								
	City dirty	.	..	..	..	.	..	330	75
„	Informations for dirty horse boxes used before being cleansed							1	—
„	Inspections of Vessels	..	..	.	..	..	..	9,281	8,924
„	found clean	..	..	..	..	.	..	4,050	4,009





# RETURNS OF CATTLE KILLED IN THE CITY SLAUGHTER-HOUSES, AND OF MEAT IMPORTED FOR SALE.

There is again to be recorded a considerable decrease over the preceding year in the number of cattle slaughtered in the City Slaughter-houses, about 5,000 less being slaughtered than in the preceding year, but the increase in the number of carcasses of dead meat imported for sale is very large; the total being over 18,000 more than in the preceding year. The live cattle are not brought to the market in large numbers when there is a large importation of carcasses; similarly with regard to sheep, there is a decrease of about 16,000 in the number killed in the City, and an increase of about 15,000 in the number of carcasses imported for sale.

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale,			
						Beasts.	Sheep.	Pigs.	Calves.
Abattoir.	4365	121221	..	12902	44647	56841	365178	267	222
Back Butler Street .....	43	70	14	6	4	..	..	..	..
Back Castle Street .....	479	65	84	289	6	31	..	2	..
Back Mount Vernon Green..	348	3381	1073	28	4	..	..	..	..
Cotter Street.....	8	10	..	..	2308	..	..	..	..
Corlett Street .....	51	1053	989	9	8	..	..	..	..
Darnley Street .....	..	..	..	..	2518	..	..	..	..
Edgeware Street .....	21	496	154	1	..	..	..	..	..
Embledon Street .....	84	326	136	1	1	..	..	..	..
Foley Street .....	..	..	..	..	6619	..	..	..	..
Gelling Street .....	305	348	201	223	..	..	..	..	..
Peel Street.....	57	659	253	4	7	..	..	..	..
Bevington Hill .....	1150	377	..	902	12	70	..	7	..
Byrom Street .....	..	..	..	..	1403	..	..	..	..
Bolton Street.....	98	3009	1176	6	..	..	..	..	..
Back Commutation Row(1)..	13	..	..	..	..	..	..	..	..
"    "    (2) ..	209	1708	418	..	..	..	..	..	..
Copperas Hill .....	...	..	..	..	11500	..	..	314	..
Finch Place .....	502	2382	1001	2	..	..	..	..	..
Frederick Street .....	11	421	328	6	109	..	..	..	..
Lydia Ann Street.....	75	1262	221	1	..	..	..	..	..
Carried forward .....	3454	15567	6048	1478	24499	101	..	323	..



**RETURNS OF CATTLE KILLED IN THE CITY SLAUGHTER-HOUSES,  
AND OF MEAT IMPORTED FOR SALE.—Continued.**

STREET.	Beasts.	Sheep.	Lambs	Calves	Pigs.	Dead Meat imported for Sale.			
						Beasts.	Sheep.	Pigs.	Calves.
Brought forward .....	3454	15567	6048	1478	24499	101	..	323	..
Norman Street .....	..	..	..	..	2713	..	..	..	..
Norfolk Street .....	..	1394	834	..	9	..	..	..	..
Soho Street .....	..	..	..	..	2017	..	..	..	..
Upper Milk Street .....	..	..	..	..	6283	..	..	..	..
Salisbury Road, Walton....	146	121	84	9	16	..	..	..	..
West Derby Road, W. Derby	51	1910	444	3	40	..	..	..	..
"    Village    "	..	8	..	..	..	..	..	..	..
Town Row .....	13	293	79	3	37	..	..	..	..
Prescot Road, Knotty Ash..	2	320	118	5	46	..	..	..	..
101, High Street, Wavertree	14	36	2	5	36	..	..	..	..
105,    "    "    "	27	176	76	8	36	..	..	..	..
Sandown Lane .....	40	390	88	..	21	..	..	..	..
Derby Lane, Old Swan .....	..	428	232	..	..	..	..	..	..
Allerton Road, Wavertree..	556	2771	1182	19	48	..	..	..	..
Total in Private Slaughter-houses.....	4303	23414	9187	1530	35801	101	..	323	..
Total in the City .....	8668	144635	9187	14432	80448	56942	365178	590	222

**PRECEDING YEAR.**

Total in Private Slaughter-houses.....	5101	19007	6719	1667	28490	353	20	6	..
Total in the City .....	13623	160964	6719	15318	70886	38501	349975	15	399

There were four applications for transfer of licences of Slaughter-houses during the year, two of which were granted and two refused, viz.:—

Premises.		Date 1896.
Lydia Ann Street .. .. .	Refused.	28th May.
Corlett Street .. .. .	Granted.	10th September.
105, High Street, Wavertree..	"	"
4, Embledon Street .. .. .	Refused.	12th November.

	1896.	1895.
Number of Visits to Slaughterhouses made by Meat Inspectors ..	10,860	10,312
"    "    Butchers' Shops .. .. .	72,299	58,478
"    "    Fish & Fruit Shops .. Fish Inspectors ..	37,239	39,165
"    "    Poultry Depots .. .. .	221	443

## UNWHOLESOME MEAT, FISH, &amp;c., SEIZED AND DESTROYED.

DATE.—1896.		Beef.	Veal.	Mutton.	Pork.	Poultry	Rabbits and Hares.	* Fish.	Shell fish.	Oysters.	Miscellaneous.
		Lbs.	Lbs.	Lbs.	Lbs.	Head		Lbs.	Bags.		
MARKETS. SLAUGHTER HOUSES.	Abattoir ..	143626	6297	14785	19263	..	..	..	..	..	..
	Back Castle Street ..	20146	1056	39	..	..	..	..	..	..	..
	Bevington Hill ..	35048	1291	479	..	..	..	..	..	..	..
	Bolton Street ..	..	..	120	..	..	..	..	..	..	..
	Byrom Street ..	..	120	..	..	..	..	..	..	..	..
	Copperas Hill ..	..	..	..	3521	..	..	..	..	..	..
	Gelling Street ..	2760	80	398	..	..	..	..	..	..	..
	Norman Street ..	..	..	..	1194	..	..	..	..	..	..
	St. John's ..	7218	52	63	12	556	397	84636	55	400	..
	St. Martin's ..	1855	..	167	445	..	..	..	..	..	..
OTHER PARTS.	Athol Street ..	..	..	..	28	..	..	..	..	..	..
	Back Butler Street ..	..	..	115	..	..	..	..	..	..	..
	Button Street ..	..	..	..	..	..	..	..	..	..	629 tins Cond. Milk
	Banastre Street ..	..	..	8100	..	..	..	..	..	..	..
	Crown Street ..	..	..	..	45	..	..	..	..	..	..
	Danby Street ..	..	..	..	380	..	..	..	..	..	..
	Derby Lane, Old Swan ..	..	..	80	..	..	..	..	..	..	..
	Edge Hill Station ..	150	..	..	560	..	..	..	..	..	..
	Foley Street ..	..	..	..	347	..	..	..	..	..	..
	Frederick Street ..	..	..	..	210	..	..	..	..	..	..
	George's Dock ..	..	..	..	50	..	..	..	..	..	..
	Great Charlotte Street ..	30	..	..	..	64	..	5197	..	..	..
	Great Homer Street..	425	..	65	..	..	..	..	..	..	..
	Great Howard Street ..	35	..	..	..	..	..	..	..	..	..
	Great Nelson Street..	..	..	..	..	..	..	..	..	..	218 Cocoanuts
	Heyworth Street ..	228	..	..	..	..	..	..	..	..	..
	Islington ..	..	..	..	..	..	..	..	..	..	56 lbs. Onions
	Kirkdale Road ..	28	..	..	..	..	..	..	..	..	..
	Leece Street ..	..	..	..	..	26	..	..	..	..	..
	Manesty Lane ..	..	..	..	..	..	..	94613	..	..	..
	Mill Street ..	..	..	52	..	..	..	..	..	..	..
	Netherfield Road ..	..	..	165	..	..	..	..	..	..	..
	North Haymarket ..	..	..	..	..	..	..	..	..	..	5700 lbs. Onions 2530 .. Apples 2142 .. Tomatoes 12 .. Cherries
	Paddington ..	25	..	..	..	..	..	..	..	..	..
	Pitt Street ..	..	..	..	..	..	..	672	..	..	..
	Portland Street ..	..	..	..	..	..	..	..	..	..	215 lbs. Cauliflowers
	Queen Square ..	..	..	..	..	..	..	..	..	..	1200 lbs. Greengages
	Ranelagh Place ..	..	..	..	..	..	..	..	..	..	150 lbs. Plums and Grapes
	Ranelagh Street ..	..	..	65	..	..	..	..	..	..	..
	Roe Street ..	25	..	..	..	..	..	..	..	..	..
	Roscommon Street ..	100	..	50	..	..	..	..	..	..	..
	Rose Street ..	..	..	..	..	140	..	12850	..	..	..
	Scotland Road ..	16303	..	7642	..	..	..	..	..	..	..
	Upper Milk Street ..	..	..	..	506	..	..	..	..	..	..
	Walton Road ..	..	..	400	..	..	..	..	..	..	..
	West Derby Road, Tue Brook.	..	..	55	..	..	..	..	..	..	..
	Williamson Square ..	4425	..	..	..	..	..	..	..	..	..
	William Henry Street ..	..	..	400	..	..	..	..	..	..	..
Total .....		232427	8896	33240	26561	786	397	197968	55	400	

Equivalent to—Meat .. Tons. 134 Cwts. 8 Qrs. 2 Lbs. 12  
Fish .. 88 7 2 8

\* Foregoing does not include Fish removed as refuse by Veterinary Superintendent.



The amount of unwholesome meat which has been seized and destroyed during the year amounts to upwards of 134 tons, and includes about 19 tons, carcasses of animals smothered aboard a cattle steamer owing to a collision.

The great bulk of this meat was not exposed for sale, and was dealt with under a Local Act, which does not require a Justices' order for its destruction.

The number of smothered and injured cattle is decreasing, the cross channel traffic being attended with less injury and damage to the cattle than formerly, owing to greater care in transit.

#### SMOTHERED AND INJURED CATTLE.

Beasts.	Sheep.	Pigs.	Number found good.	Number found bad.	Weight of Bad in pounds.
39	52	132	189	34	9,861

The quantity of fish was also in excess of the amount taken last year, and includes a large quantity of fresh fish which had gone bad in transit, and a large quantity of salt fish which had become tainted during transit or storage.

The number of carcasses seized by Medical Officer of Health and Inspectors, distinguishing the number so condemned in consequence of the animal having suffered from Tuberculosis, is as follows :—

	<u>1896.</u>
Number of carcasses seized during the year by Medical Officer of Health and Inspectors under section 116 of the Public Health Act	939
* Number of such carcasses condemned by Justices under section 117 of the Public Health Act .. .. .	* 1
Number of carcasses so condemned in consequence of the animal having suffered from Tuberculosis .. .. .	124
Amount of Fines and Costs .. .. .	£20 4s. 6d.

Police proceedings in respect to meat and fish were as follows :—

	<u>1896.</u>	<u>1895.</u>
Number of Informations in respect to Diseased Meat and Fish ..	4	9
„ Fined .. .. .	3	8
„ sent to Gaol .. .. .	—	—
Amount of Fines and Costs .. .. .	£46 19 0	£47 1 1

\* The remainder were dealt with under a Local Act, which does not require a Justices' Order.

GLANDERS AND FARCY.

Veterinary examinations, by request of Board of Agriculture, of horses imported from the American Continent.

Horses Examined.	Horses found affected with		
	Glanders.	Pneumonia.	Strangles.
922	...	26	9

In addition to those referred to in the foregoing table, 1,071 horses, some of which were landed beyond the City boundaries, have been examined at the various Saleyards, with a view to the maintenance of the general health of the animals in the City.

Horses Examined.	Horses found affected with		
	Glanders.	Pneumonia.	Strangles.
1,071	...	12	3

The imported animals were on the whole in very good condition and the mortality very small.



GLANDERS AND FARCY.

The number of cases detected in 1896 shews a considerable increase. Glanders and Farcy have been found to exist on 16 premises. 48 reports of suspicious cases were received, 358 animals were examined, and of these 32 were condemned and destroyed, 30 as being affected with Glanders and Farcy, and 2 suspicious cases. Compensation was paid to the owners.

Animals Examined.	Affected.	Suspicious.	Not Affected.
358	30	2	326

Total Number of Animals in Stables, &c., where the Disease occurred.	SLAUGHTERED.		Died.
	By Order of Owner.	By Order of Local Authority.	
155	8*	32	1

\* Five of these animals came from localities outside the City boundaries, viz. :— 2 from Burscough, 1 from Ditton, 1 from Linacre, and 1 belonged to a travelling gipsy.

LUNGS OF HORSES EXAMINED AT KNACKER'S YARD, HOLME STREET,  
SANDHILLS.

Since the 18th April, the Veterinary Superintendent has caused to be examined the lungs of all horses sent to the above premises. In every instance where there was evidence of the disease manifested in the lungs, the owners of the animals were notified, and if within the City boundaries, the remainder of their studs were subjected to veterinary examination. In those cases where the existence of Glanders or Farcy was capable of detection during the life of the animal, proceedings were taken against the owners. Of the total number of lungs examined, five, taken from horses that were brought into the City from places outside the boundary were found affected, and in three of these cases proceedings were instituted against the owners; in the remaining two there were no outward manifestations of the disease.

Lungs Examined.	Glandered.	Not Affected.
1,760	14	1,746

PLEURO-PNEUMONIA.

A case of Pleuro-Pneumonia occurred in a shippin where five cows were kept. The animal had been purchased at an auction, in Oswestry, two months previously ; it was ailing for some days, and sent by the owner to the Abattoir, where it was found by the Inspector.



# SWINE FEVER.

The following table shows the number of animals affected and the number in the herds slaughtered under the Swine Fever Order.

Total Number in Herds.	HEALTHY.		DISEASED.			Died.	Locality.	Remarks.
	Slaughtered.		Slaughtered.		By Order of Board of Agriculture.			
	By Order of Owners.	By Order of Board of Agriculture.	By Order of Owner.	By Order of Board of Agriculture.				
233	228	...	2	...	3	Abattoir	} These animals came from Ireland.	
66	63	...	2	...	1	Gill Street Market		
17	...	14	...	...	3	Club Moor, West Derby		
15	14	...	...	...	1	West Derby		
14	5	...	...	2	7	Knotty Ash		
8	...	4	..	3	1	Prescot Road, Stanley		
1	...	...	..	...	1	Fulwood Park		
3	...	...	...	1	2	Edge Lane		
2	...	...	1	...	1	Bishop Eton Monastery		
1	...	...	...	...	1	Priory Road, Wavertree		
10	...	9	...	...	1	Edge Lane		
370	310	27	5	6	22			

### RABIES.

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During almost the entire year, viz., from the 1st January to 2nd November, a Muzzling Order was in force, and not a single case of rabies was reported.

*Post mortem* examinations were made by the Veterinary Inspectors during the year on 47 dogs, and none of them shewed signs of having been affected with rabies.

Powers regulating measures for the suppression or control of diseases of animals are vested in the Board of Agriculture, and the case of rabies, although the disease is one communicable to man, is no exception to the rule.

Outbreaks of rabies during the last five years have been localised at different times in different parts of the country. The Board of Agriculture have therefore never deemed it necessary to pass an order requiring muzzling of dogs all over the country, the Board having considered that unless the disease is so extensively spread as to make it difficult or impossible for the Local Authorities concerned, either individually or in combination, to successfully combat the evil, little or no advantage would be likely to be gained by the intervention of the Central Authority.

In 1889, rabies became very prevalent in various parts of the country, more especially in the thickly-populated districts of Lancashire, Yorkshire, and Cheshire. In 1889, a Muzzling Order was adopted by the City Council. As soon as suitable muzzling regulations were brought into operation, the number of cases steadily fell, and in 1892 a minimum of 38 was reported in this country. In February, 1892, the Board of Agriculture authorised the withdrawal of the Muzzling Order



from certain parts of Lancashire, so far as it related to dogs which had a collar with the name and address of the owner of the dog legibly engraved on such collar. This Order also extended to Liverpool. The recurrence of rabies, however, necessitated a re-adoption of the Muzzling Order in the City of Liverpool in January, 1894.

It may be well to state that the greater portion of cases of rabies and hydrophobia relatively to population, occur in cities and densely-populated districts. The reasons, therefore, for a Muzzling Order in cities, are perhaps more cogent than in rural districts.

What is known as a Muzzling Order contains provision for the slaughter of dogs affected with, or suspected of, rabies. It also provides for the seizure, detention, and disposal of stray dogs, and of dogs not muzzled.

So far as the City of Liverpool is concerned, the effect of the provision for the destruction of stray dogs is shewn by the following table, indicating the number of dogs taken from the streets and destroyed during each of the last six years :—

1890	...	...	...	...	4,070
1891	...	...	...	...	1,950
1892	...	...	...	...	1,449
1893	...	...	...	...	830
1894	...	...	...	...	3,146
1895	...	...	...	...	3,312

It will be seen from the foregoing that the streets were fairly cleared of stray dogs in 1890 and 1891 under the Muzzling Order then in operation, but the numbers diminished largely in 1893, when there was no Muzzling Order; since the adoption of the Muzzling Order of 1894 no less than 6,458 unmuzzled dogs have been taken from the streets,

these dogs being, in the language of the Society for the Prevention of Cruelty to Animals, "generally speaking, worthless and diseased."

The official return of the Board of Agriculture for the year 1894 contains the following paragraph:—

"Local Authorities, however, have shown great reluctance to exercise the extensive powers they possess, more especially with regard to the imposition of the muzzle. Muzzling regulations are unpopular among dog owners, and usually bring upon Local Authorities making them the odium of interfering with the right, which each dog owner thinks his dog possesses, to bite at least one person. A popularly-elected body, such as a Town or County Council, is perhaps naturally unwilling to expose itself to unfavourable criticism. But in view of the terrible mental sufferings endured by persons bitten by a rabid animal, and by their friends, and the fearful nature of the death that awaits some of the victims, any measure which could minimise the danger should secure cordial, although it may be silent, approval. Even if this were not the case it would appear to be the duty of the governing body of every district to protect those they represent against the horrors of hydrophobia."

Much has been made, from time to time, of the circumstance that a universal Muzzling Order has not been issued by the Board of Agriculture. It is, no doubt, a matter of very great regret that the Board has not seen its way to issue a universal Muzzling Order, but the fact that the Muzzling Order may have been removed in a rural district where the necessity for an Order may be but slight, and that that district abuts upon an urban one where the necessity may be great, is no reason whatever why precautionary measures should be cast aside in the urban district.



### ADMINISTRATION OF COWSHEDS AND SHIPPONS.

The number of Shippons in the City during the years 1889 to 1896 inclusive, together with the number of cows licensed to be kept, and the number of applications for new shippons, is as follows :—

	Shippons.		Cows.		Applications.	
1890	...	378	...	5,104	...	2
1891	...	380	...	4,950	...	1
1892	...	337	...	4,539	...	6
1893	...	344	...	4,634	...	4
1894	...	304	...	4,005	...	2
1895	...	325	...	4,311	...	20
1896	...	404	...	5,393	...	129*

\* Including 125 new applications in incorporated area.

**Registration of Premises.** During the past few years special efforts have been made to improve the condition of the premises in which cows are kept.

The Medical Officer declines to renew the licenses of any premises which do not comply with sanitary requirements, consequently as a suitable season must be selected for structural alterations to be carried out, and a reasonable amount of time must be allowed, a considerable number of shippons are without licenses; the owners or occupiers are proceeding with reasonable despatch to do what is necessary.

At the present time no premises are licensed, and no premises will in future be licensed, until their sanitary condition fulfils in every detail the requirements of the Regulations.

**Inspection of Shippons.** Shippons are under the immediate supervision of two well-qualified and competent inspectors, whose whole time and undivided attention are devoted to the examination of shippons to ensure that the requirements of the bye-laws as to light, ventilation, cleanliness, &c., are carried out. They are also prepared to advise in regard to the construction of new shippons.

In regard to the health of the cows themselves, the shippens are systematically visited by the Leavelookers, five in number, who examine the cows. The visits and examinations of these Inspectors, which are authorised by the bye-laws, are not objected to by the cowkeepers, and no instance of obstruction has arisen, nor has any cowkeeper refused to remove from the shippen, cows which the Inspector has considered should be removed.

In the event of a cow being found to be in a diseased condition the circumstance is reported to the Medical Officer, and the Veterinary Superintendent or his assistant examines the suspected animal.

Cowkeepers appear now to realise that what is being done is in their own interests, consequently they have on the whole, and with a few notable exceptions, desisted from opposition and evinced willingness to co-operate with the Sanitary Officers.

**Inspection of Dairies.** All places where milk is sold require to be registered, and applications for registration are not granted until after the District Sanitary Inspector has visited the premises, and any defects which he may have found are dealt with. The premises are then visited by the Milkshop Inspector to ascertain that they are suitable, and that no other business likely to cause contamination of milk is carried on.

In May and November all licensed premises are visited by the District Sanitary Inspectors in order to see that the requisite half-yearly lime-washing has been properly carried out.

**Analysis of Milk.** 841 Samples of milk were taken for analysis under the Food and Drugs Act.

Consumers would do wisely to boil milk for a few seconds, and not to consume it raw. Objections are raised to this on account of the change in the flavour produced by boiling, and it is also urged that, as milk is a food intended by nature to be taken in the uncooked state, boiling is unnecessary. It must be borne in mind, however, that milk, when supplied in the natural manner to the young infant, passes direct from the gland, to the stomach of the infant, at a suitable temperature and adequately mixed; it contains neither adulterant nor preservative, nor has anything been abstracted from it, and it is, bacteriologically, clean and pure. The milk of commerce, on the other



hand, is exposed to risks of contamination, not only in the open buckets in the shippin, but also in strainers, pails, milk cans and jugs, into which it finds its way in the course of its progress to the table of the consumer ; and although it may be neither skimmed nor watered, yet after being hawked from door to door through the dusty streets it may arrive in a varying degree of staleness, more or less contaminated, and loaded with microbes of various kinds.

Between milk supplied as Nature intended it and milk which has gone through so many vicissitudes, there is a considerable gulf fixed, and a consideration of these facts may modify the prejudices against a few seconds boiling.

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STATISTICS respecting licences to keep Cattle, and Registration of Premises for the Sale of Milk, under the Dairies, Cowsheds, and Milkshops Order.

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LICENSES TO KEEP COWS.

Number of Applications to keep cows on premises not previously licensed ...	129
"          "          granted ... ..	80
"          "          standing over pending requisite alterations ...	35
"          "          withdrawn ... ..	10
"          "          refused ... ..	4
Number of cows applied for on above applications ... ..	1,732
"          cows granted... ..	988
"          applications standing over from last year and now granted...	2
"          applications for transfer to fresh tenants of shippins which were previously licensed ... ..	46
"          transfers granted ... ..	41
"          transfers refused ... ..	1
"          transfers in abeyance, pending alterations ... ..	4
"          applications to keep more cows than the number for which the licence was originally issued ... ..	10

Number of granted	...	...	...	...	...	...	...	...	9
„ additional cows applied for	..	...	...	...	...	...	...	...	42
„ cows granted	...	...	...	...	...	...	...	...	25
„ applications refused	...	...	...	...	...	...	...	...	1
„ shippens at present licensed	...	...	...	...	...	...	...	...	404
„ cows authorised to be kept	...	...	...	...	...	...	...	...	5,393
„ shippens in added area	...	...	...	...	...	...	...	...	75
„ cows in added area	...	...	...	...	...	...	...	...	919

#### LICENSES TO KEEP PIGS.

Number of new applications to keep pigs on premises not previously licensed	28
„ „ granted ... ..	14
„ „ in added area ... ..	27
„ „ in former City area ... ..	1
„ pigs applied for on above applications ... ..	614
„ pigs granted ... ..	177
Total number of premises now licensed	36
„ „ pigs ... ..	276

Particulars respecting new applications :—14 granted, 5 refused, 3 premises vacated,  
6 in abeyance, pending alterations ; total 28.

#### MILK SHOPS.

Number of applications for registration	...	...	...	...	...	...	167
Of which transfers were	..	...	...	...	...	...	115
Number of above applications in added area	...	...	...	...	...	...	153
Number of applications granted	...	...	...	...	...	...	109
„ applications refused...	...	...	...	...	...	...	23
„ applications standing over, pending alterations. (These are in connection with shippens)	...	...	...	...	...	...	35
Two applications standing over from last year have been granted.							
Number on the register at the end of 1895	...	...	...	...	...	...	1,415
„ „ „ 1896	...	...	...	...	...	...	909



During last year, all the registered milkshops were visited by the District Sanitary Inspectors, and it was found that 567 of these had ceased to sell milk, and were consequently removed from the register.

## SHIPPON INSPECTION.

								<u>1896.</u>	<u>1895.</u>
Number of Inspections of Shippons	..	..	..	..				3,126	1,146
„ Informations .. .. .	..	..	..	..	..	..		7	4
„ Fined .. .. .	..	..	..	..	..	..	..	7	2
Amount of Fines and Costs	..	..	..	..	..	..		£9 17 6	£1 14 0

LEAVELOOKERS' VISITS TO SHIPPONS FOR THE PURPOSE OF  
EXAMINING COWS.

No. of Visits.	No. of Cows Examined.	No. found Healthy.	No. found ill and referred to the Veterinary Inspector.
559	5,949	5,930	19

## DAIRIES AND MILK SHOPS INSPECTION.

								1896.	1895.
Number of Inspections of Dairies and Milk Shops ..								4,130	1,892
„	found Incorrect	..	..	.	..	.	..	508	262
„	of Informations	..	..	..	..	..	..	4	10
„	Fined ..	..	..	..	..	..	..	1	7
„	Acquitted and Withdrawn	..	..	..	..	..	..	3	3
Amount of Fines and Costs ..								£0 14 6	£9 16 6

# SHOP HOURS ACT, 1892—5.

During 1896, under the above Act, there have been 4,862 visits paid to shops during the day, and 2,792 visits made after six o'clock; in 6,609 instances the shops were found to be correct, and 1,045 incorrect.

The persons concerned have generally evinced readiness to comply with the requirements of the Act, and have thus lessened the difficulties in its administration.

	<u>1896.</u>	<u>1895.</u>
Number of Shops visited (day) .. .. .	4,862	3,961
„ „ found incorrect .. .. .	669	631
„ „ visited after 6 p.m. .. .. .	2,792	2,014
„ „ „ „ found incorrect .. .. .	376	298
„ copies of Act distributed by the Inspectors .. .. .	1,076	1,022
„ Informations for excessive hours .. .. .	4	—
„ Convictions „ „ .. .. .	4	—
being 1 Grocer (2 informations), 1 Fishmonger and 1 Baker.		
„ Informations for not exhibiting Notice of Act and number of hours .. .. .	8	1
„ Convictions .. .. .	7	1
being 3 Butchers, 2 Ironmongers, 1 Baker and 1 Pawnbroker.		
Total number of Informations .. .. .	12	1
„ „ Convictions .. .. .	11	1
Total Amount of Fines and Costs .. .. .		
	<u>£10 11s. 6d.</u>	<u>£0 14s. 6d.</u>



FACTORY AND WORKSHOPS ACT, 1878—95.

The Inspectors appointed under the above Acts have visited a large number of Workshops, the summary of which is appended. A certain number of Sanitary defects were found, the character of which is indicated in the following table :—

	1896.	1895.
Number of Workrooms, dirty walls .. .. .	569	533
„ „ „ ceilings .. .. .	570	531
„ „ „ floors .. .. .	27	40
„ „ „ urinals .. .. .	33	22
„ „ „ water-closets .. .. .	82	67
„ „ „ lavatories .. .. .	27	5
„ „ insufficiently ventilated, arising from structural defects or from want of attention .. .. .	430	314
„ „ found overcrowded .. .. .	11	16
„ Defective Drains and Water-closets; also insufficient water-closet accommodation, and other nuisances .. .. .	755	629
„ Notices issued { upon Owners .. .. .	142	248
„ { upon Occupiers .. .. .	527	406
„ „ not complied with .. .. . (These are known to be in progress.)	2	3
„ Informations .. .. .	21	17
„ Fined .. .. .	10	6
„ of References to Government Factory Inspector ..	126	146
„ Workshops inspected, protected .. .. .	598	497
„ „ „ non-protected .. .. .	26	42
„ Workshops measured .. .. .	694	622
Visits to Workshops .. .. .	5,443	4,283
Workshops found incorrect .. .. .	2,318	1,826
Amount of Fines and Costs .. .. .	£6 15 0	£6 15 6

SUMMARY OF VISITS PAID TO WORKSHOPS.

Basket Makers ... .. 11	Leather Workers ... .. 15
Blind Makers ... .. 7	Marine Stores... .. 99
Boat Builders ... .. 6	Mattress and Bed Makers ... .. 23
Boot Makers ... .. 70	Milliners ... .. 136
Bottlers ... .. 94	Mineral Water Manufacturers ... 8
Box Makers ... .. 12	Paint and Varnish Manufacturers... 17
Brush Makers... .. 8	Paper Cutters, &c ... .. 69
Cabinet Makers and Joiners ... 312	Photographers ... .. 5
Canned Meats... .. 38	Pickle and Sauce Manufacturers ... 77
Cap Makers ... .. 27	Plasterers and Modellers .. .. 12
Carvers and Gilders .. .. 23	Plumbers ... .. 21
Cattle Food Mixers ... .. 8	Relief Stampers ... .. 10
Coach Builders ... .. 51	Rope Makers ... .. 8
Confectioners ... .. 105	Sack and Bag Makers ... .. 33
Coopers... .. 24	Saddlers ... .. 29
Cork Cutters ... .. 12	Sailmakers ... .. 6
Cotton Sorters, &c. ... .. 138	Scale Makers .. .. 5
Cycle and Bassinette Makers ... 33	Sign Writers ... .. 6
Dress and Mantle Makers ... .. 925	Slipper Makers ... .. 5
Drysalts ... .. 38	Smiths ... .. 45
Engravers ... .. 26	Tailors ... .. 1,722
Enamellers ... .. 33	Tarpaulin Makers ... .. 40
Firewood Manufacturers, &c. ... 21	Toy Makers ... .. 7
French Polishers ... .. 23	Trunk and Portmanteau Makers ... 11
Furriers ... .. 11	Umbrella Makers ... .. 13
Galvanisers ... .. 7	Underclothing Makers ... .. 130
Glass Blowers ... .. 9	Upholsterers ... .. 23
Ink Manufacturers ... .. 11	Watchmakers and Jewellers ... 33
Knitters ... .. 15	Various... .. 183
Laundries ... .. 547	Total ... .. 5,443



### BAKEHOUSES.

Number of Bakehouses on Register, 31st December, 1896	...	...	...	...	960
Number of Bakehouses added to Register during 1896	...	...	...	...	207
Number of Bakehouses struck off Register during 1896	...	...	...	...	33

About three-fourths of the added bakehouses are within the old area, and one-fourth within the added areas, and consist of small cakeshops which require supervision.

Number of Visits paid to bakehouses...	...	...	...	...	...	4,539
Number of Bakehouses found dirty (walls and ceilings)	..	...	...	...	...	397
Number of Notices issued for linewashing	...	...	...	...	...	268
Number of Bakehouses linewashed without notice	...	...	...	...	...	129
Number of Notices issued for defective ventilation	...	...	...	...	...	53
„ „ „ to cleanse store cisterns and provide water from main						6
„ „ „ to repair defective drains and waste pipes	...	...	...	...	...	18
„ „ „ to discontinue using bedrooms opening directly into bakehouse	...	...	...	...	...	17
„ „ „ to take drains out of bakehouses	...	...	...	...	...	23
„ „ „ to repair defective floors and walls	...	...	...	...	...	34
„ „ „ to repair defective ceilings	...	...	...	...	...	38
„ „ „ to remove closets from bakehouses	...	...	...	...	...	7
„ „ „ to provide suitable water-closet accommodation	...	...	...	...	...	13
„ „ „ to remove ashpits from vicinity of bakehouse	...	...	...	...	...	2
„ „ „ to remove and cease to keep animals in bakehouse	...	...	...	...	...	3
„ „ „ to cease to use bakehouse for the purpose of domestic washing	...	...	...	...	...	8
„ „ „ to cleanse floors, windows, areas, tables and troughs...						131
„ „ „ to cease to use as bakehouses places underground not in conformity with Act, 1895	...	...	...	...	...	9
Number of References to Government Factory Inspector	...	...	...	...	...	39

All the Notices were complied with except two, for which informations were laid, viz. :—  
One for a defective ceiling, the defendant being ordered to pay 2s. costs, and to do the work in seven days : the other for using a bedroom opening directly into the bakehouse, in which case a fine of 20s. with 4s. 6d. costs was imposed.

In the latter case the defendant afterwards made such structural alterations to the premises as complied with the requirements of the original notice.





There were two appeals by the defendants to Quarter Sessions against the decisions of the Magistrates who had inflicted penalties in each case ; but both appeals were dismissed by the Recorder, with costs, and the decisions of the Magistrates confirmed.

In addition 24 cases of excessive smoke from Steamers in the river were observed ; in 13 the vessels were bound to foreign ports, and in 9 the owners could not be traced, and in 2 the Steamers were towing vessels in cases of emergency and consequently no proceedings were taken.

	1896.	1895.
Complaints received of smoke from defective house flues, and from low chimneys .. .. .	133	87
Visits relating thereto .. .. .	642	272
Chimneys raised in consequence of complaints .. .. .	34	25
Flues altered and repaired .. .. .	27	31
Attention promised .. .. .	48	13
Referred to other departments .. .. .	4	3
Frivolous complaints .. .. .	20	15
Total complaints dealt with ..	133	87

#### CAUTIONS FOR EMITTING EXCESSIVE SMOKE.

	1896	1895.
Chief Inspectors and Assistants gave Manufacturers ..	601 Cautions ..	362
„ „ „ Steamers ..	76 „ ..	39
Total .. ..	677 „ ..	401
Number of enquiries respecting Owners .. .. .	240	..

The large amount paid in fines for smoke nuisances indicates the necessity for care in preventing them.

In many instances the fault is owing to careless stoking, and due attention would obviate the grounds of complaint.

Proceedings under the Food and Drugs and Margarine Acts.

All samples of food or drugs are taken either by or under the superintendence of Inspectors of the Health Committee. It becomes necessary, however, from time to time to employ women or young lads to go into the shop to ask for the articles, and as soon as the agent receives them, the Inspector enters the shop and completes the formalities which the Act requires. This is rendered necessary as the Inspectors become known in the district. Special attention is paid to milk, a large number of samples of which are taken.

SAMPLES TAKEN FOR ANALYSIS.

No. of Samples purchased.	Description of Samples.	Adulterated.	Informations.
12	Cream .. .. .	..	..
681	New Milk .. .. .	63	61
145	Skimmed Milk .. .. .	17	17
2	Condensed Milk .. .. .	..	..
1	Buttermilk .. .. .	1	..
53	Butter.. .. .	6	6
19	Lard .. .. .	..	..
1	Lardine .. .. .	..	..
6	Margarine .. .. .	..	..
24	Cheese.. .. .	..	..
1	Tea .. .. .	..	..
13	Coffee .. .. .	1	1
1	Sugar .. .. .	..	..
8	Mustard .. .. .	1	1
29	Pepper .. .. .	..	..
7	Cayenne Pepper .. .. .	..	..
1	Ginger.. .. .	..	..
18	Ground Ginger .. .. .	..	..
2	Carraway Seeds .. .. .	..	..
7	Pickles .. .. .	..	..
3	Piccalilli .. .. .	..	..
1	Pickled Walnuts .. .. .	..	..
4	Vinegar .. .. .	1	1
2	Roast Mutton .. .. .	..	..
1	Baking Powder .. .. .	..	..
5	Arrowroot .. .. .	..	..
5	Candied Peel.. .. .	..	..
1	Ground Cinnamon .. .. .	..	..
2	Macaroni .. .. .	..	..
1	Rice .. .. .	..	..
1	Bread .. .. .	..	..
1	Bread and Butter .. .. .	..	..
10	Flour .. .. .	..	..
2	Cornflour .. .. .	2	..
1	Oats .. .. .	..	..
2	Oatmeal .. .. .	..	..
4	Yeast .. .. .	..	..
2	Honey .. .. .	..	..
5	Marmalade .. .. .	..	..
12	Jam .. .. .	..	..
4	Cakes .. .. .	..	..



SAMPLES TAKEN FOR ANALYSIS—CONTINUED

No. of Samples purchased.	Description of Samples.	Adulterated.	Informations.
10	Sweetmeats .. .. .	..	..
1	Seidlitz Powder .. .. .	..	..
4	Tartaric Acid.. .. .	..	..
1	Borax .. .. .	..	..
15	Cream of Tartar .. .. .	..	..
2	Carbonate of Soda .. .. .	..	..
4	Olive Oil .. .. .	1	1
2	Oil of Mustard .. .. .	2	..
1	Castor Oil .. .. .	..	..
1	Olives .. .. .	..	..
1	Cod Liver Oil .. .. .	..	..
1	Cassia .. .. .	..	..
8	Medicine Prescription .. .. .	2	2
4	Spirits of Nitrous Ether .. .. .	2	..
9	Preserved Peas .. .. .	5	4
1	„ Beans .. .. .	..	..
1	„ Ginger .. .. .	..	..
2	Rum .. .. .	..	..
2	Irish Whiskey .. .. .	..	..
1	Scotch Whiskey .. .. .	..	..
2	Gin .. .. .	..	..
2	Beer .. .. .	..	..
1	Stout .. .. .	..	..
<b>Total 1176</b>		<b>104 Adulterated.</b>	<b>94</b>
<u>1132</u> preceding year.		<u>147</u> preceding year.	

	1896.	1895.
Number of Informations .. .. .	100	108
„ Fined .. .. .	89	97
Acquitted or Withdrawn .. .. .	11	11
Amount of Fines and Costs ..	£241 2 6	£286 15 0

SAMPLES OF MILK OBTAINED DURING THE YEAR 1896.

Number of Samples purchased on Week-days .. .. .	522
„ Informations .. .. .	51
Number of Samples taken at Railway Stations on Week-days .. .. .	93
„ Informations .. .. .	0
Number of Samples purchased on Sundays .. .. .	145
„ Informations .. .. .	24
Number of Samples taken at Railway Stations on Sundays .. .. .	66
„ Informations .. .. .	0

SAMPLES OBTAINED FOR BACTERIOLOGICAL EXAMINATION.

Number of Samples taken of Milk .. .. .	119
„ „ Oysters .. .. .	2
„ „ Mussels .. .. .	1

REFUSING TO SELL SAMPLES FOR ANALYSIS.

	<u>1896.</u>	<u>1895.</u>
No. of Informations .. .. .	2	1
„ Fined .. .. .	2	1
Acquitted or Withdrawn .. .. .	—	—
Amount of Fines and Costs .. .. .	£2 9 0	£2 4 6

GIVING FALSE WARRANTY.

	<u>1896.</u>	<u>1895.</u>
No. of Informations .. .. .	1	1
„ Fined .. .. .	1	1
Amount of Fine and Costs .. .. .	£3 17 6	£2 4 6

MARGARINE ACT.

	<u>1896.</u>	<u>1895.</u>
Number of Visits to Shops .. .. .	4,303	2,143
„ Samples obtained .. .. .	28	26
„ „ Analysed .. .. .	—	—
„ Informations .. .. .	37	22
„ Fined .. .. .	35	21
Amount of Fines and Costs .. .. .	£44 18 6	£24 19 6

The amount of fines for offences under the Sale of Food and Drugs Act has decreased during the past twelve months as compared with the preceding twelve months. It was especially noticed that the common and simple fraud of adulterating milk with water was much less frequently practised in 1896 than 1895, and the samples of milk purchased on Sundays showed a marked improvement.



NUISANCES PREJUDICIAL TO HEALTH.

The extension of the City area has brought a large increase in the number of matters upon which the advice and assistance of the Health Department has been sought during the year. The applications made by residents in the City were 7,993. In many instances complaint was made to the Department only after repeated requests addressed to the persons causing or allowing the nuisance, or to agents or owners of property, had been ignored. A great deal of the time of the Inspectors was taken up by these special examinations. The following table shews the character of the proceedings:—

	<u>1896.</u>	<u>1895.</u>
Number of Complaints made by Inhabitants .. .. .	7,993	7,796
„ Nuisances discovered on above complaints .. .. .	15,988	15,720
„ „ „ house to house inspection .. .. .	57,999	51,843
„ Notices issued .. .. .	39,796	38,034
„ Notes to complainants .. .. .	4,006	3,311
„ „ sent to comply with notices .. .. .	5,367	4,771
„ Nuisances re-inspected .. .. .	99,100	83,945
„ „ abated on re-inspection .. .. .	55,320	46,830
„ Drains repaired .. .. .	27,701	18,207
„ Ashpits „ .. .. .	1,990	2,501
„ Closets „ .. .. .	18,930	16,937
„ Water Closet Conversions .. .. .	132	168
„ Spouts fixed and repaired .. .. .	1,126	852
„ Places from which animals have been removed .. .. .	280	315
„ Offensive Matter removed from premises .. .. .	230	722
„ Stagnant Water „ .. .. .	509	1,161
„ Dilapidated Houses .. .. .	325	543
„ Premises supplied with water .. .. .	4,051	5,387
„ Chimneys repaired to abate smoke nuisances .. .. .	39	30
„ Cellar Rails repaired .. .. .	7	7
„ Informations laid .. .. .	989	1,809
„ Fined .. .. .	237	350
„ of Magistrates' Orders .. .. .	404	729
„ Acquitted or Withdrawn .. .. .	348	730
Amount of Fines and Costs .. .. .	£220 1 6	£296 6 1

The applications to examine large and important public buildings and offices have not been so numerous as in the last few years, but applications to examine large and highly-rented dwelling-houses have been very numerous, and the application of the smoke test has in many cases brought to light gross defects in the drainage system. The bulk of complaints arise in respect to ill-constructed and jerry-built property.

OFFENSIVE TRADES.

	<u>1896.</u>	<u>1895.</u>
Number of visits .. .. .	786	650

Applications for permission to carry on the following offensive trades were made during the year, and a report by the Medical Officer of Health on each application was submitted to the Health Committee.

Premises.	Business.	Granted.	Refused.	Date 1896.
Cherry Lane, Walton..	Knackers' Yard .. ..	—	1	2nd January.
Pumpfields .. ..	Fish Skin Curing .. ..	—	1	16th January.
No. 141, Vauxhall Rd	Tallow Melting and Oil Refining	—	1	16th January.
No. 245, „	Fat Melting .. ..	1	—	20th February
No. 8, Hurst Street, Old Swan	Cod Liver Oil Manufactory..	—	1	20th February
No. 141, Vauxhall Rd.	Do. .. ..	1	—	12th March.
„ „	Oil Refinery .. ..	—	1	19th March.
No. 24, Douro Place	Bone Boiling .. ..	—	1	4th June.
Cherry Lane, Walton..	Artificial Manure Manufacture	—	1	1st October.
Nos. 79 and 81, Naylor Street	Fat Melting .. ..	—	1	12th Nov.
Cunliffe Street.. ..	Tripe Dressing .. ..	—	1	26th Nov.

In the cases in which permission was granted, conditions were imposed requiring that the premises be put in proper order to the satisfaction of the City Engineer and the Medical Officer of Health, that no public nor private nuisance be caused, and that the business be discontinued whenever the Council shall so require.

KNACKERS' YARD RETURNS.

	Horses Destroyed.	Horses taken in Dead.	Asses Destroyed.	Cows Destroyed.	Other Beasts.
Holme Street .. ..	1,267	1,408	49	65	3



MANURE YARDS AND WHARVES.

	<u>1896.</u>	<u>1895.</u>
Number of visits .. .. .	557	705

REFERENCES TO OTHER DEPARTMENTS.

	<u>1896.</u>	<u>1895.</u>
Referred to City Engineer .. .. .	1,957	1,958
„ Building Surveyor .. .. .	1,223	1,375
„ Water Engineer .. .. .	5,237	7,393
„ Veterinary Superintendent .. .. .	1,664	1,850
„ School Board .. .. .	12,484	11,457

The references to the Water Engineer comprise, mainly, defective fittings, resulting in waste of water; also cases in which the supply was insufficient, owing to various accidental causes.

The references to the School Board chiefly relate to school children from infected houses.

REFERENCES FROM OTHER DEPARTMENTS.

	<u>1896.</u>	<u>1895.</u>
Received from the City Engineer .. .. .	12,632	12,133
„ Veterinary Superintendent .. .. .	4,788	5,152
„ Water Engineer .. .. .	2,322	4,525
„ Lodging-house Inspectors .. .. .	7,386	9,579

The references from other Departments mainly comprise insanitary conditions discovered by officers belonging to those Departments, but with which it is not within their province to deal. The City Engineer's Department discovered a large number of defects in the incorporated areas when engaged in flushing private drains.

Damage done by the severe frost experienced in the early part of the year 1895 explains the greater number of references during that year, a circumstance which also retarded the house to house visitations during the same period.

HOUSE TO HOUSE VISITATION.

	<u>1896.</u>	<u>1895.</u>
Number of Inspections of Street Houses .. .. .	12,316	6,341
„ Street Houses found Clean .. .. .	10,844	5,204
„ „ „ Dirty .. .. .	1,472	1,137
„ Apartments in Street Houses Examined .. .. .	52,941	29,963
„ Inspections of Court Houses .. .. .	2,818	2,349
„ Court Houses found Clean.. .. .	2,429	1,642
„ „ „ Dirty.. .. .	389	707
„ Apartments in Court Houses Examined.. .. .	8,108	7,207
Total Number of Houses Examined .. .. .	20,525	14,610

COURT AND ALLEY EXAMINATIONS.

	<u>1896.</u>	<u>1895.</u>
Number of Visits to Courts and Alleys .. .. .	69,128	76,534
„ Closets found Dirty, but Cleansed by Officer's Instruction	69,962	76,458
„ Informations. . . . .	35	76
„ Fined .. .. .	23	64
Amount of Fines and Costs .. .. .	<u>£2 15 0</u>	<u>£6 14 6</u>

Visits to courts and alleys are made with the special object of ensuring the cleanliness of the domestic offices and surface of the courts. The aim is to keep the courts and alleys uniformly clean throughout the week, and with this view the district inspectors are instructed that every tenant in each court is in turn to be held responsible for the cleanliness of the court for a period of one week; the inspector records in his visiting book whose turn it is, and duly informs that tenant. Failing compliance with his requirements, an information is laid under a bye-law of the Local Sanitary Act.

The magistrate has rendered great help to the department by imposing a small fine in those cases in which a prosecution became necessary. There is a marked improvement in the condition of the courts, and also in the apparent willingness of the people to cleanse them. The attention of the officer is, however, very necessary, since when the visits are lessened the filthy habits of the people soon lead to a recurrence of the dirty conditions.

The court and alley work is greatly decreasing in amount, owing to the demolition of low-class property for the extension of business, or to the removal of insanitary property by the Insanitary Property and Artizans' Dwellings Committee. The number of courts and alleys scheduled for inspection in 1890 was 2,165, in 1895 it had fallen to 1,660, and in 1896 it had further fallen to 1,593.

During the year all courts and alleys having covered entrances were specially washed and hosed down by the scavengers.



### EXAMINATION OF CELLAR DWELLINGS.

	<u>1896.</u>	<u>1895.</u>
Number of Street Cellars inspected .. .. .	3,028	4,100
"        "        "        found empty .. .. .	65	159
"        "        "        used for Lumber, &c. .. .. .	956	1,517
"        "        "        found illegally occupied .. .. .	80	84
"        "        "        "        legally .. .. .	1,927	2,340
"        Notices issued to Owners .. .. .	130	169
"        "        "        Occupiers .. .. .	79	101
"        Informations against Street Cellar Owners .. .. .	2	3
"        Fined .. .. .	1	1
"        of Informations against Street Cellar Occupiers .. .. .	2	—
"        Fined .. .. .	2	—
"        of Court Cellars inspected .. .. .	286	538
"        "        "        found empty .. .. .	19	31
"        "        "        used for Lumber, &c. .. .. .	204	367
"        "        "        illegally occupied .. .. .	7	6
"        "        "        legally .. .. .	56	134
"        "        and Street Cellars found dirty .. .. .	232	445
"        Informations against Court Cellar Owners .. .. .	5	6
"        Fined .. .. .	5	4
"        of Informations against Court Cellar Occupiers .. .. .	1	1
"        Fined .. .. .	—	—
Amount of Fines and Costs .. .. .	£4 1 0	£1 6 6

The total number of cellar dwellings at present upon the register approximates to 9,000. A great many of these are untenanted, and are not likely to be re-occupied as dwellings.

The number of cellars filled in by the Health Committee, free of charge to the owners, during the year was 72, and the total filled in during the last ten years was 859.

The City Engineer has kindly supplied the following tables :—

NUMBER OF HOUSES ERECTED AND TAKEN DOWN DURING YEAR 1896.

DISTRICTS AND WARDS.							Erected.	Taken down
Scotland ...	...	...	...	...	...	...		204
Exchange ...	...	...	...	...	...	...	8	284
Abercromby ...	...	...	...	...	...	...	3	39
Everton ...	...	...	...	...	...	...	33	11
Kirkdale ...	...	...	...	...	...	...	44	...
West Derby ...	...	...	...	...	...	...	199	2
Toxteth ...	...	...	...	...	...	...	71	204
Walton ...	...	...	...	...	...	...	313	...
West Derby (Rural) ...	...	...	...	...	...	...	41	...
Wavertree ...	...	...	...	...	...	...	185	2
Toxteth (Rural)...	...	...	...	...	...	...	302	1
							1,199	747

Number of cellars filled in during 1896 .. .. .	72
“ “ “ the last 10 years .. .. .	859

SEWER VENTILATION TO END OF 1896.

Number of 9-inch by 6-inch, 9-inch, 6-inch, 6-inch by 4-inch, 4-inch by 4-inch, 4-inch, and 3-inch Iron Pipe Ventilating Shafts .. .. .	1,104
Number of Street Ventilating Manhole Covers and Gratings .. .. .	6,781



### COMMON LODGING-HOUSES.

The Common Lodging-Houses Act provides that any person opening any premises as a Common Lodging-House, or receiving lodgers therein, without making application to the Medical Officer of Health to have such premises registered, is liable to a penalty of 40s. for every such offence.

When premises have been approved and registered in accordance with the requirements of the Common Lodging-Houses Act, the following Rules and Instructions, together with suitable and permanent cards indicating the various requirements, are handed to the Keeper, to place in a prominent position in each room.

In addition to the requirements mentioned in the instructions, the cleanliness and suitability of the beds and bedding, engage the attention of the Inspector.

#### RULES AND INSTRUCTIONS.

1.—No greater number than                      Lodgers are to be received or accommodated in this house at any one time.

2.—The windows of every sleeping-room in this house are to be opened, and kept open to their full width, from nine to ten o'clock every morning, and from two to three o'clock every afternoon (weather permitting), unless in case of sickness in any room requiring the windows to be closed.

3.—The floors of every room in this house shall be well swept every morning before the hour of ten, and shall be well washed during the morning of every Friday.

4.—This house shall be thoroughly cleansed, and the walls and ceiling of every room in this house shall be well and sufficiently limewashed, and the blankets, rugs, and bed-clothes, and covers used in this house, shall be thoroughly cleansed and scoured in the first week of each of the months of April, August, and December.

5.—Upon any person in this house, whether a Lodger or one of the family, being affected with fever or any contagious or infectious disorder, the Keeper shall forthwith give notice thereof to the Medical Officer of Health, at his Office, Municipal Offices, Dale Street, and the Medical Officer will visit the house, and take such proceedings as he shall think proper in compliance with the Act.

6.—If any person in this house shall be affected with fever or any infectious or contagious disorder, the blankets and bed-clothes used by such person shall be thoroughly cleansed and scoured, and the bedding fumigated, immediately after the removal of such person, and where the bedding used consists of shavings or straw, the same shall be burned immediately after such removal.



7.—The Keeper of this house shall provide sufficient accommodation for washing, together with a sufficient supply of water for the use of the Lodgers herein.

8.—The Keeper of this house shall reduce the number of Lodgers, or shall cease to receive and accommodate Lodgers altogether, immediately upon receiving notice to that effect from the Medical Officer of Health.

9.—This ticket shall be placed and kept in such situation in this house as the Medical Officer of Health shall from time to time direct, and shall be produced and delivered to such Officer on demand.

N.B.—The Keeper of any Lodging-house defacing or removing this ticket or disobeying the above Rules and Instructions, will be liable to the several penalties in that behalf provided by the Bye-laws for regulating Lodging-houses, a copy whereof may be obtained on application at the Office of the Town Clerk, at the Municipal Offices, Dale Street.

By order of the Health Committee.

At the end of 1895 there were on the register a total of 705 lodging-houses, and at the end of 1896 the total number was 635, which furnished accommodation for 13,585 lodgers, besides 2,038 members of the keepers' families.

The difference in the number of lodging-houses was occasioned by the removal of 218 old licenses and the addition of 148 new ones.

The diminution in the number of common lodging-houses is due partly to the falling-off in the emigration trade during the last few years, and partly to the fact that larger houses, commonly referred to as "model lodging-houses," with somewhat better accommodation, are being opened, and the business of the smaller ones extinguished.

In some of the better-class houses for men, separate cubicles are provided for each lodger, the price paid for them varying from 6d. to 1s. 6d. per night. These cubicles are much more appreciated than the ordinary accommodation provided.

The number of the so-called "model lodging-houses" for men only upon the register is 113, and these are registered to accommodate 5,015 lodgers, as well as 229 members of the keepers' families.

There are also 25 registered model lodging-houses for the accommodation of women only. These have room for 657 lodgers, in addition to 39 members of the keepers' families.

The visits to lodging-houses are both by day and by night. The night visits are almost restricted to the lower districts and commoner class of house. The lodging and emigration houses of the better class



especially those provided only with single beds for each person, and with no more beds than are equivalent to the number of lodgers allowed, are only occasionally visited at night, unless special circumstances necessitate a closer supervision.

Houses which are not licensed either as lodging or sub-let houses are frequently visited by day when such a course is deemed expedient, in order to ascertain whether any grounds exist for putting these houses on the register.

There were 748 visits paid during the year to such houses, and in two of the cases, where suspicion was confirmed, night visits were also paid, and the tenants summoned and fined.

Persons harbouring lodgers in unlicensed premises receive a notice to apply to have the rooms measured and licensed. There were 97 such notices issued during the year, but in only two cases was it necessary to institute prosecutions.

The number of day visits paid during the year was 29,152, and the night visits, 1,034.

Ninety-two informations were laid against keepers of common lodging-houses during the year for the following offences :—

Not sweeping floors	...	...	...	...	28
Not washing floors	...	...	...	...	26
Overcrowding	...	...	...	...	19
Receiving lodgers in unlicensed rooms	...	...	...	...	6
Not applying to register	..	...	...	...	2
Mixing sexes	...	...	...	...	6
Not limewashing	...	...	...	...	5
Total					92

Convictions followed in 91 cases, the total amount of fines amounting to £27 9s. 6d., and ranging from 1s. and 1s. costs to 40s. and costs.

One case was withdrawn.

The number of lodging-houses found dirty was 164; notices were served to limewash and cleanse.

The Bye-law requires that every case of infectious sickness in a lodging-house should be at once reported to the Medical Officer of Health. Twenty-one cases of Fever occurred in lodging-houses; 18 of the patients were at once sent to hospital, the remaining 3, being

members of the keepers' families, were not removed; 2 cases of Diphtheria also occurred in lodging-houses, and being children of the keepers' families, neither of them were removed; both died. In all cases of Fever or Infectious Disease, the bedding was removed to the disinfecting apparatus and the rooms purified and cleansed. There were 51 deaths from non-contagious diseases in lodging-houses, of which 29 belonged to the keepers' families, and 22 were lodgers.

#### SEAMEN'S LICENSED LODGING-HOUSES.

The Corporation have made bye-laws, with the sanction of the President of the Board of Trade, for the licensing of Seamen's Lodging Houses, under the Merchant Shipping (Fishing Boats) Act, 1883, section 48, which enacts that "The Sanitary Authority within whose district any seaport town is situate may, with the sanction of the President of the Board of Trade, from time to time, make, revoke, alter, and amend bye-laws and regulations relating to Seamen's Lodging Houses in such town, which shall be binding upon all persons and bodies keeping houses in which seamen are lodged, and the owners thereof, and persons employed therein. Such bye-laws and regulations shall, amongst other things, provide for the licensing of Seamen's Lodging Houses, the inspection of the same, the sanitary condition of the same, the publication of the fact of a house being licensed, the due execution of the bye-laws and regulations, and the non-obstruction of persons engaged in securing such execution, the preventing of persons not duly licensed holding themselves out as keeping or purporting to keep licensed houses, and the exclusion from licensed houses of persons of improper character, and sufficient penalties for the breach of such bye-laws and regulations not exceeding in any case the sum of fifty pounds. All offences under such bye-laws and regulations shall be deemed to be offences within the Merchant Shipping Acts, 1854 to 1883, and be punishable accordingly."—And on the written application of the keeper of any registered common lodging-house or registered lodging-house, made in such form and stating such particulars as the Council require, the Council will, if they see fit, grant to such keeper a license authorizing him to designate his registered house a Seamen's Licensed Lodging House.

Applications from the keepers of Registered Common Lodging-houses for licenses authorizing the designation of such Registered Common Lodging-houses as Seamen's Licensed Lodging-houses, have been very few, only twelve such Licensed Lodging-houses now being on the register, with accommodation for 211 seamen.



The bye-laws must necessarily exercise a beneficial effect upon those houses which are licensed as Seamen's Licensed Lodging-houses, but the great bulk of common lodging-houses to which seamen commonly resort are not regulated under these bye-laws, but are dealt with by regulations under the Common Lodging-houses Act of 1851.

The number of licenses granted since the adoption of the Seamen's Licensed Lodging-house Bye-laws is 23. Eleven have been given up, none withdrawn, which leaves 12 at present on the register.

It has not been found necessary to institute proceedings under the bye-laws in question.

Some years ago the holders of licenses to keep Seamen's Lodging-houses were authorized by the Board of Trade to board vessels and seek for lodgers, and while this privilege was granted there was an advantage in holding such a license, but that privilege being now withdrawn, it does not appear that there is any advantage to the keeper of a common lodging-house to have his premises registered as a Seamen's Lodging-house, and hence probably the small number upon the register.

#### SUB-LET HOUSES.

These are houses, one or more rooms of which are let off to members of one or more other families. The Bye-laws provide for their registration and inspection to prevent overcrowding and ensure attention to cleanliness and sanitary requirements.

The number registered during 1896 was 580, making the total on the Register on the 31st December, 17,708. The reason there were fewer houses on the Register in 1896, compared with 1895, is that many of the houses had ceased to be sub-let and were removed from the Register; a number of others were demolished by the Insanitary Property Committee, being unfit for human habitation. The number of visits paid during the night was 13,925, and during the day 69,410, with the result of finding 1,449 rooms overcrowded. In addition to overcrowding, the cases of permitting males and females not married to occupy the same room comes under the notice of, and are entered in the books of the Inspectors. There were 716 rooms thus indecently occupied. The character of the indecent occupation may be judged of from the following facts:—In 324 instances one man and

two women were found in the same bedroom ; in 295 instances two men and one woman ; in 59 instances two men and two women ; in 24 instances one man and three women ; in 18 instances three men and one woman ; in 7 instances three men and two women ; in 6 instances two men and three women ; in 3 instances one man and four women ; in 1 instance three men and three women. These cases are most common amongst the poorest and most ignorant inhabitants of the most squalid districts. They appear to be the outcome of ignorance and indifference, and not of immoral intent.

Informations were laid against 1,950 chief tenants for breaches of the bye-laws, viz. :—

Overcrowding .. .. .	1,127
Floors not washed .. .. .	325
Floors not swept .. .. .	494
Refusing admission.. .. .	4
Total .. .. .	1,950

The fines levied in each case were as follows:—7 fined 1s. ; 1,684 fined 1s. and 1s. costs ; 140 fined 1s. 6d. and 1s. 6d. costs ; 1 fined 2s. and 1s. costs ; 67 fined 2s. and 2s. costs ; 24 fined 2s. 6d. and 2s. 6d. costs ; 1 fined 3s. and 3s. costs ; 9 fined 5s. and 4s. 6d. costs ; 2 fined 10s. and 4s. 6d. costs ; 3 fined 20s. and 4s. 6d. costs ; making a total of fines levied during the year of £219 0s. 0d. Of the remaining 12 cases, 10 informations were withdrawn and 2 acquitted, the tenants having complied with the bye-laws.

### CANAL BOATS.

The Leeds and Liverpool Canal Company are proprietors of the only canal having direct communication with Liverpool, and the length of the waterway within the City, exclusive of the locks which lead to the docks, is about three miles.

The number of inspections of Canal Boats during the year was 5,705, and the condition of the boats and their occupants as regards matters dealt with in the Acts and Regulations is indicated by the following information :—



Forty-eight boats, not registered by their present owners, were found to be used as dwellings. In 4 of these cases written notices were sent to the owners, and in 44, verbal notices were given to masters.

In 46 cases the boats were registered in compliance with the notices, in 1 the registration was not completed on December 31st, and 1 has not been seen since.

Twenty-three boats were found without certificates on board. Notices were sent to the owners in each case, and 22 were found abated, and 1 has not been seen since.

Twenty-nine were found not having the registered number painted on both sides of the boat. Notices were sent to the owners in each case, and the omission rectified in 28 cases. One has not been seen since.

In 186 cases infringements of the Acts and Regulations were found, caused by :—leaky decks (110), general leaky condition of boats (39), no doors to lockers (8), broken scuttle covers (2), defective ventilation (9), broken floors (10), defective stoves (2), defective pump (1), and no water-casks on board (5).

In 181 cases notices were sent to the owners, and in five cases verbal notice was given to the master. One hundred and seventy-four of the notices were complied with, and twelve have not been re-inspected.

In 20 cases defective second bulkheads were reported. Notices were sent in each case, and the defects were found remedied in 18 cases ; 2 of the boats have not been seen since.

In 60 boats the cabins required painting. Notices were sent to owners in each case. 52 of them were attended to, and 6 of the boats have not yet been seen again by the Inspector. Two of the notices have not yet expired.

Dirty cabins were reported in 9 cases. Six verbal notices were given to masters, and 3 written notices sent to the owners. In all cases the notices were complied with.

Informations were laid in 10 cases, for infringements of the Acts and Regulations, viz. :—causing unregistered boat to be used, 3 ; non-separation of sexes, 5 ; carrying offensive cargo, and not having a second bulkhead, 2.

In all of these cases fines were inflicted, varying from 5s. and 4s. 6d. costs, to 20s. and 4s. 6d. costs, and amounting to a total of £6 15s. 0d.

Only one case of infectious sickness, viz., Typhoid Fever, occurred on boats during the year. On receipt of the notification, the Inspector visited the canal and found that the boat had left for Blackburn with the patient on board. The Medical Officer of Health of the District was duly apprised of this.

The entire number of infringements of the Acts and Regulations referred to in the Report occurred on 249 boats, in several instances the offence being repeated on the same boat.

Thirty-six notices were sent to the School Board, of children living on canal boats and not attending any school.

The number of boats on the register is 631, of which 299 have been re-registered, viz. :—5 in 1884, 60 in 1885, 21 in 1886, 25 in 1887, 20 in 1888, 24 in 1889, 23 in 1890, 23 in 1891, 16 in 1892, 19 in 1893, 26 in 1894, 19 in 1895, and 18 in 1896.

Twenty-six boats have been removed from the register, as it was ascertained that 23 of them had been broken up, and 3 re-registered in other districts. It is probable that a considerably larger number of boats have been broken up, but in the absence of definite evidence of this, the boats remain on the register.

During the year, 28 new boats were registered, and 18 re-registered, on account of changes of owners. All boats re-registered in consequence of a change of owners, or the name of the boat being changed, retain their original numbers.

New certificates were issued to 4 boats, owing to structural alterations.

Copies of registration certificate were issued to the owners of 37 boats owing to the original ones being worn out.

There were 55 changes of masters reported, and the fact duly recorded on the register.





### THE AMBULANCE STAFF.

The following table shews the number of patients removed by Officers of the Ambulance Staff and the Hospitals to which they were taken :—

Netherfield Road.	Grafton Street.	Park Hill.	Brownlow Hill.	Mill Lane.	Priory Road.	Children's Infirmary.	Royal Infirmary.	Smithdown Road.
785	903	495	48	194	172	1 *	2 †	9

All cases of Smallpox and all cases of Typhus Fever, with very rare exceptions, are removed to Hospital, and a special Inspector is appointed to visit the house from which the patient has been removed, to ascertain whether any further sickness has developed. These inquiries are made at intervals of a day or two for one month, and any case of sickness, however trifling it may appear to be, is at once reported, and visited by a medical man. By these inquiries many cases of infectious sickness are discovered and removed to the hospital at the earliest possible stage of the disease, and often before any serious risk of infection has arisen. Without these inquiries, which have occasioned no inconvenience to anyone, the patients would have remained at home for a longer or shorter period, constituting centres of infection to the neighbourhood. The absence of friction indicates the care exercised by the Inspectors in carrying this system into execution.

On April 22nd, Margaret Flannery was fined £1 and costs for transmitting the infected clothing of a typhus patient from No. 107, Grafton Street, to a pawnshop, No. 95, Grafton Street.

### NOTICES TO MASTERS OF SCHOOLS.

In accordance with the arrangements made with the School Board, 5,203 postcards were sent to the Head Masters of the various schools, informing them that children from infected houses attended their schools. Similar information was sent to the School Board.

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\* Removed by request, from H.M.S. "Eagle."

† Removed by request, one from S.S. "Etruria," and one from a private house.



### THE DISINFECTING APPARATUS.

The number of articles disinfected at the various Apparatus during the year amounted to 63,587.

DATE. 1896.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	Number of Pieces of Wearing Apparel, &c.	Total Number of Articles.
January ..	303	267	2,338	1,286	4,194
February .. ..	392	375	2,825	2,168	5,760
March .. ..	321	294	2,422	3,240	6,277
April .. ..	304	343	2,963	1,027	4,637
May .. ..	464	390	3,373	2,296	6,523
June .. ..	383	299	2,926	2,271	5,879
July .. ..	309	252	1,956	354	2,871
August .. ..	516	402	3,353	933	5,204
September .. ..	459	388	2,851	731	4,429
October .. ..	579	455	3,860	790	5,684
November .. ..	569	461	3,876	1,445	6,351
December .. ..	540	389	3,407	1,442	5,778
Totals .. ..	5,139	4,315	36,150	17,983	63,587

The number of articles destroyed at the various Apparatus during the year amounted to 2,084, compensation being paid in conformity with the provisions of the Public Health Act.

DATE. 1896.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	Number of Pieces of Wearing Apparel, &c.	Total Number of Articles.
January ..	12	31	24	26	93
February .. ..	16	41	31	160	248
March .. ..	13	24	33	72	142
April .. ..	34	64	59	46	203
May .. ..	54	66	179	352	651
June .. ..	28	52	74	28	182
July .. ..	18	30	43	3	94
August .. ..	18	42	34	5	99
September .. ..	12	42	23	31	108
October .. ..	21	39	31	8	99
November .. ..	13	30	27	30	100
December .. ..	14	30	16	5	65
Totals .. ..	253	491	574	766	2,084

The collection, removal, disinfection and return of infected bedding has been carried on as hitherto by the Sanitary officers.

A considerable number of articles have been disinfected at the apparatus at the City Hospitals in addition to those mentioned above.

It has been found that in many instances in which compensation for clothing had been given in money to the poorer classes of people, that the money was spent in drink, and the people left without clothing. As a consequence of this, an arrangement was made with a firm of repute, to supply articles equivalent in value to those which had been destroyed, thus preventing an improper use of the money.

#### PRINCE'S DOCK MORTUARY.

The Mortuary at the Prince's Dock is for the reception of the bodies of persons who have been drowned, killed, &c., and over which the Coroner has to hold inquests. Bodies are taken there by the police, and when it may be necessary to make post-mortem examinations, any medical gentleman may have the assistance of an Inspector on sending a communication to 54, Gascoyne Street.

BODIES REMOVED TO THE PRINCE'S DOCK MORTUARY.	
Number from River.	Number from City.
7	157

#### REMOVALS TO MORTUARIES ON MEDICAL CERTIFICATES OR ON MAGISTRATES' ORDERS.

Bodies Removed to Mortuaries.										
Green Lane.	Lark Lane.	Waver-tree.	Smithdown Road.	St. Martin's.	Mill Road.	Anfield.	Belmont Road.	Park Hill.	Netherfield Road.	Walton Village.
5	6	4	1	3	..	..	2	..	..	3

The Caretaker of St. Martin's Mortuary is temporarily provided with a residence in Eldon Place, and plans for the re-construction of the Mortuary are in course of preparation.

#### CREMATORIUM.

A Crematorium has been erected in Anfield Cemetery, and the ancient means of disposal of the dead by cremation, which is again finding favour in many important centres of population throughout Europe, may be resorted to here.



CITY BURIAL GROUNDS AND GRAVEYARDS.

Interments in some of the old City Graveyards are still permitted, and much ingenuity is displayed in storing away the dead in the limited space available. It is fortunate that restrictions are placed upon these interments, and that a certain space and depth are requisite before the grave can be used, for the injurious effects of the decay of human bodies in the vicinity of dwellings cannot be doubted.

The number of interments requiring supervision by the Sanitary officers is diminishing year by year. This year the attention of the Sanitary officer was required in 52 cases, against 70 in 1895.

In accordance with an instruction of the Health Committee the Medical Officer reported early in the year upon the subject of intramural burials in Liverpool.

There can be no doubt that the places, as well as the methods of interment, have been in the main dependent upon custom, sentiment and convenience. The subject is one to which little, if any, unbiassed consideration is given by the public, as it is forced upon the attention at a time when the judgment is clouded by sentiments of sorrow and affection, and as a consequence the sanitary features involved are thrust out of sight. It is owing to this that public opinion has done nothing to help sanitary authorities in their endeavours to ensure that the disposal of the dead shall be effected without the probability of injury to the living.

Interments under certain conditions are still permitted in eleven burial grounds in Liverpool viz. :—

St. James' Cemetery,	St. James' Road,
Ancient Chapel,	Park Road,
St. Mary's Cemetery,	Walton Road,
Necropolis,	West Derby Road,
St. George's Church,	Heyworth Street,
St. Mary's Church,	Edgehill,
St. Anne's,	Overbury Street,
Jewish Cemetery,	Deane Road,
Unitarian Chapel,	Renshaw Street,
St. Michael's,	Upper Pitt Street,
St. James' Church,	St. James' Place.

The Home Office places certain restrictions upon the use of some of these.

The numbers of applications to the Medical Officer for permission to inter in City Graveyards, where such application is necessary, have during the last five years been as follows : —

1891	...	...	...	64
1892	...	...	...	69
1893	...	..	...	42
1894	...	...	...	58
1895	...	...	...	56

The largest number of interments appear to take place at the Necropolis. No notice is required to be sent to the Sanitary Department when these interments take place, but occasional visits are made to this burial ground.

Here there is an arrangement of tiers, separated by a course of flagging, and with brickwork between each coffin. The walls between the vaults are  $4\frac{1}{2}$  inches in thickness, and a stone flag covers over the top course of coffins, about 2 feet 6 inches below the surface of the ground.

The vaults contain about 36 coffins, and it is probable, that within an area 10 yards square, there will be over 300 bodies of adults and children.

Interments in this greatly over-crowded graveyard not only take place in family graves and vaults, but new graves are also being opened. The approximate number of interments (not including stillborns) which have taken place in the cemetery since it was opened is 82,341.

The number of interments during each of the last five years is as follows :—

1891	...	...	...	591
1892	...	...	...	487
1893	...	...	...	482
1894	...	...	...	343
1895	...	...	...	352

There is said to be accommodation for 2,160 more bodies, besides graves already sold, but which have not yet been fully utilised.

The inhabitants of the houses abutting on the Necropolis have, as a whole, occupied them but a short time. Many of them complain of offensive smells, which they believe come from the cemetery.



In many instances the occupiers also state that their houses are infested with mice of a peculiar light fawn colour, which they believe come from the Cemetery.

Some light may be thrown upon the probable condition of the subsoil in this city graveyard, from the following extract from a report by Inspector Beck, of the City Engineer's Department, who has been 35 years on that district. It will be noticed from this report that the offensive condition described was in that part to which material from the burial grounds would be most likely to gravitate. It was not found in the sewer nearer the surface. The Inspector says :—

“ The sewer in West Derby Road is what is known as a rock  
“ sewer, and is cut in the sandstone. It is about 14 or 15 feet  
“ below the surface, and is between two and three feet in width.  
“ This sewer was undergoing reconstruction in 1889. The bottom  
“ was very much worn, and ‘ liners ’ were to be put in. The top is  
“ arched over with brick, and the sides were to be cased.

“ When opposite to the Necropolis in West Derby Road, a large  
“ quantity of black jelly was found adhering to the side of the  
“ sewer nearest the Necropolis, the other side was the natural  
“ colour of the rock. When this material was touched or pricked,  
“ it emitted a frightful stench. The opinion of the other men and  
“ myself was that it came from the burial ground. One of the men  
“ at work was taken seriously ill, and died while the work was in  
“ progress. The other men objected to work there. The jelly was  
“ scraped off, and several coats of cement put on to try and keep  
“ the stuff from oozing through.

“ There is also another sewer in West Derby Road, which runs  
“ above the preceding one at a slight angle. This sewer is  
“ only about 9 feet below the surface, and is supposed to drain the  
“ burial ground. The vaults in the burial ground are about 14 or  
“ 15 feet deep. This sewer is of similar construction to the other  
“ one, and was reconstructed at the same time. None of the jelly  
“ material was found in this sewer. None of the material was  
“ found in the Everton Road sewer, which is about 9 feet below the  
“ surface.

“ The jelly was only found in that particular length of the sewer  
“ outside the Necropolis.”



St. Mary's Cemetery, Kirkdale, is a proprietary cemetery, in which interments are restricted by the proprietors to family graves. No new graves are opened. The area of the cemetery is a little over 2 acres, and a part of this area has been only used superficially, *i.e.*, for the interment of one body, whilst in other portions there are common graves in which large numbers of bodies have been placed. There is no memorial stone to indicate the number so interred, and the records have been lost.

It is considered by the proprietors that about 200 square yards of unused ground, nearest to the roadway, is still available for burials.

About 250 bodies have been interred during the last five years, all in sold graves, and in addition to these a large number of stillborn infants have also been buried. These amounted to 139 in 1893, and 136 in 1895.

It would appear that the proprietors are not unwilling that this burial ground should, under certain conditions, be turned to other uses.

New graves are still opened at St. James' Cemetery; the Ancient Chapel Grounds, Park Road; St. Mary's Edgehill; The Jewish Cemetery, Deane Road, without notice being sent to the Sanitary Department.

Interments also take place at St. George's, Heyworth Street, and St. Anne's Overbury Street, without notice being given.

At the Jewish Cemetery, Deane Road, the graves are opened to a depth of 5 feet 6 inches, and only one body placed in each grave.

St. James' Cemetery is 10 to 11 acres in area, the approximate number of bodies interred is 50,300, and the average of the last five years is 395. There is said to be room for 2,400 more bodies, distributed in graves throughout the cemetery, having depth for one to five interments.

Many of the city graveyards have been appropriately dealt with by the Sanitary Authority, laid out into gardens, and converted into attractive and suitable recreation grounds. There can be no more striking contrast than between the graveyards so dealt with, and the city graveyards still in use. These latter are in appearance sufficiently dismal, consisting in the main of long rows of flat stones, often cracked



and uneven by subsidence of the soil beneath, many with illegible inscriptions, others, recording the names of 16 persons upon one slab, testify to the great amount of putrescible matter lying beneath. Many of the graves are sunken, and headstones cracked and leaning at all angles. In instances coming under his notice in which municipal necessities have led to absorption of parts of a city churchyard, the Medical Officer has observed that commonly the remains of more human beings are found beneath a single tombstone than the record on the tombstone indicates.

Where many circumstances combine, as in cities, to affect injuriously the public health, it may be difficult, or even impossible, to prove by statistics the precise influence exercised by each, individually, but all conditions, which, as a matter of common knowledge are liable to be prejudicial, should be avoided.

From the report of the Royal Commission appointed some years ago to enquire into the practice of intramural interments, the following may be quoted :—

“As there appear to be no cases in which the emanations from  
 “human remains in an advanced stage of decomposition are not of  
 “a deleterious character, so there is no case in which the liability  
 “to danger should be incurred either by interment (or by entomb-  
 “ment in vaults, which is the most dangerous) amidst the dwellings  
 “of the living, it being established as a general conclusion, from  
 “which no adequate grounds of exception have been proved—That  
 “all interments in towns, where bodies decompose, contribute to  
 “the mass of atmospheric impurity, which is injurious to the  
 “public health.”

It may be observed that one great object in paving courts and alleys and the poorer back streets with sets, or in some other impermeable way, is to prevent the pollution of the subsoil by materials which may be thrown upon the surface. The importance and utility of this no one questions, but in marked contrast to such an object, human remains, no less dangerous nor offensive, are placed underground, within a stone's throw of the habitations of the living.

## CHAP. IV. THE SCAVENGER.

Throughout the whole of the year, but more especially during the summer months, the streets and public places are covered with a mass of filth, which is not only a nuisance to the public, but also a source of danger to the health of the community. The filth is not only a nuisance to the public, but also a source of danger to the health of the community. The filth is not only a nuisance to the public, but also a source of danger to the health of the community. The filth is not only a nuisance to the public, but also a source of danger to the health of the community.

The public should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places.

It is the duty of the public to keep the streets and public places clean, and to keep the streets and public places clean, and to keep the streets and public places clean.

## CLEANSING AND SCAVENGING

The public should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places.

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A public scavenger is a person who is employed to keep the streets and public places clean, and to keep the streets and public places clean, and to keep the streets and public places clean.

The public should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places. The public should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places, and should be kept informed of the state of the streets and public places.



CLEANSING AND SCAVENGING.

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Throughout the whole of the year, but more frequently during the Summer months, courts and alleys with covered entrances were washed by means of hose pipes, with markedly beneficial results. The surface of certain streets in the lower districts of the City, as well as certain streets in which the traffic is heavy, were also washed from time to time during the hot and dry weather, with very great benefit.

This practice should be largely extended, and all cab ranks and tramway and omnibus stations should be thoroughly well hosed with water. In public and private conveniences the increased use of water is attended with great advantage, but even now there are certain places of this character where a stinted and niggardly water supply is eked out, and recourse is had to smelling substances such as camphor, carbolic acid, soap, &c., with a view to disguise the smells arising from the decomposition of urine. The free use of water would obviate this practice, which is not only offensive, but mischievous, inasmuch as the deodorants disguise the conditions which result from want of cleanliness, but in no way counteract the consequences of those conditions.

The domestic use of water for baths and for sanitary purposes should also be largely increased, and the public would do well, having regard to the inadequacy of the two-gallon water-closet cistern, to flush the closets as frequently as possible, and whenever an opportunity presents itself.

A parsimonious restriction in the use of water will inevitably result in disease.

Mr. Richard S. Reynolds, M.R.C.V.S., the Veterinary Superintendent, has kindly supplied the following tables, which indicate the magnitude of the important operations carried out by the staff under his control.

TABLE No. 1.

## NIGHT SERVICE FOR EMPTYING MIDDENS, COURT ASHPITS, AND SOME OFFICE ASHPITS.

Consequent upon the gradual extinction of middens, either by entire demolition or by the conversion of them into dry ashpits, the operations of the night service are now confined to the removal of domestic and office ashes from the neighbourhood of the Exchange, where it would be impracticable to perform the necessary work during business hours.

Notices Received.	Middens, &c., Emptied.	Loads of Nightsoil and Ashes.						Nightly average Working Staff.				Analysis of Work.		Average contents of each Midden.
		Number Removed.			Where Deposited.			Midden Men.	Wharf Men.	Carts.	Horses.	Loads per Man per Night.	Loads per Cart per Night.	
		Manure.	Ashes.	Total.	Chisen- hole Street.	Sandhills.	River Craft Dock.							
897	3,858	..	5,135	5,135	4,673	..	462	7.4	1.	3.5	3.5	2.2	4.6	1.3



**TABLE No. 2.**  
**SERVICE FOR THE COLLECTION AND REMOVAL OF DRY ASPHIT ASHES.**

Notices Received.	Ashpits Emptied.	Loads of Dry Ashes.								Average Daily Working Staff.			Analysis of Work.		Average contents of each Ashpit.
		Number Removed.	Where Deposited.							Asphalt Men.	Carts and Wagons.	Horses.	Loads per Man per Day.	Loads per Cart per Day.	
Chisenhale Street.	Sandhills.		River Craft Dock.	Waverree.	Rathbone Road Destructor.	Smithdown Road Destructor.	Rubbish Tips, &c.								
2,116	648,541	89,876	18,050	19,288	21,950	21	6,416	6,027	18,124	117.2	86.3	88.2	2.4	3.3	.14

It will be observed that the number of notices received to empty ashpits is only .3 per cent. of the total number of ashpits actually emptied. The number of brick ashpits within the old City and Added Areas is approximately 65,000, and the figures show that the average number of times each ashpit was emptied was 10.4. From the 65,000 pits 89,876 loads were removed, therefore, the average contents at each time of emptying was only .14 of a load.

TABLE No. 3.

## SERVICE FOR THE COLLECTION AND REMOVAL OF BELL CART ASHES.

The bell cart service is one of the greatest importance, as it provides the means for the daily removal of domestic refuse from shops, business premises, and dwellings, which have not any convenience for the storage of ordinary household waste except from day to day. The service is also one demanding, not only regular attention as regards daily observance, but it must be conducted at certain hours of the morning to suit the convenience of the tenants.

It is an exceedingly important service from a sanitary point of view, and householders should avail themselves of its advantages to the fullest.

Loads Removed.	Where Deposited.						Carts Employed.
	Chisenhale Street.	Sandhills.	River Craft Dock.	Waverfree Siding.	Rathbone Road Destructor.	Smithdown Road Destructor.	Rubbish Tips.
20,870	8,940	2,315	6,537	1	705	1,233	1,139
							19.1



**TABLE No. 4.**  
**SERVICE FOR FLUSHING AND CLEANSING TROUGH WATER CLOSETS.**

Number of Urinals.	Number of Trough Water Closets.	Average Working Staff.	
		Trough W. C. Men.	Urinal Men.
250—718 Stalls.	2,419	40.4	12.6

The regular and frequent flushing of trough water closets has a material influence upon the maintenance of public health, more especially so as this form of closet has been found necessary for the tenants of confined and densely-populated portions of the City. During the Summer months a large number of the urinals and the major proportion of the trough water closets are cleansed and disinfected twice daily.

During the remaining part of the year each receives daily attention.

TABLE No. 5.

## SERVICE FOR CLEANSING, COLLECTION, AND REMOVAL OF REFUSE FROM STREETS, COURTS, PASSAGES, &amp;c.

Not less than 100,174 loads of sweepings from the streets were removed during the year. There is included in this quantity some proportion of ashpit and domestic refuse, since there are certain quarters of the City where the people make a practice of throwing the house refuse upon the street surface, rather than go to the trouble of conveying it to the stall provided for its reception.

Many of the back streets are strewn with such material, necessitating the frequent sweeping of this class of street by barrowmen going over the areas more than once daily, and the refuse is removed with the ordinary street sweepings.

Loads of Street Sweepings Removed.							Average Daily Staff.				Average Number of Loads Removed Daily per Cart.	
Total Number Removed.	Where Deposited						Scavengers.	Sweeping Machines.		Carts.		Horses.
	Chiswell Street.	Sandhills	Waverley.	River Craik Dock.	West Derby District.	Toxteth Park District.		Refuse on New Meadow.	Day.			
100,174	47,269	11,418	3,311	19,484	1	11	18,680	336.5	7.6	17.	80.5	3.9









TABLE No. 8.

REMOVAL OF GARBAGE FROM ABATTOIR.

Loads Removed.	Where Deposited.			Carts employed Daily.
	Chisenhale Street.	Sand- hills.	River Craft Dock.	
1,467	1,059	67	341	1·2

The removal of the Abattoir garbage and horse and cow manure, although small in amount, is of advantage to the department in enabling it to more economically dispose of a certain quantity of refuse which, without admixture with this material, would be unsaleable, and entail a considerable additional cost for final disposal.

TABLE No. 9.

## REMOVAL OF HORSE, COW, AND FOWL MANURE.

GRAND TOTAL.				CHISENHALE STREET.				RIVER CRAFT DOCK.				SANDHILLS.				WAVERTREE.			
Horse.	Cow.	Fowl.	Total.	Horse.	Cow.	Fowl.	Total.	Horse.	Cow.	Fowl.	Total.	Horse.	Cow.	Fowl.	Total.	Horse.	Cow.	Fowl.	Total.
740	653	171	1,564	403	289	171	863	321	363	..	684	6	1	..	7	10	..	..	10



TABLE No. 10.

## DESPATCHES OF MANURE AND REFUSE.

	Saleable Manure.			Unsaleable Refuse.						Grand Total in Tons.	Average Daily Staff.			
	Night Soil.	Sweepings.	Mixture.	Total.	Contractors.	Farmers.	Depôts.	Sea.	Destructor.		Total.	Inspectors and Foremen.	Labourers.	
Chisenhale St., by Flats..	..	2,208	4,992	7,200	4,272	50,304	96	..	..	54,672	}	1.		
Sandhills, do. ....	..	..	..	..	1,152	5,376	4,560	..	..	11,088			}	22.5
Do., by Rail ..	..	1,328	124	1,452	..	8,472	..	..	..	8,472				
Wavertree do. ....	..	2,912	..	2,912	..	128	..	..	..	128	..	2.		
Chisenhale Street and Sandhills, <i>via</i> Stanley D'k	..	..	..	..	..	..	..	..	..	..	}	..		
per "Alpha" .....	..	..	..	..	..	..	..	1,239	..	1,239			}	2.7
per "Beta" .....	..	..	..	..	..	..	..	68,430	..	68,430				
River Craft Dock.....	..	1,717	3,798	5,515	..	995	..	..	..	995	}	6.		
Do., per "Alpha" .....	..	..	..	..	..	..	..	71,393	..	71,393			}	54.8
Do., per "Beta" .....	..	..	..	..	..	..	..	9,470	..	9,470				
Chisenhale Street Wharf.	..	..	..	..	..	..	..	25,973	25,973	25,973	..	..		
Rathbone Road .....	..	..	..	..	..	..	..	..	6,231	6,231	..	..		
Smithdown Road .....	..	..	..	..	..	..	..	..	7,126	7,126	..	..		
	..	8,165	8,914	17,079	5,424	65,275	4,656	150,532	39,330	265,217	2.	88.		

The foregoing Table shows that in all not less than 282,296 tons of town refuse have been disposed of by the various means available for the purpose. Large as the total is, it does not represent the quantity actually collected and carted to the Wharves, for during the Winter months a large proportion of the street sweepings consists of a quantity of water, which is drained out before it is dispatched from the Wharves and Railway Sidings.

TABLE No. 11.

Deals with the horses employed on the various works belonging to the Health Committee. Among the stud, the percentage of mortality was 3·3, the number purchased for renewal was 54, and the percentage of ineffectives 4·3.

## HORSES.—DAILY AVERAGE NUMBER.

Hired.	Corporation Horses.				Supplied for various Works.																								
	Number.	Effective for Work.	Percentage of Ineffectives.	At Work every Sunday.	Scavenging.												City Engineer.												
					Night Ash Removal.	Dry Ash Removal.	Sundry Ash Tips.	Bell Ash Removal.	Street Scavenging.	Sweeping Machines, Day.	Sweeping Machines, Night.	Yard, Stables, Stores, Wharves, &c.	Market.	Superintendent.	Watering.	Watering before Street Machines.	Carr Hall.	Messengers.	Abattoir.	Paving.	Sewers Cleansing.	Brownlow Street.	Watering before Steam Roller.	Cannals.	Parks.	May Day and Not Ordered.	Carting Salt.	Disinfecting Vans.	
34.	296·5	284	4·3	38·7	3·4	86·3	1·9	19·1	80·5	7·6	17	4·4	1·3	2·4	17·4	4·5	4	4	4	1·2	34	7·8	1	2·1	2·7	1	2·2	—	13·1

New Horses.		Number Disposed of			
Purchased.	Bred.	Died.	Destroyed.	Percentage of Mortality.	Sold.
54	2	9	1	3·3	34









Name of the vessel		Date		Place		Remarks	
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
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1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	

# INSANITARY PROPERTY.

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## INSANITARY PROPERTY.

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INSANITARY PROPERTY.

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Early in the year a number of houses unfit for human habitation were reported upon by the Medical Officer, and duly presented for demolition, by the Grand Jury.

The report shewed that the total number of houses dealt with, which were of the usual back-to-back court type, was 240; 160 of them were occupied, and 80, or one-third, were untenanted. The population of these houses was 764.

During the three years 1893 to 1895, zymotic disease of various kinds had appeared in these houses, and included scarlet fever, typhoid fever, typhus fever and diphtheria.

Taking the property as a whole, the death rate during the last five years averaged 48·4 per 1,000, the death rate for the whole City during that period being 26 per 1,000.

Taking the streets separately, the populations are almost too small in number to base an average upon, but the actual figures show that the rate varies from 31·7 in Knight Street to 72·8 in Birkett Street; Gascoyne Street and Ford Street being respectively 41 and 51 on the average of five years.

As regards repair, the condition of the property generally is one of dilapidation and ruin; the large proportion of empty houses is owing to their advanced stage of decay, which has driven out even the poorest, leaving the houses abandoned and derelict.

It would be impossible to restore property in such a condition to a habitable state, even if the original structure had been all that could be desired. The owners are aware of this, and neglect even the simplest sanitary requirements. During the last two years no less than 202 notices were issued from the Sanitary Department upon the owners to abate nuisances of a more or less serious character, in connection with their property, and in addition to these, during the same period, notices were sent 26 times, under the Public Health Act, to remedy nuisances arising from filth and dirt alone.

There need be no apprehension that the removal of these insanitary centres will lead to overcrowding elsewhere, for there is ample accommodation for those displaced within a short radius of the presented areas, in many cases better, in no cases worse, than the houses which they now occupy.

Thus, within a quarter of a mile radius from the Scarlett Street group there are upwards of 600 such empty houses, and within a stone's throw of the Knight Street group there are upwards of 40 such empty houses. Within a radius of 300 yards from Gascoyne Street there are 97 such empty houses, and within a similar radius of Maguire and Ford Streets there are 125 such houses.

The benefit to the City of the removal of these insanitary slums becomes more and more apparent as the work proceeds, and there are few sanitary operations attended with more beneficial results than this undoing of the errors of bygone years, of a period when no building laws were in operation to control the erection of buildings intended for human habitation.

### THIRTEENTH PRESENTMENT.

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The situation of the houses dealt with in the presentment is as follows :—

The court known as No. 4 court in KNIGHT STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 4 and 6 in the said No. 4 court.

The dwelling-houses numbered 14 and 16 in KNIGHT STREET aforesaid, contiguous to No. 4 court in the said street.

The court known as No. 6 court in KNIGHT STREET aforesaid.

The dwelling-houses numbered 1 and 2 in the said No. 6 court.

The dwelling-houses numbered 18 and 20 in KNIGHT STREET aforesaid, contiguous to No. 6 court in the said street.

The court known as No. 8 court in KNIGHT STREET aforesaid.

The dwelling-houses numbered 1, 2, 3 and 5 in the said No. 8 court.

The dwelling-houses numbered 22 and 24 in KNIGHT STREET aforesaid, contiguous to No. 8 court in the said street.

The dwelling-house numbered 13 in BACK KNIGHT STREET in the City aforesaid, contiguous to No. 8 court in Knight Street.

The court known as No. 10 court in KNIGHT STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5 and 6 in the said No. 10 court.

The dwelling-houses numbered 26 and 28 in KNIGHT STREET aforesaid, contiguous to No. 10 court in the said street.



The dwelling-house numbered 15 in BACK KNIGHT STREET in the City aforesaid, contiguous to No. 10 court in Knight Street.

The court known as No. 12 court in KNIGHT STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5 and 6 in the said No. 12 court.

The dwelling-houses numbered 32, 34 and 36 in KNIGHT STREET aforesaid, contiguous to No. 12 court in the said street.

The dwelling-house numbered 17 in BACK KNIGHT STREET in the City aforesaid, contiguous to No. 12 court in Knight Street.

The dwelling-house numbered 62 in ROSCOE STREET in the City aforesaid, contiguous to No. 12 court in Knight Street.

The court known as No. 11 court in GASCOYNE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 11 court.

The dwelling-houses numbered 33, 35 and 37 in GASCOYNE STREET aforesaid, contiguous to No. 11 court in the said street.

The court known as No. 13 court in GASCOYNE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 13 court.

The dwelling-houses numbered 39, 41 and 43 in GASCOYNE STREET aforesaid, contiguous to No. 13 court in the said street.

The court known as No. 15 court in GASCOYNE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 15 court.

The dwelling-houses numbered 45, 47, 49 and 51 in GASCOYNE STREET aforesaid, contiguous to No. 15 court in the said street.

The court known as No. 17 court in GASCOYNE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6 and 7 in the said No. 17 court.

The court known as No. 2 court in GASCOYNE STREET aforesaid.

The dwelling-houses numbered 3, 4, 5 and 6 in the said No. 2 court.

The court known as No. 2 court in FORD STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 2 court.

The dwelling-houses numbered 8 and 9 in FORD STREET aforesaid, contiguous to No. 2 court in the said street.

The court known as No. 3 court in FORD STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 3 court.

The dwelling-houses numbered 10 and 11 in FORD STREET aforesaid, contiguous to No. 3 court in the said street.

The court known as No. 5 court in FORD STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 5 court.

The dwelling-houses numbered 18 and 19 in FORD STREET aforesaid, contiguous to No. 5 court in the said street.

The court known as No. 6 court in FORD STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6 and 7 in the said No. 6 court.

The dwelling-houses numbered 20 and 21 in FORD STREET aforesaid, contiguous to No. 6 court in the said street.

The court known as No. 6 court in MAGUIRE STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 6 court.

The dwelling-house numbered 16 in MAGUIRE STREET aforesaid, contiguous to No. 6 court in the said street.

The court known as No. 8 court in MAGUIRE STREET aforesaid.

The dwelling-house numbered 1 in the said No. 8 court.

The dwelling-house numbered 18 in MAGUIRE STREET aforesaid, contiguous to No. 8 court in the said street.

The court known as No. 10 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 1, 2 and 3 in the said No. 10 court.

The dwelling-house numbered 20 in MAGUIRE STREET aforesaid, contiguous to No. 10 court in the said street.

The court known as No. 16 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 16 court.



The dwelling-houses numbered 32 and 34 in MAGUIRE STREET aforesaid, contiguous to No. 16 court in the said street.

The court known as No. 18 court in MAGUIRE STREET aforesaid.

The dwelling-house numbered 2 in the said No. 18 court.

The court known as No. 20 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 1 and 2 in the said No. 20 court.

The dwelling-house numbered 40 in MAGUIRE STREET aforesaid, contiguous to No. 20 court in the said street.

The court known as No. 22 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 2, 3, 4, 5 and 6 in the said No. 22 court.

The dwelling-house numbered 42 in MAGUIRE STREET aforesaid, contiguous to No. 22 court in the said street.

The court known as No. 24 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 2 and 3 in the said No. 24 court.

The dwelling-house numbered 46 in MAGUIRE STREET aforesaid, contiguous to No. 24 court in the said street.

The court known as No. 30 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 1 and 4 in the said No. 30 court.

The dwelling-houses numbered 50 and 52 in MAGUIRE STREET aforesaid, contiguous to No. 30 court in the said street.

The court known as No. 34 court in MAGUIRE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 34 court.

The dwelling-houses numbered 60 and 62 in MAGUIRE STREET aforesaid, contiguous to No. 34 court in the said street.

The court known as No. 10 court in BIRKETT STREET, in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 10 court.

The dwelling-houses numbered 48 and 50 in BIRKETT STREET aforesaid, contiguous to No. 10 court in the said street.

The court known as No. 12 court in BIRKETT STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 12 court.

The dwelling-houses numbered 52, 54 and 56 in BIRKETT STREET aforesaid, contiguous to No. 12 court in the said street.

The dwelling-houses numbered 7, 9, 11 and 13 in SCARLETT STREET, in the City aforesaid, contiguous to No. 12 court in BIRKETT STREET.

The court known as No. 1 court in MANSFIELD STREET, in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 1 court.

The dwelling-houses numbered 25, 27, 29 and 31 in MANSFIELD STREET aforesaid, contiguous to No. 1 court in the said street.

The court known as No. 3 court in MANSFIELD STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 3 court.

The dwelling-houses numbered 33 and 35 in MANSFIELD STREET aforesaid, contiguous to No. 3 court in the said street.

The court known as No. 5 court in MANSFIELD STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 5 court.

The dwelling-houses numbered 37, 39 and 41 in MANSFIELD STREET aforesaid, contiguous to No. 5 court in the said street.

The dwelling-houses numbered 1, 3 and 5 in SCARLETT STREET, in the City aforesaid, contiguous to No. 5 court in MANSFIELD STREET.

In addition to the foregoing dealt with by presentment, the Medical Officer of Health certified that the following premises were unfit for human habitation and ought to be demolished. These reports were laid before the Council and referred to the Insanitary Property Committee :—

The court known as No. 1 court in BOSTOCK STREET, in the City of Liverpool.

The dwelling-houses numbered 1 and 3 in the said No. 1 Court.



The dwelling-house numbered 19 in ARLEY STREET, in the said City.

The court known as No. 15 court in RACHEL STREET, in the said City.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6 and 7 in the said No. 15 court.

The dwelling-houses numbered 77 and 79 in RACHEL STREET aforesaid, contiguous to No. 15 court in the said street.

The court known as No. 7 court in CIRCUS STREET, in the said City.

The dwelling-houses numbered 2, 4, 6 and 8 in the said No. 7 court.

The court known as No. 2 court in DEXTER STREET, in the said City.

The dwelling-houses numbered 1 and 2 in the said No. 2 court.

The court known as No. 5 court in WOLFE STREET, in the said City.

The dwelling-houses numbered 1 and 2 in the said No. 5 court.

The dwelling-house numbered 167 in WOLFE STREET aforesaid, contiguous to No. 5 court in the said street.

The court known as No. 7 court in WOLFE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 7 Court.

The dwelling-houses numbered 169 and 171 in WOLFE STREET aforesaid contiguous to No. 7 court in the said street.

The court known as No. 9 court in WOLFE STREET aforesaid.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 9 court.

The dwelling-houses numbered 173 and 175 in WOLFE STREET aforesaid, contiguous to No. 9 court in the said street.

The dwelling-house numbered 31 in CARTL STREET, in the said City.

The dwelling-house numbered 2 in FISHER STREET, in the said City.

The dwelling-house numbered 29 in HUGHSON STREET, in the said City.

Two houses which had been converted into stables were dealt with under the Housing of the Working Classes Act, as this Act furnished a convenient means of removing the premises which obstructed the light and ventilation of other dwellings, and prevented proper measures from being carried into effect for making other houses sanitary.

The situation of the premises in question was Nos. 36 and 38, Maguire Street.

The City Engineer has kindly supplied the following table :—

#### INSANITARY PROPERTY.

Insanitary Property purchased 1896.			Insanitary Property demolished 1896.		
No. of houses included in thirteenth presentment	No. of houses purchased by Insanitary Property Committee included in presentments referred by Council to Committee.	Total.	No. of houses included in thirteenth presentment.	No. of houses demolished by Insanitary Property Committee included in presentments referred by Council to Committee.	Total.
91	52	143	92	45	37





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## CITY HOSPITALS.

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## INFECTIOUS DISEASE.

Table shewing the cases of Infectious Disease coming under the notice of the Medical Officer of Health during 1896, including those reported under the Notification Act.

Year—1896.	Fever.				Small Pox.	Scarlatina.	Measles.	Diphtheria	Membranous Group.	Puerperal Fever.	Erysipelas.	TOTAL.
	Typhus.	Typhoid.	Simple.	Relapsing.								
January ..	15	50	7	..	..	260	396	41	10	3	109	891
February	11	44	1	..	..	232	362	29	8	6	116	809
March ..	15	50	3	..	..	224	509	38	8	5	101	953
April ..	77	68	5	..	..	170	269	23	6	5	107	730
May... ..	53	88	11	..	..	173	520	46	7	4	138	1,040
June ..	20	95	16	..	..	243	311	27	3	2	111	828
July... ..	24	111	5	1	..	205	117	43	6	3	95	610
August ..	23	141	8	1	1	316	26	27	6	3	95	647
September	12	108	3	..	1	475	53	39	8	6	119	824
October ..	19	128	7	..	1	545	113	48	10	6	122	999
November	20	116	5	..	3	402	130	44	7	7	138	872
December	16	64	2	2	2	339	124	39	10	9	128	735
TOTAL ..	305	1,063	73	4	8	3,584	2,930	444	89	59	1,379	9,938
Removed to Hospital	298	539	18	..	8	1,589	138	107	13	7	297	3,014

The number of patients removed to hospital includes those taken to General Hospitals as well as those taken to the City Hospitals.

# THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

The number of notifications received by the Medical Officer under the above Act, during the year was 7,209, as follows :—

			<u>1896.</u>		<u>1895.</u>		<u>1894.</u>
January	...	...	466	...	589	...	663
February	...	...	493	...	475	...	585
March	...	...	454	...	445	...	753
April	...	...	484	...	401	...	395
May	...	...	517	...	522	...	651
June	...	...	523	...	460	...	645
July	...	...	517	...	396	...	582
August	...	...	644	...	493	...	634
September	...	...	770	...	497	...	723
October	...	...	933	...	535	...	864
November	...	...	774	...	611	...	730
December	...	...	634	...	484	...	577
			<u>7,209</u>	...	<u>5,908</u>	...	<u>8,002</u>

The diseases were specified as follows :—

			<u>1896.</u>		<u>1895.</u>		<u>1894.</u>
Smallpox	...	...	11	...	142	...	199
Scarlet Fever	...	...	3,610	...	2,636	...	4,034
Typhoid	„	...	1,122	...	1,301	...	1,445
Typhus	„	...	185	...	111	...	200
Continued	„	...	120	...	102	...	168
Relapsing	„	...	5	...	2	...	1
Fever	...	...	26	...	30	...	47
Puerperal Fever	...	...	67	...	61	...	68
Diphtheria	...	...	492	...	289	...	313
Membranous Croup	...	...	95	...	78	...	68
Erysipelas	...	...	1,476	...	1,156	...	1,457
Choleraic Diarrhoea	...	...	—	...	—	...	1
English Cholera	..	...	—	...	—	...	1
			<u>7,209</u>	...	<u>5,908</u>	...	<u>8,002</u>



## NUMBER OF CASES REPORTED AND NUMBER REMOVED TO HOSPITALS, 1889-1896.

	SMALLPOX.		SCARLET FEVER.		TYPHOID.		TYPHUS.		MEASLES.	
	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.
1889.....	9	8	1,832	533	670	302	158	124	3,175	104
1890.....	2	2	3,520	938	506	296	103	87	4,013	152
1891.....	21	21	1,176	448	588	350	175	156	2,262	160
1892.....	177	177	1,554	603	699	345	73	70	3,376	150
1893.....	75	73	3,538	1,380	1,396	728	183	168	2,316	94
1894.....	229	226	3,963	1,415	1,350	745	325	312	2,494	122
1895.....	130	127	2,710	1,039	1,306	662	162	158	3,462	93
1896.....	8	8	3,584	1,589	1,063	539	305	298	2,930	138

## CITY HOSPITALS.

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The returns from the City Hospitals show that the public have very largely availed themselves of the advantages which they offer, and it will be seen in the case of scarlet fever a larger proportion of cases of this disease have been treated in hospital during last year than in any previous year.

Every case of smallpox was isolated in hospital, and, with seven exceptions, all cases of typhus fever.

The much-needed additions and improvements at the Netherfield Road Hospital are approaching completion, and it may be hoped that at no distant date further provision will be made for measles.

It is interesting to note that patients suffering from typhoid fever have a far better chance of recovery in hospital than when treated at home.

There appears to be a general feeling that the hospitals receive an undue proportion of specially severe cases, sent in because they have become too great a tax upon the strength and resources of the relatives, who had at first hoped to be able to nurse them : removal thus rendered necessary by development of serious symptoms, takes place at a time when it must necessarily be prejudicial to the patient's chances of recovery.

The rates of mortality have varied somewhat in the different Hospitals. This circumstance is owing to the fact that the greater number of patients in one Hospital were under 10 years of age, the majority of these being below 5 years. These are age periods of great mortality in Scarlet Fever.

Another Hospital, on the other hand, received a large number of Scarlet Fever patients between the ages of 10 and 20 years, a period when mortality is low.



The following tables, prepared by the Medical Staff of each Hospital show the number of patients, the nature of the illness, and the results, at each of the five City Hospitals during the year 1896 :—

CITY HOSPITAL NORTH, NETHERFIELD ROAD.

DISEASES.	Remaining Dec. 31st, 1895.	Admitted During 1896.	Total under Treatment 1896.	Discharged to Homes.	Transferred to Parkhill Convalescent.	Remaining Dec. 31st, 1896.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	52	451	503	152	279	50	3	22	4·8
Typhus Fever .. ..	21	171	192	132	34	14	—	12	7·0
Enteric Fever .....	20	92	112	88	—	7	—	17	18·4
Other Diseases .....	2	71	73	54	—	5	2	14	19·7
Totals .....	95	785	880	426	313	76	5	65	8·3

SCARLET FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of cases .....	149	177	102	17	4	2	—	451
No. of deaths .....	14	6	1	1	—	—	—	22
Percentage of deaths	9·4	3·4	1·0	6·0	—	—	—	4·8

## TYPHUS FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of cases .....	14	21	77	23	25	7	4	171
No. of deaths .....	—	—	1	1	7	3	—	12
Percentage of deaths	—	—	1·3	4·3	28·0	34·0	—	7·0

## TYPHOID FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of cases .....	6	21	38	14	9	4	—	92
No. of deaths .....	1	4	5	3	3	1	—	17
Percentage of deaths	16·6	19·0	13·2	21·4	33·3	25·0	—	18·4

## OTHER DISEASES.

Disease.	Cases.	Deaths.
Measles .....	4	—
Dysentery .....	1	—
Febricula .....	16	—
Tubercular Diseases .....	5	5
Pneumonia .....	13	1
Meningitis .....	5	5
Laryngitis .....	1	1
Enteritis .....	6	—
Abscess (Parotid, &c.) .....	3	2
Unclassified .....	17	—
	<u>71</u>	<u>14</u>

Visiting Physician, Dr. ROBERTSON.

Resident Physician, Dr. ROBINSON.



# CITY HOSPITAL SOUTH, GRAFTON STREET.

DISEASES.	Remaining in Hospital 31st Dec., 1896.	Admitted into Hospital during 1896.	Total under treatment during 1896.	Died during 1896.	Discharged to homes 1896.	Transferred to Parkhill Convalescent 1896.	Others Transferred to other Hos- pitals, 1896.	Remaining in Hospital 1896.	Mortality per cent. of Admissions.
Scarlet Fever .....	35	528	563	37	94	395	—	37	7.0
Typhoid Fever ....	20	201	221	22	159	19	1	20	10.9
Typhus Fever ....	—	31	31	3	20	8	—	—	9.6
Diphtheria .....	—	90	90	19	45	19	—	7	21.1
Measles .....	—	2	2	—	—	—	—	—	—
Other Diseases ....	—	57	57	18	33	6	—	—	31.5
Totals .....	55	909	964	99	351	447	1	64	10.8

## SCARLET FEVER.

	AGE PERIODS.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 Upwards	Total.
No. of cases .....	228	202	61	25	10	2	—	528
No. of deaths .....	27	7	1	1	1	—	—	37
Percentage of deaths	11.8	3.4	1.6	4.0	10.0	—	—	7.0

## TYPHUS FEVER.

	AGE PERIODS.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 Upwards	Total.
No. of cases .....	—	9	15	4	—	1	1	30
No. of deaths .....	—	—	1	1	—	1	—	3
Percentage of deaths	—	—	6.6	25.0	—	100.0	—	10.0

## TYPHOID FEVER.

	AGE PERIODS.							TOTAL.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 Upwards	
No. of cases .....	17	24	72	57	23	4	4	201
No. of deaths ....	..	2	6	9	4	1	..	22
Percentage of deaths	..	8·3	8·3	15·7	17·4	25·0	..	10·9

## DIPHTHERIA.

	AGE PERIODS.							TOTAL.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 Upwards	
No. of cases .....	43	28	14	4	1	..	..	90
No. of deaths .....	18	1	..	..	..	..	..	19
Percentage of deaths	41·8	3·5	..	..	..	..	..	21·1

## OTHER DISEASES,

	Cases.	Deaths.
Pneumonia ..	12	10
Sore Throat ..	8	—
Syphilis ..	1	—
Tonsillitis ..	3	—
Erysipelas ..	1	—
Febricula ..	17	—
Anæmia ..	1	—
Meningitis ..	2	2
Phthisis ..	6	5
Pleurisy ..	2	—
Hydronephrosis ..	1	1
Rheumatism ..	1	—
Empyema ..	1	—
Alcoholism ..	1	—
Total ..	57	18=31·5 per cent.

Visiting Physician, Dr. ROBERTS.

Resident Physician, Dr. BLAKEMAN.



# CITY HOSPITAL, PARKHILL.

DISEASES.	Remaining in Hospital on December 31st, 1896.	Patients admitted during 1896.					Remaining in Hospital on 31st December, 1896.	Total number under treatment during 1896	Fatal Acute Cases.		Died within 24 hours of admission	Fatal Transferred Cases.	
		Acute Cases	From City Hospital North.	From City Hospital South.	From City Hospital East.	From City Hospital Priory Road			Number	Percentage		Number.	Percentage.
Scarlatina .....	91	365	279	395	23	23	174	1176	21	5.7	2	10	1.3
Smallpox .....	—	7	—	—	—	—	2	7	—	—	—	—	—
Enteric .....	—	16	—	19	—	—	—	35	—	—	—	—	—
Diphtheria and Croup.....	—	7	—	19	—	—	—	26	2	28.5	1	—	—
Typhus .....	4	81	34	8	—	—	—	127	10	12.3	—	—	—
Measles .....	—	6	—	—	—	—	—	6	—	—	—	—	—
Varicella .....	—	2	—	—	—	—	—	2	—	—	—	—	—
Other Diseases ....	9	40	—	6	—	—	3	55	4	10.0	—	1	16.6
Total .....	104	524	313	447	23	23	179	1434	37	7.0	3	11	1.3

## ACUTE SCARLET FEVER.

	AGE PERIODS.						
	Under 5	5—10	10—20	20—30	30—40	40 Upwards	TOTAL.
No. of cases .....	133	138	75	13	6	—	365
No. of deaths .....	18	3	—	—	—	—	21
Percentage of deaths ..	13.5	2.1	—	—	—	—	5.7

## ACUTE TYPHUS FEVER.

	AGE PERIODS.							TOTAL.
	Under 5	5—10	10—15	15—20	20—30	30—40	40 Upwards	
No. of cases .....	4	19	21	9	6	13	9	81
No. of deaths .....	—	—	—	1	2	3	4	10
Percentage of deaths	—	—	—	11·1	33·3	23·0	44·4	12·3

## OTHER ACUTE DISEASES.

Diseases.	Cases.	Deaths.
Tonsillitis .....	11	—
Pneumonia .....	7	2
Malaise .....	6	—
Bronchitis .....	4	—
Febricula .....	5	—
Others .....	7	2
Total .....	<u>40</u>	<u>4</u>

*Visiting Physician, Dr. ROBERTS.*

*Resident Physician, Dr. KENNAN.*



## CITY HOSPITAL EAST (MILL LANE).

DISEASES.	Remaining in Hospital 31st Dec., 1895.	Admitted into Hospital during 1896.	Total under treatment during 1896.	Died during 1896.	Discharged to homes 1896.	Transferred to Parkhill Convalescent, 1896.	Remaining in Hospital, 31st Dec., 1896.	Mortality % of admissions.
Scarlet Fever .. ..	10	138	148	4	94	23	27	2·9
Typhoid Fever .. ..	5	58	63	9	43	..	11	15·5
Diphtheria .. ..	..	1	1	..	1	..	..	..
Other Diseases .. ..	..	13	13	1	12	..	..	7·6
TOTALS .. ..	15	210	225	14	150	23	38	6·6

Visiting Physician, Dr. RICHARDSON.

## CITY HOSPITAL, PRIORY ROAD.

DISEASES.	Remaining in Hospital, Dec. 31st, 1895.	Admitted during 1896.	Total under treatment 1896.	Discharged to homes.	Transferred to Parkhill Convalescent.	Remaining in Hospital, Dec. 31st, 1896.	Deaths.	Mortality per cent of admissions.
Scarlatina .. ..	14	118	132	68	23	33	8	6·7
Enteric Fever .. ..	2	1	3	3	..	..	..	..
Measles .. ..	..	64	64	62	..	..	2	3·1
Erysipelas .. ..	..	4	4	3	..	..	* 1	25·0
Other Diseases .. ..	..	† 14	14	13	..	..	1	7·1
TOTALS .. ..	16	201	217	149	23	33	12	5·9

\* NOTE.—The death from erysipelas was in a case of advanced renal disease.

† All non-infectious diseases. The death was from sloughing throat.

Visiting Physician, Dr. ARCHER.

RATE OF MORTALITY AMONGST PATIENTS TREATED AT HOME AND  
PATIENTS TREATED IN THE CITY OF LIVERPOOL FEVER HOSPITALS.

HOME MORTALITY.

Year.	Disease.	Cases.	Deaths.	Per cent.
1891	Typhoid Fever	303	63	20·7
1892		443	77	17·3
1893		956	171	17·8
1894		878	176	20·0
1895		771	129	16·7
1896		595	114	19·1
1891	Scarlet Fever	728	85	11·6
1892		953	89	9·3
1893		2,158	149	6·9
1894		2,548	152	6·0
1895		1,671	97	5·8
1896		1,984	120	6·0

HOSPITAL MORTALITY.

Year.	Disease.	Cases.	Deaths.	Per cent.
1891	Typhoid Fever	283	26	9·1
1892		236	34	14·4
1893		431	50	11·5
1894		441	72	16·3
1895		481	68	14·1
1896		468	52	11·1
1891	Scarlet Fever	546	33	6·0
1892		633	36	5·6
1893		1,391	74	5·3
1894		1,468	80	5·4
1895		1,039	72	6·9
1896		1,600	97	6·0

The foregoing pages indicate that the extensive operations carried out with a view to improve the sanitary condition of the City have been attended with results which are satisfactory in character. The diminishing rate of mortality which has been effected in past years has



been continued in almost every district of the City, and indicates also a great diminution in the amount of sickness of serious and prolonged character, and consequent suffering and loss. Evidence is not wanting that the public themselves are taking an increased interest in sanitary matters. The value of hospital isolation in infectious sickness is more appreciated than ever it was before, and the results of hospital treatment are calculated to enhance its popularity.

The inhabitants of the poorer quarters not only appreciate to a certain extent what is done for them, but evince some inclination to co-operate with the Sanitary Officers.

It unfortunately cannot be recorded that the occupiers of the rougher and more squalid neighbourhoods show very marked signs of improvement; in far too large a proportion, drunkenness furnishes the ready explanation of squalor and extreme degradation. There may be reason to hope that sanitation may ultimately prevail amongst a class who have hitherto resisted every other agency, whether educational, religious, or philanthropic.

Whilst many difficulties and much opposition remain to be overcome before the full advantages of sanitary administration will be felt, yet the retrospect of the year is satisfactory evidence that the work now in progress is attended with successful results.

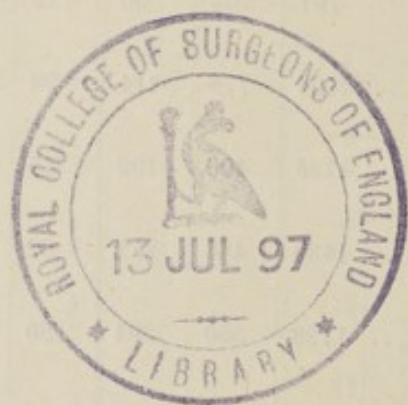
E. W. HOPE, M.D., D.Sc.,  
MEDICAL OFFICER OF HEALTH.

PUBLIC HEALTH DEPARTMENT,  
MUNICIPAL OFFICES,

LIVERPOOL, 10th June, 1897.







B

# TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS 142

coming to the knowledge of the Medical Officer of Health, during the year 1896, in the Urban Sanitary District of Liverpool; classified according to DISEASES and LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES			NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.											NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITALS.										
	Census, 1891.	Estimated to Middle of 1896.	Registered Births.	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11
DISTRICTS AND WARDS.	(b.)	(c.)	(d.)	Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.
(a.)								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.							Typhus.	Enteric Typhoid.	Continued.	Relapsing.	Puerperal.		
Scotland .. .. .	53713	46530	2053	..	269	14	13	65	141	7	..	4	..	195	..	129	5	3	64	65	3	..	..	..	..
Exchange .. .. .	47738	38964	1433	1	192	7	6	18	82	5	..	5	..	133	1	71	2	2	18	33	2	..	..	..	..
Abercromby .. .. .	55530	50181	1740	..	177	19	3	21	75	1	..	5	..	96	..	105	3	..	21	4	..	..	..	..	..
Everton (H) .. .. .	110556	110706	4335	..	656	77	18	68	176	11	2	11	..	218	..	279	16	..	66	62	1	..	..	..	..
Kirkdale .. .. .	66131	68090	2359	3	310	24	12	2	127	5	1	9	..	130	3	101	6	1	1	45	..	..	..	..	..
West Derby .. .. .	76971	79236	2950	..	561	111	12	2	112	12	1	8	..	104	..	260	29	1	2	39	2	..	..	..	..
Toxteth (H H) .. .. .	107341	107015	3522	..	719	89	11	128	133	19	..	12	..	308	..	318	19	3	126	48	5	..	..	..	1
Walton (H) .. .. .	40304	55332	1542	..	156	29	11	1	75	..	..	1	..	50	..	59	4	2	..	20	..	..	..	..	..
West Derby (Rural) (H) .. .. .	36349	39059	951	..	217	29	2	..	59	9	..	..	..	33	..	83	4	..	..	28	..	..	..	..	..
Wavertree .. .. .	13764	15430	460	..	146	16	..	..	16	4	..	1	..	8	..	64	2	..	..	6	..	..	..	..	..
Toxteth (Rural) .. .. .	21046	30520	598	..	159	28	1	..	29	..	..	3	..	33	..	39	5	..	..	2	..	..	..	..	..
Public Institutions. } Workhouses and Hospitals. . . . .	..	..	..	..	70	..	..	..	11	..	..	..	..	70	..	63	..	..	..	8	..	..	..	..	3
Emigrants, Seamen, &c., passing through the City .. .. .	..	..	..	4	22	1	..	..	27	..	..	..	..	1	4	21	1	..	..	22	..	..	..	..	..
TOTALS .. .. .	629443	641063	21943	8	3584	444	89	305	1063	73	4	59	..	1379	8	1592	96	12	298	392	13	..	..	..	4

Notification of Infectious Disease compulsory in the District since 1st September, 1890.

(H) The localities in which the Isolation Hospitals are situated.

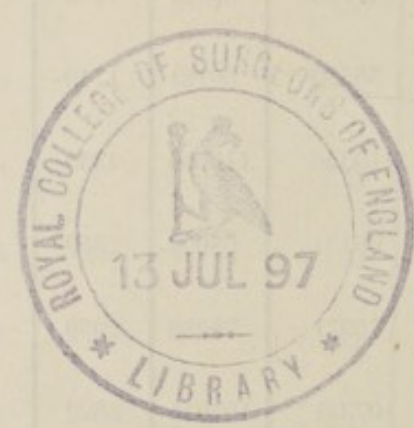


# TABLE OF POPULATION, BIRTHS, & DEATHS

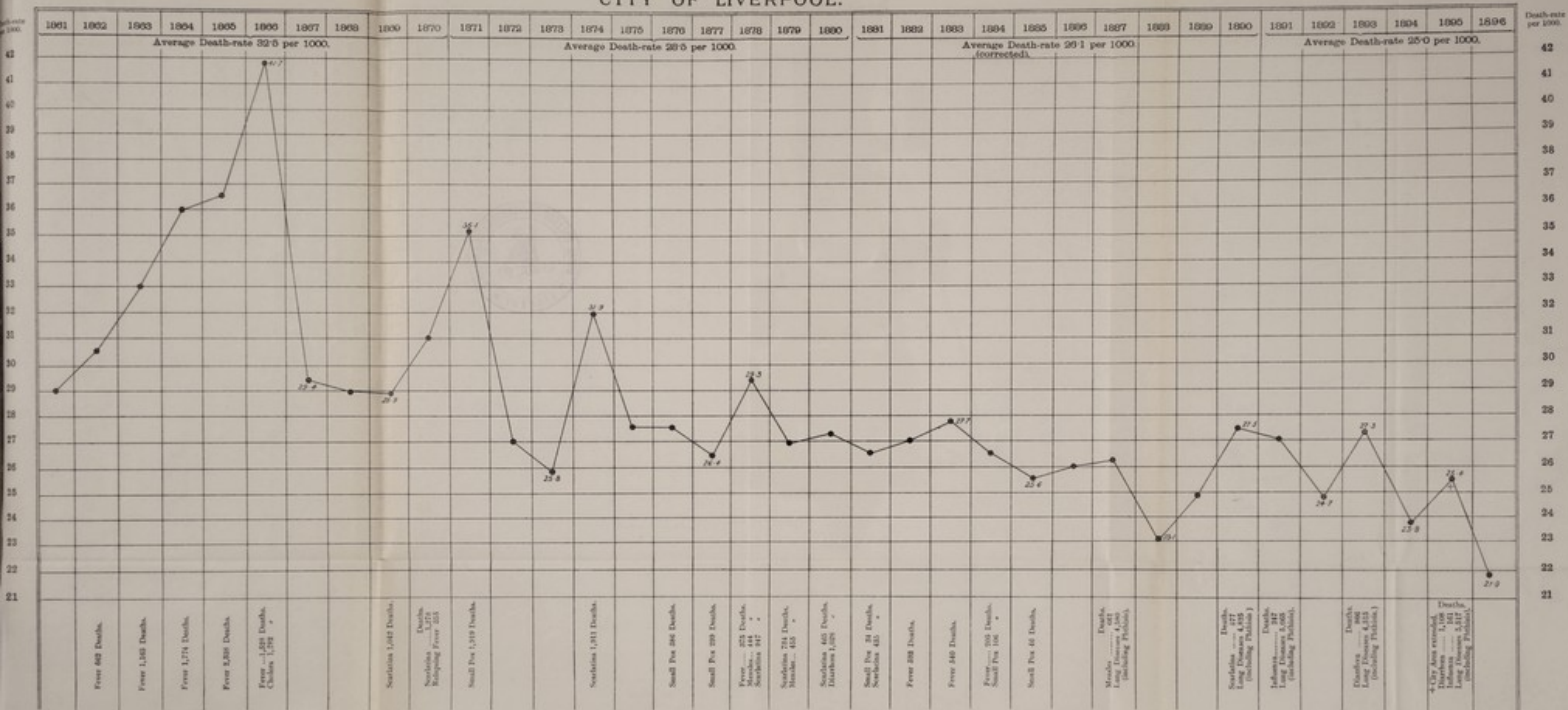
PART I. — THE ANNUAL RETURNS FOR THE YEAR 1897.

PREPARED BY THE REGISTRAR GENERAL OF ENGLAND.

REGISTRATION DISTRICTS.		POPULATION.		BIRTHS.		DEATHS.	
NAME.	NUMBER.	1891.	1897.	1891.	1897.	1891.	1897.
Adelphi	1	1,000	1,000	10	10	5	5
Albany	2	2,000	2,000	20	20	10	10
Albany	3	3,000	3,000	30	30	15	15
Albany	4	4,000	4,000	40	40	20	20
Albany	5	5,000	5,000	50	50	25	25
Albany	6	6,000	6,000	60	60	30	30
Albany	7	7,000	7,000	70	70	35	35
Albany	8	8,000	8,000	80	80	40	40
Albany	9	9,000	9,000	90	90	45	45
Albany	10	10,000	10,000	100	100	50	50
Albany	11	11,000	11,000	110	110	55	55
Albany	12	12,000	12,000	120	120	60	60
Albany	13	13,000	13,000	130	130	65	65
Albany	14	14,000	14,000	140	140	70	70
Albany	15	15,000	15,000	150	150	75	75
Albany	16	16,000	16,000	160	160	80	80
Albany	17	17,000	17,000	170	170	85	85
Albany	18	18,000	18,000	180	180	90	90
Albany	19	19,000	19,000	190	190	95	95
Albany	20	20,000	20,000	200	200	100	100
Albany	21	21,000	21,000	210	210	105	105
Albany	22	22,000	22,000	220	220	110	110
Albany	23	23,000	23,000	230	230	115	115
Albany	24	24,000	24,000	240	240	120	120
Albany	25	25,000	25,000	250	250	125	125
Albany	26	26,000	26,000	260	260	130	130
Albany	27	27,000	27,000	270	270	135	135
Albany	28	28,000	28,000	280	280	140	140
Albany	29	29,000	29,000	290	290	145	145
Albany	30	30,000	30,000	300	300	150	150
Albany	31	31,000	31,000	310	310	155	155
Albany	32	32,000	32,000	320	320	160	160
Albany	33	33,000	33,000	330	330	165	165
Albany	34	34,000	34,000	340	340	170	170
Albany	35	35,000	35,000	350	350	175	175
Albany	36	36,000	36,000	360	360	180	180
Albany	37	37,000	37,000	370	370	185	185
Albany	38	38,000	38,000	380	380	190	190
Albany	39	39,000	39,000	390	390	195	195
Albany	40	40,000	40,000	400	400	200	200
Albany	41	41,000	41,000	410	410	205	205
Albany	42	42,000	42,000	420	420	210	210
Albany	43	43,000	43,000	430	430	215	215
Albany	44	44,000	44,000	440	440	220	220
Albany	45	45,000	45,000	450	450	225	225
Albany	46	46,000	46,000	460	460	230	230
Albany	47	47,000	47,000	470	470	235	235
Albany	48	48,000	48,000	480	480	240	240
Albany	49	49,000	49,000	490	490	245	245
Albany	50	50,000	50,000	500	500	250	250
Albany	51	51,000	51,000	510	510	255	255
Albany	52	52,000	52,000	520	520	260	260
Albany	53	53,000	53,000	530	530	265	265
Albany	54	54,000	54,000	540	540	270	270
Albany	55	55,000	55,000	550	550	275	275
Albany	56	56,000	56,000	560	560	280	280
Albany	57	57,000	57,000	570	570	285	285
Albany	58	58,000	58,000	580	580	290	290
Albany	59	59,000	59,000	590	590	295	295
Albany	60	60,000	60,000	600	600	300	300
Albany	61	61,000	61,000	610	610	305	305
Albany	62	62,000	62,000	620	620	310	310
Albany	63	63,000	63,000	630	630	315	315
Albany	64	64,000	64,000	640	640	320	320
Albany	65	65,000	65,000	650	650	325	325
Albany	66	66,000	66,000	660	660	330	330
Albany	67	67,000	67,000	670	670	335	335
Albany	68	68,000	68,000	680	680	340	340
Albany	69	69,000	69,000	690	690	345	345
Albany	70	70,000	70,000	700	700	350	350
Albany	71	71,000	71,000	710	710	355	355
Albany	72	72,000	72,000	720	720	360	360
Albany	73	73,000	73,000	730	730	365	365
Albany	74	74,000	74,000	740	740	370	370
Albany	75	75,000	75,000	750	750	375	375
Albany	76	76,000	76,000	760	760	380	380
Albany	77	77,000	77,000	770	770	385	385
Albany	78	78,000	78,000	780	780	390	390
Albany	79	79,000	79,000	790	790	395	395
Albany	80	80,000	80,000	800	800	400	400
Albany	81	81,000	81,000	810	810	405	405
Albany	82	82,000	82,000	820	820	410	410
Albany	83	83,000	83,000	830	830	415	415
Albany	84	84,000	84,000	840	840	420	420
Albany	85	85,000	85,000	850	850	425	425
Albany	86	86,000	86,000	860	860	430	430
Albany	87	87,000	87,000	870	870	435	435
Albany	88	88,000	88,000	880	880	440	440
Albany	89	89,000	89,000	890	890	445	445
Albany	90	90,000	90,000	900	900	450	450
Albany	91	91,000	91,000	910	910	455	455
Albany	92	92,000	92,000	920	920	460	460
Albany	93	93,000	93,000	930	930	465	465
Albany	94	94,000	94,000	940	940	470	470
Albany	95	95,000	95,000	950	950	475	475
Albany	96	96,000	96,000	960	960	480	480
Albany	97	97,000	97,000	970	970	485	485
Albany	98	98,000	98,000	980	980	490	490
Albany	99	99,000	99,000	990	990	495	495
Albany	100	100,000	100,000	1,000	1,000	500	500

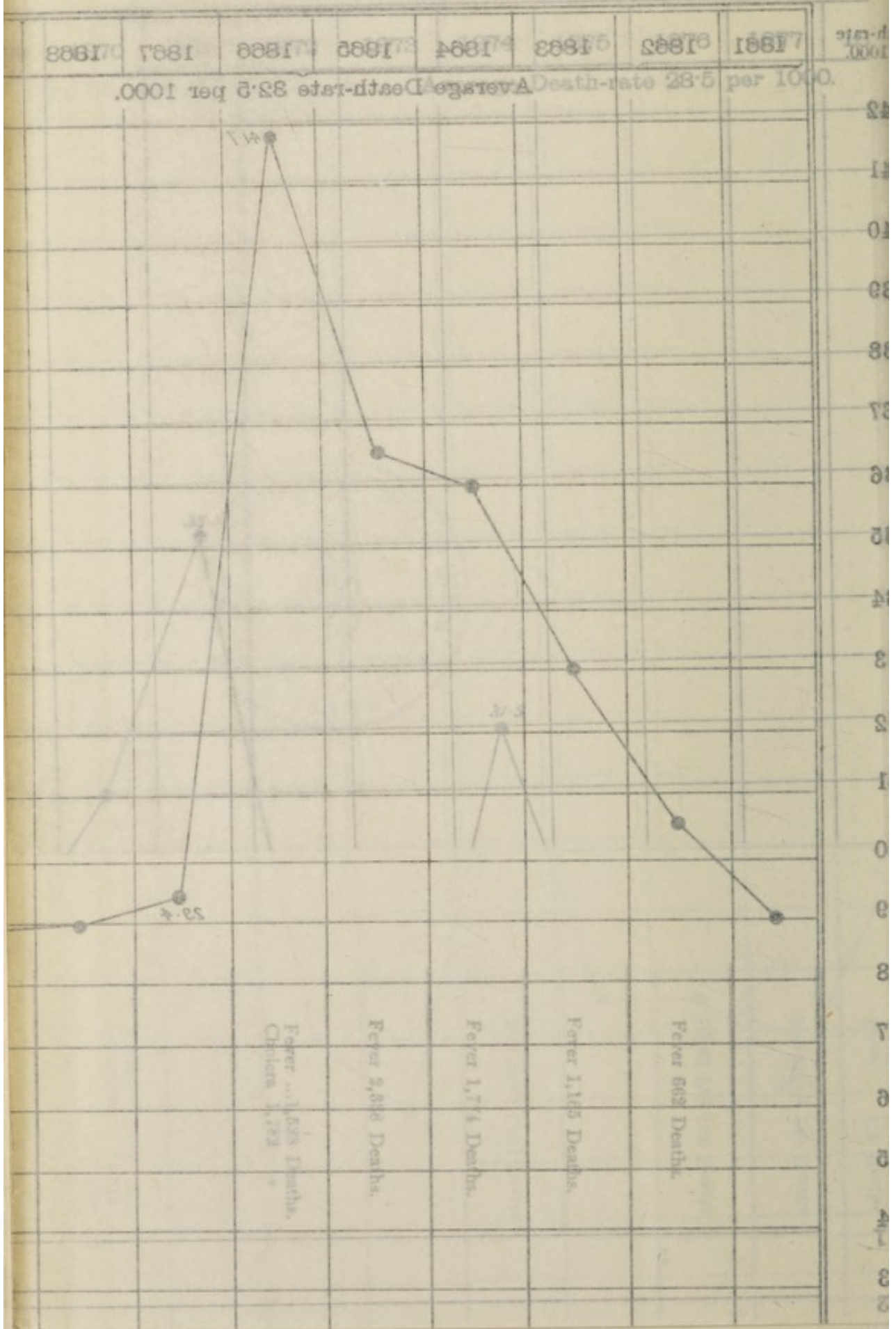


# CITY OF LIVERPOOL.





# CITY OF LIV



DEATHS REGISTERED IN THE CITY OF LIVERPOOL,  
DURING THE YEAR ENDING SATURDAY, 26TH DECEMBER, 1896.





PHILIPS' NEW PLAN OF  
GREATER LIVERPOOL

SCALE OF ONE MILE

The Map is divided into half-mile squares.



TYPHUS CASES DURING 1896.

The 10,000 Circles show the Position of Cases.

R I V E R M E R S E Y

GEORGE PHILIP & SON, PUBLISHERS, LIVERPOOL

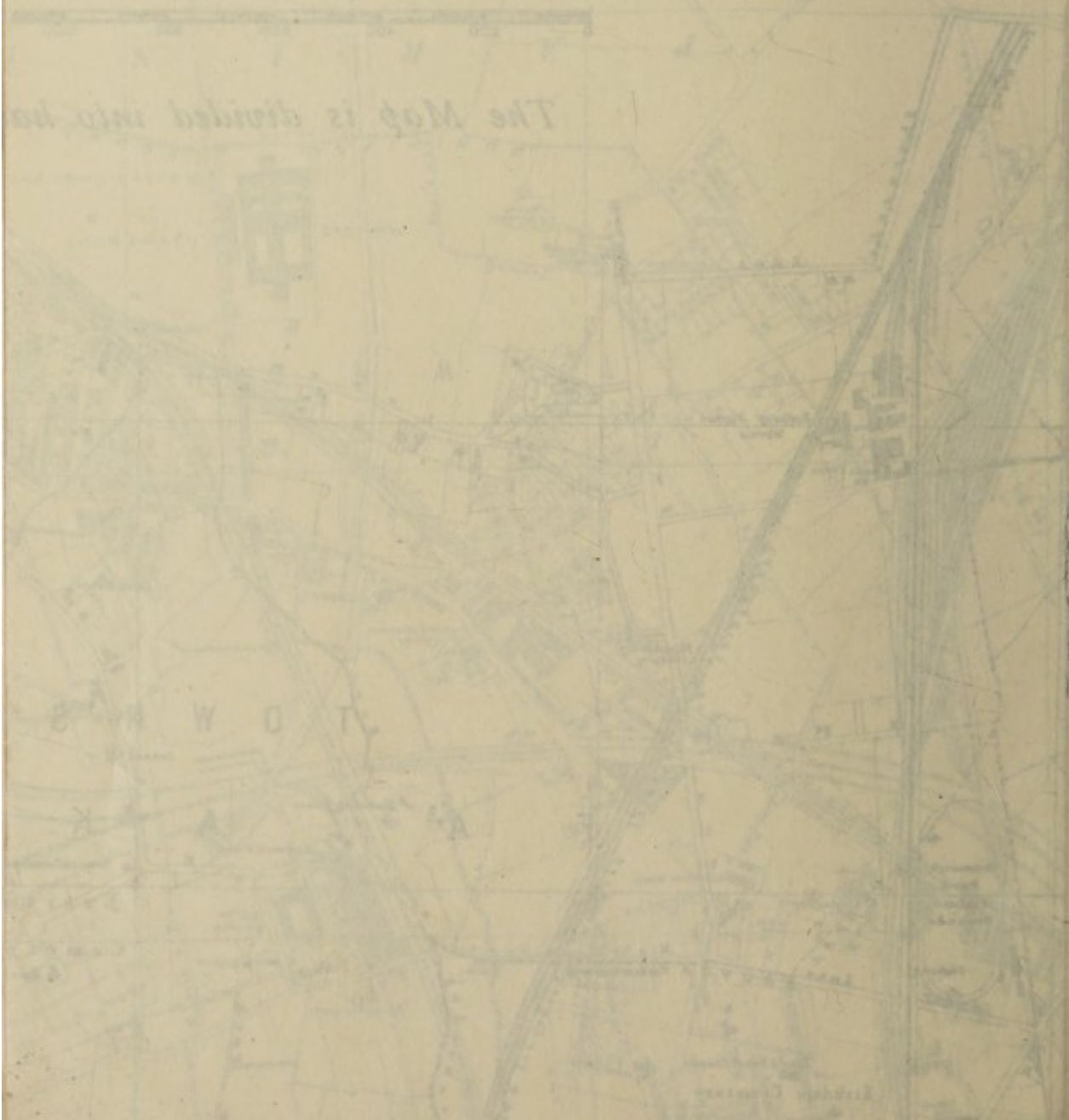
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# PHILIPS NEW GREATER LI

SCALE OF ONE



The Map is divided into 10

T O W N S

A L A B A M A