

[Report 1901] / Medical Officer of Health, Accrington Borough.

Contributors

Accrington (England). Borough Council.

Publication/Creation

1901.

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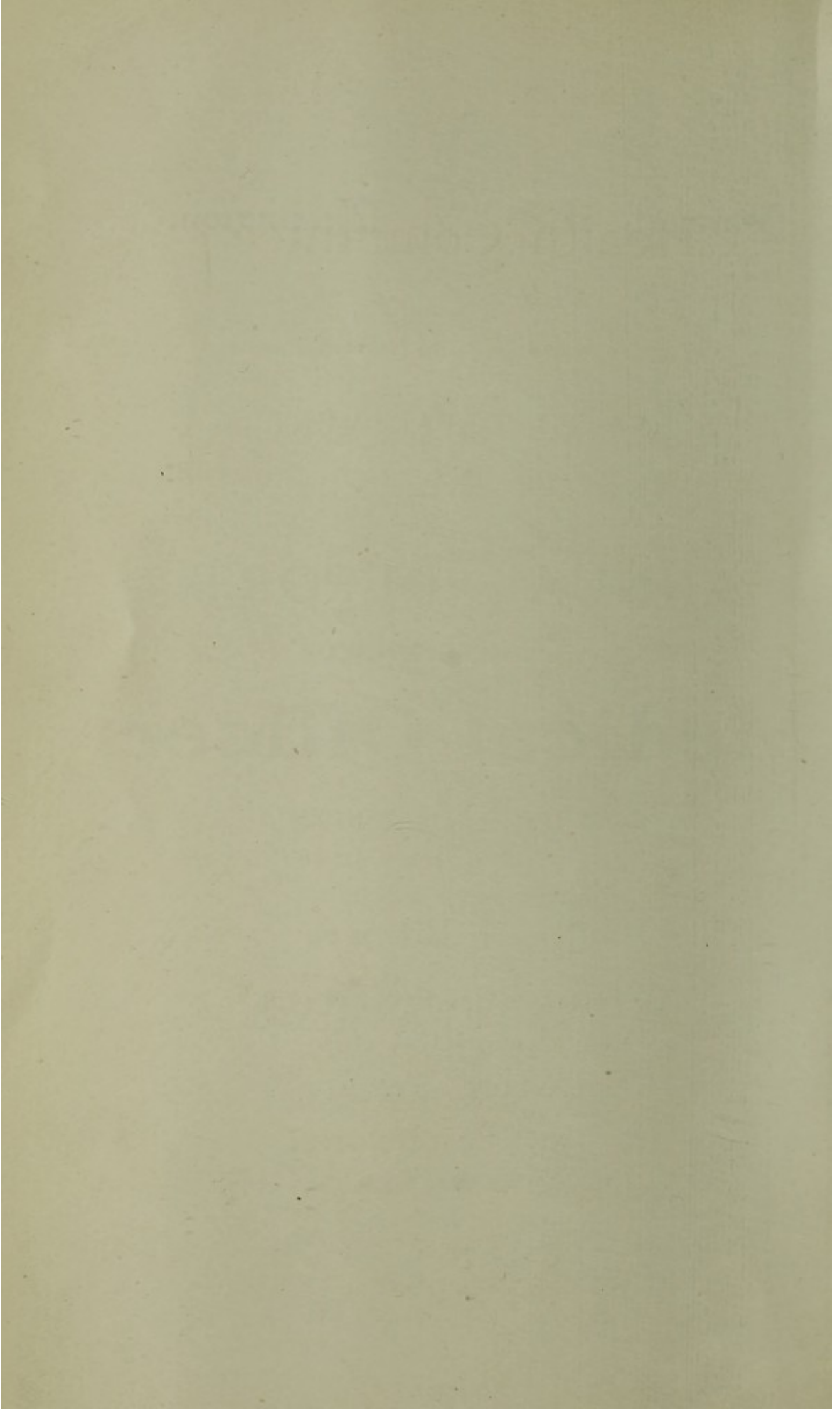
HEALTH DEPARTMENT.

ANNUAL REPORT
OF THE
Medical Officer
FOR THE YEAR 1901.

ARTHUR GREENHALGH,
M.B., Ch.B., M.R.C.S., D.P.H.,
Medical Officer of Health.



ACCRINGTON:
JAS. BROADLEY, "Gutenberg" Works.



Health Committee.

From November, 1901, to November, 1902.

Chairman · - - Alderman T. BROUGHTON.

Vice-Chairman : - - Councillor T. CRONSHAW

Committee :

THE MAYOR (Councillor JAMES CUNLIFFE).

Alderman JOHN DUCKWORTH.

Councillor J. BRIGGS.

„ J. E. BUNTING.

„ A. BURY.

„ J. H. CRITCHLEY.

„ D. C. DEWHURST.

„ J. HARWOOD.

„ J. E. HAWORTH.

„ J. C. LUPTON.

„ T. E. NUTTALL, M.B.

„ G. W. PICKUP.

„ H. RAMSBOTTOM.

„ J. WADDINGTON.

„ R. WALKER.

Health Department.

Medical Officer of Health :

ARTHUR GREENHALGH, M.B., Ch.B. M.R.C.S., D.P.H.

Chief Sanitary Inspector :

RICHARD DIGGLE, Assoc. San. Inst.

Assistant Sanitary Inspector :

JOHN E. CRAWSHAW.

Clerk :

WILLIAM HUNT.

Disinfector and Caretaker of Smallpox Hospital :

THOMAS BRAITHWAITE.

Foremen of Scavenging Departments :

WILLIAM HOWARD.

SAMUEL SIXSMITH.

*To the Sanitary Authority of the Borough
of Accrington.*

GENTLEMEN,

I beg to submit for your consideration my Report on the health and sanitary condition of the Borough for the year ending December 31st, 1901.

The year under consideration has not been marked by the special incidence of any particular disease, no serious epidemics have occurred. Diseases of the Chest and Organic Disease of the Heart, generally following upon Rheumatism, claim the first place as the cause of death.

The Infant Mortality for the year comes out at 159·21 as against—

England and Wales	151
33 Great Provincial Towns	165
Rural England and Wales	138
67 Smaller Towns	163

Again I have to thank the Chairman and Members of the Health Committee for their support, and all the other officials of the Council for their uniform kindness and assistance in all matters relating to my office.

I have the honour to be, Gentlemen,

Your obedient Servant,

ARTHUR GREENHALGH.

Population.

The statistics contained in this Report are based upon a population of 43,223, which I estimate would be the population of the Borough at the middle of the year 1901.

A copy of the Census returns appears below.

LOCALITY.	HOUSES.				POPULATION.		
	In-habited.	Un-inhabited.		Build-ing.	Persons.	Males.	Fe-males.
		In Occu-pation.	Not in Occu-pation				
North-East Ward ..	2456	150	29	71	11001	5190	5811
South-East Ward ..	1736	93	42	9	7858	3789	4069
South-West Ward ..	3237	175	59	25	14568	6924	7644
North-West Ward ..	2086	33	20	63	9695	4625	5070
Accrington	9515	451	150	168	43122	20528	22594

Population in Census year 1881 ..	...	...	31,435
" " " 1891 ..	...	...	38,603
" " " 1901 ..	...	...	43,122
Increase of population in the ten years 1881-1891			7,168
" " " " 1891-1901			4,519
Number of occupied houses in 1881	...	...	6,396
" " " 1891	...	...	8,155
" " " 1901	...	...	9,515
Number of new houses certified ready for occu- pation during 1901 ..	...	...	230
Average number of persons in each house in 1881			4.9
" " " " 1891			4.7
" " " " 1901			4.5
Estimated population to middle of year 1901 ..			43,223

It will be noted that the rate of increase between the ten years 1891-1901 is very much less than that between the ten years 1881-1891. The average number of persons per house is however smaller.

The following table shows the number of new houses certified as fit for occupation during the ten years 1891-1901, arranged according to the Wards in which they are situated.

YEAR.	North-West Ward.	South-West Ward.	North-East Ward.	South-East Ward.	TOTAL.
1891	32	77	33	12	154
1892	29	104	40	25	198
1893	45	48	36	4	133
1894	36	57	25	2	120
1895	27	12	47	4	90
1896	60	30	17	6	113
1897	54	31	17	13	115
1898	67	98	67	4	236
1899	51	96	38	9	194
1900	90	90	41	16	237
1901	101	39	75	15	230
Total ..	592	682	436	110	1820

Area.—The area of the Borough, according to the last Ordnance Survey, is 3,426·6 acres, giving a density of 12·6 persons to the acre. The urban portion of the Borough has a considerably higher density than this, but cannot be estimated with accuracy.

Altitudes.—Altitudes at centre of Town and Boundaries.

	Feet above Sea Level.
Town Hall : Ordnance Bench Mark	441·60
Centre of Street opposite	439·00

Boundaries at :—

Blackburn Road (adjoining Church) :—

Bench Mark on Boundary Stone...	413·00
Centre of Road opposite	412·19

Whalley Road (adjoining Clayton) :—

Bench Mark on Boundary Stone...	515·00
Centre of Road opposite	513·80

Burnley Road (adjoining Huncoat) :—

Bench Mark on Boundary Stone...	563·00
Centre of Road opposite	562·04

Manchester Road (adjoining Baxenden) :—

Bench Mark on Boundary Stone ..	757·00
Centre of Road opposite	755·90

Datum : Mean High Water Mark at Liverpool.

Occupations.—The occupations of the people are of a varied character. The staple industries are cotton weaving, cotton spinning, the manufacture of cotton spinning machinery, calico printing, and coal mining. In recent years brick-making has been an important local industry. Few towns of this size have such a variety of industries.

Within the last year or two the Railway Co. have drafted a considerable number of men to other parts of their works, and the manufacture of cotton spinning and weaving machinery has been in a very depressed state. This accounts in some measure for the population being smaller than the estimated population in 1900.

Deaths —689 deaths, 344 males and 345 females, have been registered in the Borough during the year, giving a death-rate equal to 15·94 per 1,000 of the estimated population per annum.

7 deaths were “uncertified” either by the Coroner or by a registered medical practitioner.

Death-rate Corrected.—The total deaths appertaining to the Borough are as follows :—

Deaths occurring in Borough (excluding Cottage Hospital)	662
Deaths in Cottage Hospital.....	27
Less deaths of persons in Hospital residing outside the Borough (non-residents) :	10
Deaths of Accrington residents in Hospital —	17
Deaths of Accrington residents occurring at the Haslingden Union Workhouse, Pike Law ..	24
Deaths of Accrington residents occurring at Blackpool	3
	706

giving a corrected death-rate of 16·33 per 1,000 per annum.

The corrected death-rate for the year 1900, calculated on an estimated population of 42,787, comes out at 16·05.

By the term "non-residents" is meant persons brought into the district on account of illness and dying there, and by the term "residents" is meant persons who have been taken out of the district on account of illness, and have died elsewhere.

Before last year the deaths of Accrington residents occurring in the Haslingden Union Workhouse were not taken into consideration in calculating the annual death-rates of the Borough. The Local Government Board, however, desired this to be done, consequently, in calculating the death-rate for the present year 24 deaths have had to be included which, under previous arrangements, would have been neglected.

Crude annual death-rate per 1,000	15·94
Corrected ,, ,, (including 24 deaths at Workhouse, and 3 at Black- pool, and excluding 10 non-residents at Cottage Hospital)	16·33
Annual death-rate, England and Wales	16·0
,, 33 large towns	18·6
,, 67 other towns	17·1
,, in Rural England & Wales	15·7
Births :—Males	518
Females	556
	—— 1074
Deaths	706
	——
Excess of births over deaths	368
Deaths of infants under 1 year of age	171
giving an infant mortality per 1,000 births of...	159·21

The following table gives the recorded death-rate for the last 23 years :—

Year.	Mortality per 1,000.	Year.	Mortality per 1,000.
1879	21·07	1891	20·20
1880	19·22	1892	17·35
1881	17·65	1893	17·24
1882	22·26	1894	12·98
1883	19·24	1895	17·82
1884	19·30	1896	15·54
1885	16·8c	1897	16·78
1886	17·40	1898	15·35
1887	17·70	1899	14·61
1888	16·70	1900	15·23
1889	20·20	1901	16·33
1890	16·60		

Seasonal distribution of deaths, including deaths of 24 Accrington “residents” occurring at Pike Law and 3 at Blackpool, and excluding 10 deaths of “non-residents” in Cottage Hospital :—

MONTH.	MALES.	FEMALES.	TOTALS.
January	36	29	65
February	24	27	51
March	30	42	72
April	45	40	85
May	22	25	47
June.....	24	14	38
July	29	24	53
August	30	27	57
September	24	27	51
October	30	32	62
November ..	23	31	54
December	37	34	71
	354	352	706

Births—1,074 births—518 males, 556 females—have been registered, giving a birth-rate equal to 24·84 per 1,000 per annum.

Number and sex of the children born during the year:—

MONTH.	MALES.	FEMALES.	TOTAL.
January	45	53	98
February	43	49	92
March	60	46	106
April	38	50	88
May	48	53	101
June.....	38	37	75
July	51	45	96
August	50	49	99
September	32	36	68
October	41	45	86
November	30	48	78
December	42	45	87
	518	556	1074

The birth-rate per 1,000 living, at all ages, for the last 20 years is:—

YEAR.	BIRTH RATE.	YEAR.	BIRTH RATE.
1882	37·4	1892	28·6
1883	33·7	1893	28·8
1884	43·4	1894	27·8
1885	32·7	1895	27·0
1886	29·2	1896	27·1
1887	30·5	1897	24·97
1888	31·5	1898	23·98
1889	28·3	1899	23·25
1890	27·1	1900	24·67
1891	30·6	1901	24·84

Natural Increase of Population.—The excess of births over deaths is 368. The corresponding figures for the last ten years are :—

1892	438
1893	456
1894	525
1895	380
1896	485
1897	348
1898 ..	372
1899	382
1900	426
1901	368

Local Government Board Tables.—At the end of the Report will be found the tables required by the Local Government Board.

In making out these tables all the calculations are based upon the population at the middle of each year, and as the Census is only taken once in ten years, the population for the intervening years has to be estimated, and so is more liable to be incorrect further away it is from the last Census year. In the year 1900 the population estimated to the middle of the year was taken as 45,100, whereas the actual Census taken at the end of March, 1901, proved to be 43,122, showing an over-estimation of nearly 2,000. This, of course, would render the statistics invalid. In making out the tables

this year I have re-estimated the populations of the years intervening between 1891—1901 from the Census figures, and so these tables may be now looked upon as correct.

In estimating the populations of the Wards, I find that in the Census years 1891 and 1901 they were as follows :—

Census Year.	TOTAL.	North-West Ward.	South-West Ward.	North-East Ward.	South-East Ward.
1901	43122	9695	14568	11001	7858
1891	38603	9131	11390	10265	7817
Increase..	4519	564	3178	736	41

Table I. shows the population, number of births, and rate calculated per 1,000 of estimated population, deaths of infants and rate per 1,000 births registered, deaths at all ages and death-rate calculated per 1,000 of estimated population for each of the last ten years (1891 to 1900), also the averages for that period, and for 1901 the deaths of Accrington residents in the Cottage Hospital, Haslingden Union Workhouse, and other places, and deaths of non-residents reported in the Borough.

Table II. shows the population estimated to middle of each year, births registered, deaths at all ages, and deaths under 1 year of age for the whole Borough, and also the same particulars relating to the four Wards of the Borough for each of the ten years 1891–1900 inclusive, and also the averages for the same period of years ; and for 1901 includes

particulars of the deaths in the Cottage Hospital, and the deaths of Accrington residents in the Haslingden Union Workhouse and other places.

Table III. gives particulars of the cases of Infectious Disease notified during the year 1901, distributed in age-periods, and also apportioned to the various Wards of the Borough.

Table IV. shows the causes of and ages at death during the year 1901, and also localizes the deaths from the various diseases to their respective wards, the Cottage Hospital, Haslingden Union Workhouse, and other places. A little study of them will make them perfectly intelligible, and convey much information respecting the diseases most prevalent, and the age-periods at which they are most fatal.

Table V. exhibits a comparison of prevalence of sickness and death from Infectious Disease during the period of 1890 to 1901 inclusive.

Table VI. will show the causes of death in greater detail than is shown in Table IV., and also the age-periods at which deaths from the various causes have taken place.

Table VII. is a diagram showing the death-rates for the last 23 years, in graphic form.

Infantile Mortality.—The deaths of infants under one year of age, registered in the Borough, number 171, which gives an infantile mortality per 1,000 registered births

equal to 159·21. The following table shows the causes of death :—

Measles	3
Whooping Cough	3
Diarrhœa	6
Zymotic Enteritis (Summer Diarrhœa) ..	19
Abscess	1
Tabes Mesenterica	2
Tubercular Meningitis.....	4
General Tuberculosis	1
Tuberculosis of Bones	1
Premature Birth	17
Atelectasis	4
Congenital Defects	3
Icterus Neonatorum.....	1
Debility at Birth	18
Convulsions	12
Meningitis	6
Heart Disease	2
Laryngismus Stridulus	1
Bronchitis	24
Pneumonia	15
Croup	1
Anæmia	1
Teething	8
Stomach Diseases	2
Enteritis	8
Skin Diseases	1
Burns ..:.....	1
Atrophy and Marasmus	4
Ill-defined	1

Besides these, from the Registrar of the Cemetery I obtained the information that there have through the year been 60 interments of children that have not been born alive.

For the last eleven years the infantile mortality has been:—

1891	151·8
1892	138·0
1893	190·3
1894	122·0
1895	192·3
1896	171·4
1897	187·38
1898	201·15
1899	178·98
1900	144·65
1901	159·21

Zymotic Diseases — The principal Fevers have caused 77 deaths, giving a Zymotic death-rate equal to 1·78 per 1,000 per annum.

Smallpox	0
Measles	21
Scarlet Fever	9
Whooping Cough	4
Diphtheria	}
Membranous Croup		3
Enteric Fever	8
Diarrhœa	32

The number of deaths from the Principal Zymotic Diseases for the last 21 years is as under:—

DISEASES.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
Scarlatina	7	138	17	3	19	8	49	7	8	23	6	2	1	2	9	8	9	11	10	4	9
Measles	5	18	2	67	9	28	15	3	141	1	37	...	34	2	15	6	20	30	2	21	21
Enteric Fever	4	8	10	7	7	8	7	12	10	8	9	7	6	3	13	10	5	13	4	7	8
Doubtful Fevers	2	5	...	1	1	1	2	1	1	...	...	1	...	...	...	...	...	...	...	...	...
Diarrhoea	12	30	27	40	19	26	30	21	27	18	11	23	35	12	59	28	31	30	57	29	32
Whooping Cough	28	7	13	30	19	38	10	13	21	5	15	32	14	3	7	21	8	8	9	13	4
Diphtheria	3	3	1	3	3	5	...	4	3	4	2	19	4	6	6	2	6	7	6	10	3
Membranous Group	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Smallpox	61	209	70	151	77	114	113	61	211	59	80	84	94	29	109	75	79	99	88	84	77

Influenza.—Influenza caused 10 deaths. N.E. Ward 5, S.W. Ward 1, and N.W. Ward 4, as compared with 14 during the year 1900.

Scarlet Fever.—Scarlet Fever has not been nearly so prevalent this year as last. 154 cases have been notified, as against 218 and 398 in the two previous years. 9 deaths, however, have been caused by this disease, as against 4 last year.

Enteric Fever.—25 cases of Typhoid Fever have been notified during the year. 8 in N.E. Ward, 7 in S.E. Ward, 6 in S.W. Ward, and 4 in N.W. Ward, against 33 cases notified during the previous year.

The deaths from this disease number 8, as compared with 7 in 1900. No common source of infection has been traced.

Measles —The Measles epidemic, which affected most of the schools of the Borough during the concluding months of 1900, continued during the early months of 1901.

There have been 21 deaths attributable to this cause during the year.

Measles not being a notifiable disease I am unable to give the number of cases.

Whooping Cough.—9 deaths have been registered as due to Whooping Cough, as against 13 the previous year.

Diarrhœa.—Diarrhœa has caused 32 deaths, 24 of which were under 1 year of age. 19 occurred during the months of August and September, the usual months for this disease to become prevalent.

This disease is every year responsible for a large number of deaths among young children. Like Typhoid Fever it is more prevalent in houses and localities where middens and pails are in use than where the water-carriage system is the method of disposal. The insanitary condition of back yards is, I believe, a powerful factor in encouraging this disease, the unpaved or unflagged portions of the yards give lodgment to foul water which poisons the subsoil, causing it during the warmer months of the year to act as a breeding ground for germs which easily contaminate the milk of the household, and so gain an entrance to the bodies of the children. The Corporation of Preston, which has suffered from a very high death-rate from Infantile Diarrhœa, has obtained power to require that all yards or courts shall be either flagged or covered with some impervious material. I have a strong belief that the lime-washing of the walls and outbuildings of back yards twice a year would not only give them a cleaner and sweeter appearance, but would at the same time render them much more healthy, and less liable to hold the germs of disease.

Improper feeding of infants is, no doubt, responsible for many deaths from this disease, and the employment of a Lady Sanitary Inspector, who would visit and advise on

matters of this kind, would, I believe, help to reduce the mortality from this fatal complaint.

Phthisis.—Phthisis or Tuberculosis of the Lungs has caused 40 deaths, as against 47 last year. In addition to this, 25 deaths have been caused by other forms of Tuberculosis, as against 11 last year, so that the Tubercle bacillus was responsible for 65 deaths in 1901 and 58 in 1900.

It is lamentable that this disease, although recognised to be preventable, should yet cause so many deaths every year. In most cases it begins through the inhalation or breathing-in of the dried sputum of persons suffering from the disease. The Health Committee have wisely ordered that notices shall be fixed in public places calling attention to the dangers of spitting. Milk and flesh from tuberculous cows is, by the majority of medical men, also considered to be capable of producing the disease if they are not properly cooked, although Prof. Koch held that this source of infection was insignificant. Investigations are at the present time going on to settle this important point; anyway, it yet remains clear that the milkman and butcher have no right to sell Tubercle bacilli to the public.

Houses where consumptives have lived and died are very liable to become contaminated with the germs of the disease, and so ought to be thoroughly disinfected and cleansed after such an event.

Smallpox.—We have had no cases of Smallpox throughout the year.

The Isolation Hospital for Smallpox was destroyed by fire on April 20th, 1901.

Despite all that can be said by the Anti-vaccinators against vaccination and re-vaccination, I am yet most firmly convinced that it is our sheet-anchor against this disease. The people who are most exposed to it, doctors, nurses, ambulance men, and other attendants at smallpox hospitals, vaccinate and re-vaccinate most assiduously, and the incidence of the disease amongst them is almost nothing.

Puerperal Fever.—2 deaths from this cause have occurred during the year.

Respiratory Diseases.—Diseases of the Respiratory Organs have caused 147 deaths, which is exactly the same number as last year. Bronchitis 63, Pneumonia 73, Pleurisy 3, other Respiratory Diseases 8.

Heart Disease.—Heart disease has caused 59 deaths. Many of these cases are the results of Rheumatic Fever.

Cancer.—Malignant disease has caused 25 deaths, as compared with 25 in 1900.

Injuries.—Accidents have caused 17 deaths, suicides 5, as compared with 13 and 3 respectively for the previous year.

Alcoholism.—5 deaths are certified as due to Alcoholism, and 5 others to Cirrhosis of the Liver.

Water Supply.—The water is supplied by the Accrington District Gas and Water Board, and their reservoirs are at three different places, viz. : Dean Clough, Mitchells, and Burnley Road, Huncoat.

The water from the largest storage reservoir of the Board, that at Dean Clough, is now delivered into three filter beds, situate at the Cliffe, Great Harwood ; after passing through three feet of clean washed sand, one foot of clean washed gravel, and through brick drains, the water is conveyed by the main drains consisting of best glazed half pipes into a covered clean water tank, from which it is pumped into the distributing mains and covered high service reservoir by two high-pressure compound condensing engines, worked at a pressure of 90 to 100-lbs. per square inch.

The water, on passing from the filter, is very clear and of good quality.

During the summer there has been a great scarcity of water, the reservoirs never having been so low. Many complaints have been made about the clearness and quality of the water. This is due to contamination in passing through the pipes to the consumer.

Disposal of Excrement.—The pail closets have been regularly emptied and cleansed. This work has been carried on at the Corporation Depôt, Hyndburn Road, which is situated about half-a-mile from the Coppy Clough Sewage Works, where the whole of the sewage of the Borough and that of the adjoining township of Church is treated by the Accrington and Church Joint Sewage Board.

An account of the method of disposal is contained in my Report for 1900.

Destructors.—The Destructors have now been in constant use since November, 1900. There are six cells, constructed by Messrs. Horsfall's, of Leeds, and the heat produced by the destruction of the refuse is used for the generation of Electricity. Details respecting the Destructors will be found in the Sanitary Inspector's Report.

The ash-bins of the Borough have never been kept so low as during the present year, and this must have a beneficial effect on the health of the town.

I regret to report that Baxenden is yet without a satisfactory sewerage scheme. Many gross defects in hygienic arrangements are present there which it is impossible to satisfactorily remedy until the main sewer connecting this portion of the Borough with Coppy Clough Works is constructed.

Disinfecting Apparatus.—The form of Disinfecter in use is Frazer's Dry Heat Apparatus, but I am in hopes that before long a more efficient Disinfecter will be constructed.

Abattoirs.—The Public Abattoirs are regularly inspected and are under the constant care of one of the Corporation workmen. The Sanitary Inspector's report gives details of the destruction of carcasses that have been considered unfit for human food.

The stalls on the Market Ground receive regular attention from the Sanitary Inspector, and his report gives full details of the actions taken during the year against persons offering unwholesome food for sale.

Dairies, Cowsheds, and Milkshops.—The new regulations, which were formulated last year, have been published and distributed to the cowkeepers and owners of farms. A period of two years has been allowed for the purpose of putting the Dairies and Cowsheds in a condition to satisfy the regulations.

Table showing Birth and Death Rates in certain Towns in 1901.

NAME.	Population.	Birth Rate per 1,000.	Death Rate per 1,000.	Zymotic Death Rate.	Respiratory Death Rate.	Phthisis Death Rate.	Death Rate from other forms of Tuberculosis.	Infant Deaths per 1,000 Births.
England and Wales.....	32,526,075	28.5	16.0	2.05	...	...	...	151
Ashton-under-Lyne	43,890	24.8	18.6	1.8	4.16	1.75	...	182
Dudley	48,725	35.73	18.25	2.8	3.7	0.8	0.8	180
Hyde	32,837	24.82	18.27	1.61	2.98	1.61	0.91	108
Lancaster	40,517	26.28	18.26	2.76	3.40	1.62	0.41	191
Stafford	20,894	26.9	17.88	2.97	2.46	2.15	0.3	100
Stalybridge	27,754	24.4	21.3	1.9	4.9	1.8	0.4	221
Stoke-on-Trent	30,637	31.6	16.3	2.31	3.39	1.01	0.32	186
Wigan	60,923	36.40	22.30	4.84	5.13	1.10	0.32	203
Wolverhampton	94,179	31.9	16.7	2.4	2.6	1.04	0.5	162
Keighley.....	41,801	26.6	16.9	1.96	2.91	1.43	0.52	142
Carlisle	45,478	27.3	17.8	1.4	3.1	1.5	...	129
Burton-on-Trent	50,386	27.33	13.88	1.89	1.99	1.44	0.49	106
Crewe	42,075	31.1	16.8	2.59	3.06	0.90	1.14	181
Accrington.....	43,223	24.84	16.33	1.78	3.40	0.92	0.57	159

Observations.—Reviewing the various statistics and comparing them with the similar figures of other towns, one finds that the death-rate as a whole may be considered satisfactory, but that the birth-rate ranks very low indeed.

Zymotic Diseases have not formed a formidable item in the death-rate of the Borough, owing to the type of disease prevalent during the year not having been of a very serious order.

The Respiratory death-rate, as might be expected in a town of this altitude, built upon a clay subsoil, stands out above the other causes of death, and with it must be associated the high death-rate from Organic Disease of the Heart, which is often a sequence of Rheumatism.

The death-rate from Phthisis or Consumption, although lower than the average of some other similar towns, could, I think, be reduced by educating the public as to the real nature of the disease and the method of preventing its spread. The advisability of adopting voluntary notification of families suffering from infectious forms of this disease is worthy of the consideration of the Council. By this means all these cases would be visited by the Sanitary Inspectors, and useful advice carried straight to the individuals most needing it alike for themselves and the general public.

In a few cases disinfection of rooms in which consumptives have lived is asked for. This is done by the Corporation workmen, and no charge is made. But these cases are exceptional; people need convincing of the great value of such a proceeding, and I think the Council would do well to help to clear away the ignorance surrounding this subject.

ARTHUR GREENHALGH,

Medical Officer of Health.

Sanitary Department.

Annual Report

OF THE

Sanitary Inspector

For the Year 1901.

RICHARD DIGGLE, Assoc. San. Inst.,

Sanitary Inspector,

Sanitary Department

Annual Report

Sanitary Inspector

For the Year 1901

Richard Moore, San. Insp.

HEALTH DEPARTMENT,

TOWN HALL,

ACCRINGTON.

To the Chairman and Members of the
Health Committee.

GENTLEMEN,

I have the honour to submit to you my Third Annual Report of the work done by the Sanitary Department during the year ended December 31st, 1901.

The past year has been a heavy one for this Department in consequence of the commencement of the Destructor.

A considerable portion of my time has been occupied in organising the work in connection with the collection and destruction of the Town's refuse, but I think the time has been well spent.

As regards the detection and abatement of nuisances, 343 notices have been served, but this does not by any means represent the number of nuisances abated, as I am frequently called upon by owners to inspect their property. In many cases nuisances have been found which have been remedied, at the owners' request, by the Corporation.

The following table shows the number and nature of nuisances attended to :—

Number of Closets and Drains blocked... ..	918
Do. do. opened	880
Tipplers out of order... ..	41
Slopstone pipes not disconnected from drain	8
Do. too short and broken	8
Do. emptying on gullies not disconnected ...	3
Dishstones require cementing	19
Traps in cellars not disconnected	3
Drains and traps in yards and cellars defective	35
Drains in yards and cellars not trapped	12
Stone drains in yards and cellars	38
Drains tested with smoke	24
Downspouts blocked and broken	14
Defective troughing	32
Houses without sufficient ventilation... ..	30
Dirty houses and yards.....	12
Houses damp, caused by structural defects	6
Water tap leaking.....	8
Keeping poultry, &c., in bedroom	2
Accumulations of manure and rubbish	7
Ashpits requiring new doors, fastenings, &c.	105
Dilapidated closets, ashplaces, division walls, &c.....	57
Number of closets altered from old privies	22
Do. do. pail system	71

Factory and Workshop Act.

A great amount of work has been done in connection with the above Act. The closet accommodation in most of the factories was insufficient, and during the year 58 additional closets have been built. One satisfactory feature has been the conversion of Pail Closets to Water Carriage System.

The new Factory and Workshop Act which came in force on January 1st, 1902, will throw more work and responsibility on my Department.

The Bakehouses have been regularly inspected, but no action has been required to be taken.

Dairies, Cowsheds, and Milkshops.

New regulations, in pursuance of the Dairies, Cowsheds, and Milkshops Order of 1885, adopted by the Council, and which came in force on the 6th May, 1901, have been sent out to all owners and occupiers.

Very few of the Cowsheds comply with the regulations dealing with ventilation and cubic space.

The farms have been visited and with one or two exceptions the premises were found in a satisfactory condition.

Common Lodging-Houses.

The Lodging-houses have been frequently visited and I am pleased to state that the way they have been conducted has been satisfactory.

Vans used as Dwellings.

As in previous years, all Vans which to my knowledge entered the town, have been inspected to ascertain their condition, and enquiries made as to the health of the occupants, with a view of checking the spread of infectious disease. I am pleased to find amongst van-dwellers generally a desire to keep their vans clean and in good condition.

Public and Private Slaughter-Houses.

The Slaughter-houses have been regularly visited. In no instance has it been found necessary to take proceedings against any occupier during the year.

Public Markets.

The Public Markets have been inspected, and as a result of such inspection, together with the inspection of Slaughter-houses, the following were seized and destroyed as unfit for human food :—

1,189 lbs. of Beef.
 232 „ Mutton.
 190 „ Pork.
 53 Rabbits.
 4 Turkeys.
 6 Geese.
 360 pairs of Kippers.
 1 Box of Finnon Haddock.
 1 „ Gurnards.
 2 Bags of Cockles.

Magisterial Proceedings.

Only one prosecution has occurred during the year, *viz.* :—James Sarsfield as owner of, and William Bramwell for hawking, fish which was unfit for human food.

The Magistrates fined Sarsfield 20/- and costs, and Bramwell 5/- and costs.

Offensive Trades.

The premises used for carrying on offensive trades have been regularly inspected, and found to be conducted in a satisfactory manner. No complaints from this source have been made during the year.

Scavenging.

During the year the streets have been regularly swept, the number of times varying from once a fortnight in the side streets where there is very little traffic to twice a week in the main thoroughfares.

In addition to this, five men with handcarts, are engaged in removing horse-droppings, etc., from the main streets, to keep them in a clean condition.

1,514 Loads of Sweepings and 951 Loads of Refuse from Street Gullies have been removed. 1,113 Loads of Snow have also been removed from the streets.

Smoke Nuisances.

Observations have been taken, and where dense smoke exceeding eight minutes in the hour has been found, the parties have been notified.

It has not been found necessary to take proceedings.

Disinfection.

In every case where infectious disease has been reported to the Medical Officer of Health, instructions have been given as to the proper isolation of the patient, and such preventative measures as were found necessary to meet the case. After the recovery of the patient, the premises and clothing, &c., have been disinfected and thoroughly cleansed. 1,257 articles of clothing, &c., have been disinfected, 497 articles of clothing, &c., burnt, and 200 rooms disinfected and thoroughly cleansed. The premises were inspected in all cases, and where sanitary defects were found, steps were taken to have the same remedied. In all cases where books from Libraries have been found from infected houses, the same have been either disinfected or burnt.

Destructors.

I beg to present to you my first Report on the working of the Destructors, which relates to the year ended December 31st, 1901.

The following figures shew the Loads and Weight of Refuse destroyed and the Cost of Destruction:—

Loads.	Refuse.	Weight.			Weight per Load.			
		T.	C.	Q.	T.	C.	Q.	LBS.
8,783	Domestic	10,416	12	1	1	3	2	24
563	Market	223	17	1	7	3	22	
	Fish & Trade	139	10	2				
		<hr/>	<hr/>	<hr/>				
		10,780	0	0				

In addition to the above, 497 Mattresses and Beds, 148 Dogs, and a quantity of Diseased Meat, etc., were cremated.

The Cost of Collection of the 10,416 Tons of Domestic Refuse was :—

	Total Cost.			Cost per ton.		
	£	s.	d.	=	s.	d.
Wages	453	3	8	=	10	4
Team Labour.....	890	15	6	=	1	8
	<hr/>				<hr/>	
	£1,343	19	2	=	2	6

The cost of Destruction of
10,780 Tons of Refuse was :—

(Wages only)	800	13	11	=	1	5
					<hr/>	
					4	0

There has also been 1,139 Loads of Domestic Refuse tipped at various tips.

On April 11th, the Horsfall Destructor Co. conducted a trial test of the Destructors and forwarded to the Borough Surveyor the result in the following form :—

Duration of Trial	22 hours.
Refuse Destroyed.....	128,565·6 lbs. in 24 hours estimated.
Refuse destroyed per cell	19,793 lbs. in 22 hours estimated.
Total water evaporated	135,624·5 lbs. in 22 hours
Water evaporated per cell	22,604·08 lbs.
Water evaporated per square foot of grate per hour	34·25 lbs.

Water evaporated per lb. of refuse	1'14 lbs.
Refuse burned per square foot of grate per hour	29'99 lbs.
Temperature registered by melting copper... ..	1,996° Fah.
Total clinker	38,680 lbs.
Total ash	3,273 lbs.
Total residue.....	41,953 lbs.
Percentage of clinker to refuse ...	32 6 per cent.
Total I.H.P. developed at 20 lbs. per I.H.P. per hour.....	308'23 I.H.P.
Average I.H.P. per cell continuously.....	51'37

The trial was stopped at 22 hours, owing to the artificial Electrical resistances breaking down, which rendered it impossible to continue running the Engines.

In order to afford a comparison with the foregoing, I beg to append the following extract, taken from the specification of the Horsfall Destructor Co. Ltd., dated February 23rd, 1899, for a Destructor of 6 cells, each having a grate area of 30 square feet, with a drying hearth at the back of each cell :

“To burn thoroughly to a hard innocuous clinker 10 tons of
 “ordinary house and and market refuse per 24 hours when
 “working at the normal rate, and to evaporate one pound
 “of water per pound of refuse from and at 212° Fah. when
 “working at the same rate.”

In November last no coal whatever was used at the Electricity Works, the whole of the steam being generated by the heat from the Destructors. I have been furnished by the Electrical Engineer with a return of the daily output of Electricity during that month. The statement is as follows :

Nov.	Units Generated.	Total for Week.	Total Units Delivered per Week.	Refuse for Week. Lbs.
1				
2				
3 Sun.	—	—	—	—
4 Mon.	493	—	—	—
5 Tues.	844	—	—	—
6 Wed.	593	—	—	—
7 Thur.	686	—	—	—
8 Fri.	825	—	—	—
9 Sat.	845	4,286	2,457	548,464
10 Sun.	—	—	—	—
11 Mon.	715	—	—	—
12 Tues.	802	—	—	—
13 Wed.	624	—	—	—
14 Thur.	794	—	—	—
15 Fri.	895	—	—	—
16 Sat.	984	4,814	2,780	555,100
17 Sun.	—	—	—	—
18 Mon.	504	—	—	—
19 Tues.	908	—	—	—
20 Wed.	720	—	—	—
21 Thur.	782	—	—	—
22 Fri.	835	—	—	—
23 Sat.	944	4,693	3,090	535,920
24 Sun.	—	—	—	—
25 Mon.	644	—	—	—
26 Tues.	745	—	—	—
27 Wed.	791	—	—	—
28 Thur.	865	—	—	—
29 Fri.	919	—	—	—
30 Sat.	1,039	5,003	3,311	492,772
		<u>18,796</u>	<u>11,638</u>	<u>2,132,256</u>
		Total Units GENERATED.	Total Units DELIVERED.	Total Lbs. REFUSE.

Lbs. Refuse per unit Generated.....112·9 lbs.

Most units generated in one day.....1,039 units.

Highest load observed, 472 amperes at 235 volts....
148·6 Electrical h.p.

RICHARD DIGGLE,

Sanitary Inspector.

LOCAL GOVERNMENT BOARD RETURN.

TABLE I.—For Whole District.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		DEATHS AT ALL AGES. NETT.				
		Number.	Rate.	Number.	Rate per 1000 Births registered.	Number.	Rate.	Number.	Rate.			
1	2	3	4	5	6	7	8	9	10	11	12	13
1891	38710	1185	30.61	180	151.8	781	20.17	..	..	..	..	..
1892	39177	1155	29.48	154	138.0	677	17.28	..	..	..	..	..
1893	39670	1139	28.71	217	190.5	683	17.21	..	..	..	..	..
1894	40187	1057	26.30	129	122.0	532	13.23	..	..	..	..	..
1895	40666	1118	27.49	215	192.3	738	18.14	..	..	..	..	..
1896	41125	1138	27.67	195	171.4	653	15.87	..	..	..	..	..
1897	41568	1062	25.54	199	197.38	714	17.17	..	..	..	..	..
1898	41954	1034	24.64	208	201.15	662	15.77	..	..	..	..	..
1899	42357	1028	24.26	184	178.98	646	15.25	..	..	..	..	..
1900	42787	1113	26.01	160	143.75	658	15.37	..	..	..	687	16.05
Averages for years 1891-1900	40820	1103	27.0	184	168.7	674	16.54	..	..	..	..	..
1901	43223	1074	24.84	171	159.21	689	15.94	27	10	27	706	16.33

* Rates calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water) } 3,426.6

At Census of 1901. } 43,122 }
 Total population at all ages. (M. 20,528, F. 22,594) }
 Number of inhabited houses } 9,515 }
 Average number of persons per house } 4.5 }

LOCAL GOVERNMENT BOARD RETURN.

TABLE II.

NAMES OF LOCALITIES	1.—ACCRINGTON.				2.—NORTH-WEST WARD.			3.—SOUTH-WEST WARD.			4.—NORTH-EAST WARD.			5.—SOUTH-EAST WARD.		
	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Deaths under 1 year.
1891...	38710	1185	781	180	9143	192	44	11466	235	60	10283	208	46	7818	146	32
1892...	39177	1155	677	154	9202	170	38	11791	179	49	10360	169	38	7824	159	29
1893...	39670	1139	683	217	9263	171	59	12135	216	81	10441	155	42	7831	141	35
1894...	40187	1057	532	129	9327	133	36	12496	156	31	10526	143	34	7838	100	28
1895..	40666	1118	738	215	9388	194	58	12827	202	61	10606	175	52	7845	167	44
1896...	41125	1138	653	195	9446	157	49	13146	178	50	10682	176	51	7851	142	45
1897...	41568	1062	714	199	9502	180	59	13454	182	49	10755	193	43	7857	159	48
1898...	41954	1034	662	208	9551	152	48	13722	157	47	10819	193	64	7862	160	49
1899..	42357	1028	646	184	9603	176	54	14001	163	44	10886	138	38	7867	150	47
1900...	42787	1113	687	161	9659	175	35	14300	186	45	10956	185	46	7872	141	35
Averages of Years 1891 to 1900 ..)	40820	1103	677	184	9408	170	48	12933	185	51	10631	173	45	7846	146	39
1901...	43223	1074	706	171	9717	199	46	14603	173	37	11027	159	50	7876	175	38

LOCAL GOVERNMENT BOARD RETURN.

TABLE III.—Cases of Infectious Disease notified during the Year 1901.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.					TOTAL CASES NOTIFIED IN EACH LOCALITY.			
	At all Ages.	At Ages—Years.				1. North West Ward.	2. South West Ward.	3. North East Ward.	4. South East Ward.
		Under 1.	1 to 5.	5 to 15.	15 to 25.					25 to 65.
Diphtheria	13	3	5	4	1	4	6	1	2
Scarlet Fever	154	43	84	20	6	47	47	41	19
Enteric Fever	25	4	6	4	11	4	6	8	7
Puerperal Fever	2	...	...	...	2	...	...	1	1
Totals.....	194	50	95	28	20	55	59	51	29

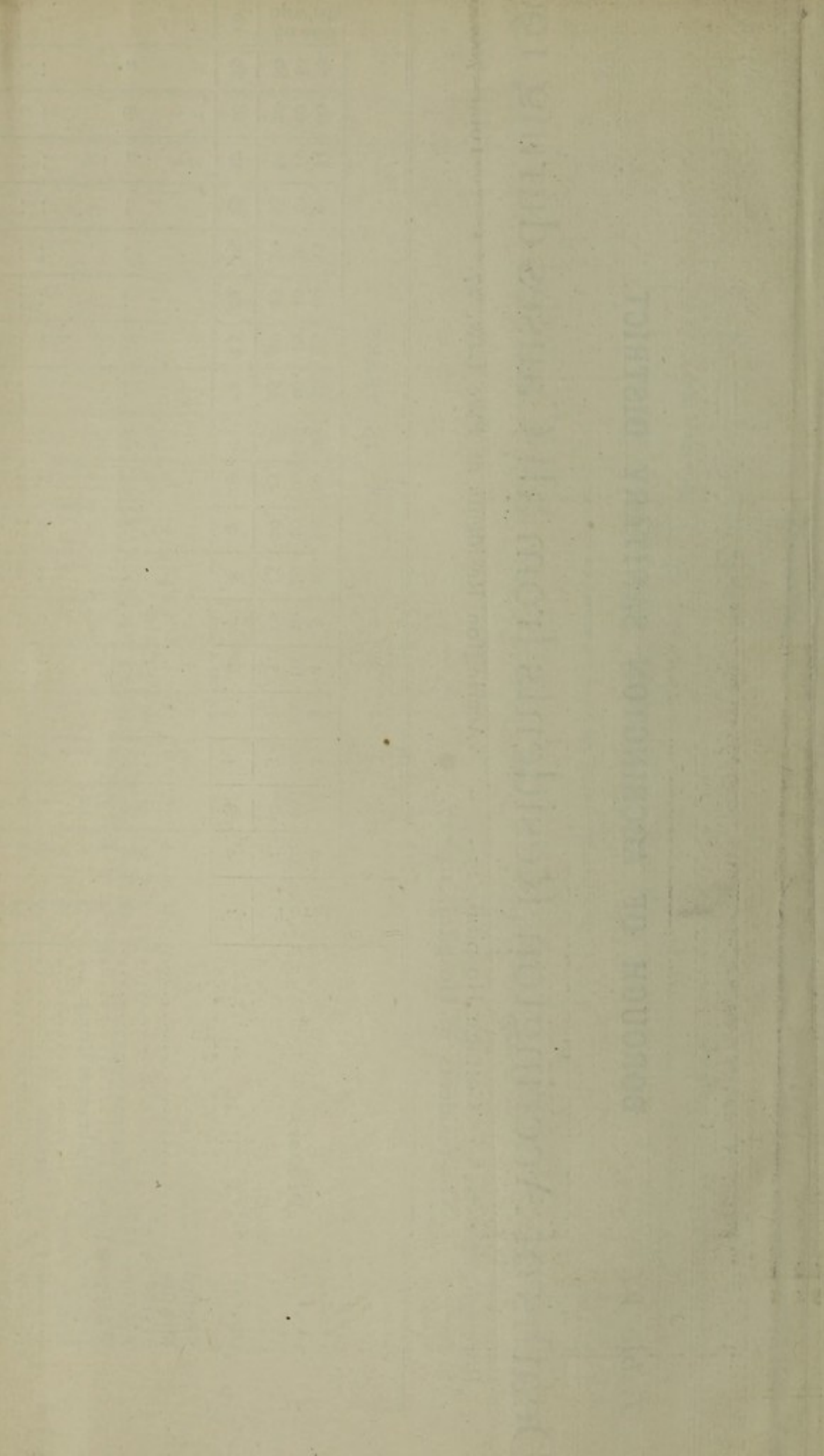
LOCAL GOVERNMENT BOARD RETURN.

TABLE IV.—Causes of, and Ages at, Death during the Year 1901.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.						DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES)				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	
	All Ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	North-West.	South-West.	North-East.		South-East.
Measles	21	3	17	1	..	..	..	3	2	11	5	..
Scarlet Fever.....	9	..	5	3	1	..	..	3	1	4	1	..
Whooping Cough.....	4	3	1	..	..	..	..	2	1	..	1	..
Diphtheria and Membranous Croup	3	..	3	..	..	..	..	..	3	..	..	..
Croup	5	1	3	1	..	..	..	4	..	1	..	..
Enteric Fever	8	..	2	2	..	..	1	1	1	1	5	..
Epidemic Influenza	10	..	..	..	1	3	4	4	1	5	..	..
Diarrhoea	32	24	4	..	..	2	9	9	4	11	8	..
Enteritis	14	9	1	..	..	1	5	5	4	2	3	..
Puerperal Fever	2	..	..	..	..	2	..	..	..	1	1	..
Erysipelas	2	..	..	..	..	2	..	..	..	2	..	..
Phthisis	40	..	1	2	9	27	1	13	6	10	11	..
Other Tubercular Diseases.....	25	8	4	9	2	2	9	9	2	5	9	2
Cancer, Malignant Disease	25	..	..	..	..	18	7	9	2	5	9	4
Bronchitis	63	24	3	..	..	19	17	15	20	17	11	..
Pneumonia.....	73	15	14	5	2	29	8	20	14	16	23	1
Pleurisy	3	..	..	..	1	2	..	..	2	1	..	..
Other Diseases of Respiratory Organs.....	8	..	4	1	..	3	..	2	3	2	1	..
Alcoholism and Cirrhosis of Liver	10	..	..	..	..	9	1	4	2	..	4	..
Venereal Diseases	3	1	1	..	..	1	..	1	1	1	..	..
Premature Birth	17	17	..	..	..	..	..	3	7	6	1	..
Diseases and Accidents of Parturition.....	4	..	..	..	2	2	..	1	2	..	1	..
Heart Diseases.....	59	2	..	..	6	30	21	19	16	13	11	2
Accidents and Negligence	17	1	6	2	1	5	2	2	8	1	6	7
Suicides	5	..	..	..	1	4	..	2	..	1	2	..
Old Age	39	..	..	..	..	1	38	14	13	4	8	..
Congenital Defects and Debility at Birth..	30	29	1	..	..	..	..	6	4	10	10	..
Other Development Diseases	11	9	2	..	..	..	..	2	1	3	5	..
All other Causes	164	25	4	7	7	90	31	46	53	30	35	11
ALL CAUSES.....	706	171	76	33	33	259	134	199	173	163	171	27

TABLE V.
COMPARISON OF PREVALENCE OF SICKNESS, AND DEATH
FROM INFECTIOUS DISEASES.

YEAR.	SMALLPOX.		ERYSIPELAS.		DIPHTHERIA.		MEMBRANOUS GROUP.		SCARLET FEVER.		ENTERIC FEVER.		PUERPERAL FEVER.	
	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths
1891	...	...	...	2	21	2	...	10	80	6	22	9	...	...
1892	...	...	...	...	88	19	...	4	46	2	23	7	2	2
1893	6	...	...	1	29	4	...	3	34	1	52	6	4	2
1894	2	1	...	2	37	3	...	7	127	2	23	3	..	...
1895	...	...	...	4	31	6	...	11	163	9	178	13	1	...
1896	...	...	...	3	40	2	...	10	177	8	54	10	4	4
1897	...	...	...	4	32	6	...	9	328	9	48	5	5	4
1898	...	...	...	3	38	7	...	3	287	11	52	13	4	2
1899	1	...	...	..	27	6	...	10	398	10	35	4	2	...
1900	...	...	...	1	21	6	...	4	218	4	33	7	1	2
1901	...	...	...	2	13	3	...	...	154	9	25	8	2	2



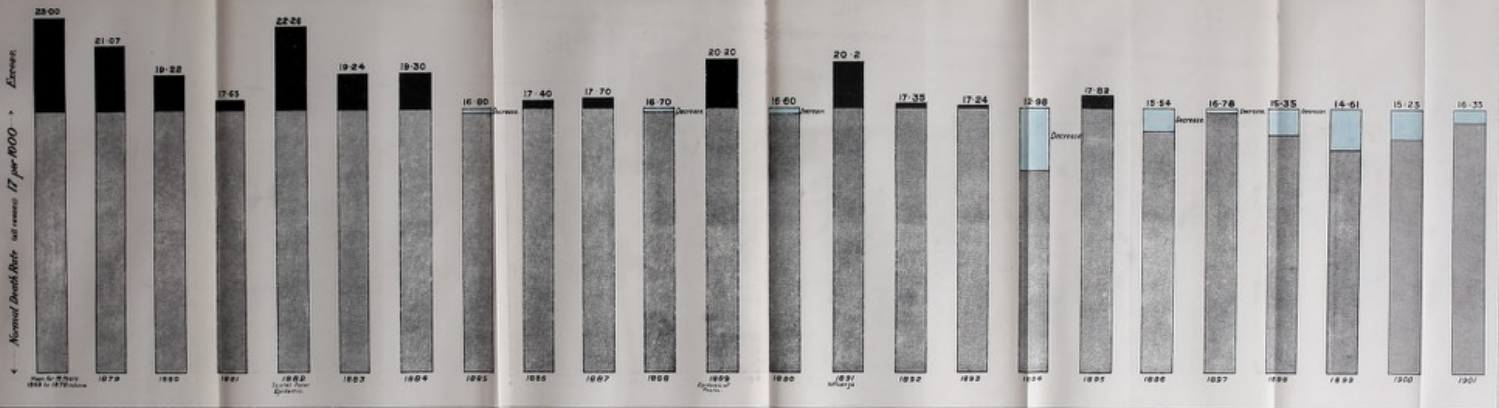
BOROUGH OF ACCRINGTON.

Diagram showing Death Rate for Twenty-Three Years, 1879 to 1901 inclusive.

TABLE VII.

REFERENCE

The shaded portion of each column represents what the late Dr. Farr considered might be regarded as the Normal Annual Death Rate of a healthy Town, viz: 17 per 1000, the Black portion shows the excess above such normal rate.



1871

1872

1873

1874

1875

1876

1877

1878

1879