

[Report of the Medical Officer of Health for Greenwich District].

Contributors

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BOARD OF WORKS
FOR THE
GREENWICH DISTRICT.

ANNUAL REPORT

FOR THE YEAR ENDED 25th MARCH, 1859.

Report of Medical Officer ;

Statement of Surveyor ;

„ *of Contracts entered into ;*

„ *of Moneys Received and Expended during the
Year ; and*

„ *of Arrears of Calls and other Moneys and
Liabilities of the said Board, on the 25th
March, 1859.*

PRINTED BY ORDER OF THE BOARD.

Greenwich :

HENRY S. RICHARDSON,

CHURCH STREET.

BOARD OF WORKS
DISTRICT OF COLUMBIA
MEMBERS OF THE BOARD
GENERAL DISTRICT

JUNE, 1888.

ANNUAL REPORT
TO THE DISTRICT OF COLUMBIA

BY THE BOARD OF WORKS
FOR THE YEAR ENDING MARCH, 1889.

THE DISTRICT OF COLUMBIA
BOARD OF WORKS
GENERAL DISTRICT
ANNUAL REPORT
TO THE DISTRICT OF COLUMBIA
BY THE BOARD OF WORKS
FOR THE YEAR ENDING MARCH, 1889.
PRINTED BY ORDER OF THE BOARD
OF WORKS
OF THE DISTRICT OF COLUMBIA
AT THE DISTRICT OF COLUMBIA
PRINTING OFFICE
1889.

Greenwich District Board of Works.

LIST OF THE MEMBERS OF THE BOARD, AND OF THE SEVERAL OFFICERS, &c.

JUNE, 1859.

MEMBERS ELECTED BY THE PARISH OF GREENWICH.

NAME.	ADDRESS.
ALFRED RHODES BRISTOW, Esq., M. P.,	London-street
Mr. GEORGE REEVE	Royal-hill
„ JOHN WILLIAM OLLEY	Deptford-bridge
„ BLACKNELL CARTER.....	Bexley-place
„ WILLIAM HOLDING	Clarence-street
„ HENRY PARR.....	Trafalgar-road
„ FRANCIS WILLIAM WARD.....	Trafalgar-road
„ EBENEZER GOUGH.....	Lewisham-road
„ FREDERICK MORLEY	George-street
Captain EDWARD ROUTH ..	Hyde-vale
Mr. THOMAS RICHARD HUNTLEY,	Clarence-street
„ GUILDFORD B. RICHARDSON...	Stainton-place, Shooter's-hill-road
„ THOMAS WILLIAM TANNER ...	Nelson-street
„ HENRY MAJOR.....	Church-street
„ JAMES ALFRED MOORE	Royal-hill
„ JOHN WILLIAM DAVIES	Trafalgar-road
„ EDWARD BRYANT	Trafalgar-road
„ WILLIAM WHITE.....	The Grove, Blackheath
„ CHARLES HARDING	London-street
„ THOMAS BURTON	Devonshire-road
The Rev. W. ALDWIN SOAMES,	M.A. Blackheath
Mr. SAMUEL NOBLE	London-street
„ JAMES ROBERTS	Crane-street
„ THOMAS WILSON ROBINSON...	Church-street
„ CORNELIUS MORIARTY	Nelson-street
„ HENRY MORLEY.....	Crooms-hill
„ JOHN ROBERTS	Church-street
„ JOSEPH BISHOP	Thames-street
„ JOSEPH MEAD	Trafalgar-road
„ JOSEPH COOPER PECKHAM ...	Blackheath-hill

MEMBERS ELECTED BY THE PARISH OF ST. PAUL, DEPTFORD,
INCLUDING HATCHAM.

NAME.	ADDRESS.
Mr. CHARLES JESSOP	High-street
„ FRANCIS TROWELL	4, Park-place, New-cross
„ JOHN FRANCIS MARTIN	Hurst-lodge, High-road, Lee
„ WILLIAM MASON	Lower-road
„ Aldn. DAVID WILLIAMS WIRE,	Stone-house, Counter-hill
„ FREDERICK KEDDELL	Park-terrace, New-cross
„ ALEXANDER PARKER	New-cross-road
„ THOMAS NORFOLK	Deptford-bridge
„ BENJAMIN DUVALL	Broadway
„ WILLIAM CRANE	Brockley-lane
„ SIMEON SHOLE	Church-street
„ GEORGE SCOTT KEYS	St. James's-place, Old Kent-road
„ FREDERICK ALGAR	Lewisham Upper-road
„ JOHN ASHFORD	High-street
„ JOHN WADE	Evelyn-street
„ FRANCIS BRYAN	Edward-street
„ JAMES WILSON HALSEY	Broadway
„ WILLIAM GEORGE HOLLOWAY,	Broadway
„ JAMES MATTHEWS	Victoria-cottages, New-cross-road
„ WILLIAM BROWN	Cold Blow Farm
The Rev. AUGUSTUS KERR BOZZI	
GRANVILLE, M. A.	Parsonage house, Hatcham

MEMBERS ELECTED BY THE PARISH OF ST. NICHOLAS,
DEPTFORD.

Mr. THOMAS WATSON	Wellington-street
„ WILLIAM HENRY SMITH	Park-villas, Granville-park, Black- heath
„ WILLIAM MASLEN	Creek-road
„ WILLIAM ANDREWS	Wellington-street
Rev. ALEXANDER E. SKETCHLEY, D.D.,	The Vicarage
Mr. BENJAMIN AVERY	Gibraltar-row, Evelyn-street

OFFICERS OF THE BOARD.

CLERK,

Mr. EDWARD WOOLFORD JAMES, Crooms-hill, and 1A, Burney-street,
Greenwich

TREASURER,

Mr. ROBERT MOLINE London and County Bank, Nelson-
street, Greenwich

MEDICAL OFFICER OF HEALTH,

Mr. HENRY NORTHOVER PINK ... Crooms-hill, Greenwich

SURVEYOR,

Mr. JOHN NIDD SMITH Camden-place, South-street, Green-
wich

INSPECTORS OF NUISANCES,

Mr. CHARLES HUGHES Blissett-street, Greenwich

Mr. BENJAMIN HUBBLE, Jun. Mornington-road, New-cross, Dept-
ford

MESSENGER,

Mr. HENRY PALMER Offices of the Board, Church-street,
Greenwich

THIRD ANNUAL REPORT
OF
The Medical Officer of Health
FOR THE
GREENWICH DISTRICT,

PRESENTED TO THE DISTRICT BOARD ON THE 25th MAY, 1859.

TABLE No. 1.

	Population, Census, 1851.	BIRTHS.			DEATHS.			AGES AT TIME OF DEATH.										CAUSES.																	
		M.	F.	Total.	M	F.	Total.	Under 5.	5 to 10	10 to 20	20 to 30	30 to 40	40 to 60	60 to 80	80 to 90	90 & upwards	Scarlatina.	Measles.	Hooping Cough.	Small Pox.	Diarrhea and Dysentery.	Fever.	Phthisis.	Heart and Chest Diseases, beside Phthisis.	Croup.	Intestinal Affections.	Brain Diseases.	Diphtheria.	Puerperal Fever.	Atrophy and Old Age.	Influenza.	Cholera.	All other Diseases.	Inquests.	Total.
January		96	87	183	102	89	191	47	5	8	24	11	29	49	18	..	1	4	7	1	3	9	22	59	1	13	16	..	1	27	..	..	27	..	191
February ..		123	106	229	87	66	153	41	4	4	13	14	18	47	11	1	..	4	2	..	4	7	25	44	1	1	14	..	..	22	..	..	23	1	153
March		105	97	202	86	73	159	55	5	3	9	13	26	31	16	1	..	2	4	..	6	6	22	51	4	2	18	..	1	18	..	..	23	..	159
Total	66998	324	290	614	275	228	503	143	14	15	46	38	73	127	45	2	1	10	13	1	13	22	69	154	6	16	48	..	2	67	..	..	80	1	503
April		96	80	176	96	89	185	67	2	8	17	19	25	36	11	..	2	7	5	..	5	8	28	53	..	5	21	..	3	10	..	..	36	2	185
May		109	106	215	112	71	183	70	6	9	11	9	20	43	15	..	4	13	6	..	6	4	13	47	1	8	30	..	2	20	..	..	26	3	183
June		77	86	163	75	49	124	43	5	7	8	13	13	28	6	1	2	13	8	..	3	7	15	30	1	2	12	..	..	12	..	..	17	2	124
Total	66998	282	272	554	283	209	492	180	13	24	36	41	58	107	32	1	8	33	19	..	14	19	56	130	2	15	63	..	5	42	..	..	79	7	492
July		87	86	173	91	67	158	57	3	13	6	2	15	47	12	3	5	8	4	..	11	7	18	22	2	9	15	..	..	25	..	..	22	10	158
August		103	82	185	89	60	149	64	9	6	11	10	11	25	13	..	11	2	2	..	18	6	23	17	1	4	24	..	..	24	..	..	15	2	149
September ..		97	83	180	95	71	166	68	8	5	10	11	16	45	3	..	15	6	5	1	16	7	21	21	..	4	17	..	3	17	..	..	31	2	166
Total	66998	287	251	538	275	198	473	189	20	24	27	23	42	117	28	3	31	16	11	1	45	20	62	60	3	17	56	..	3	66	..	..	68	14	473
October		133	134	267	105	78	183	65	13	8	16	13	30	31	7	..	24	2	4	..	15	9	24	31	1	2	19	3	..	14	..	..	32	3	183
November ..		135	154	289	129	104	233	86	15	11	16	18	31	40	15	1	17	4	1	1	4	14	32	57	7	7	33	1	1	25	..	..	25	4	233
December ..		90	93	183	94	68	162	63	9	13	11	11	17	26	12	..	11	1	2	1	4	6	18	61	2	8	8	..	1	13	..	..	23	3	162
Total	66998	358	381	739	328	250	578	214	37	32	43	42	78	97	34	1	52	7	7	2	23	29	74	149	10	17	60	4	2	52	..	..	80	10	578
Total	66998	1251	1194	2445	1161	885	2046	726	84	95	152	144	251	448	139	7	92	66	50	4	95	90	261	493	21	65	227	4	12	227	..	..	307	32	2046

TABLE No. 2.

A COMPARATIVE STATEMENT DURING THE PAST TWO YEARS.

1857	1461	1396	2857	1083	818	1901	654	38	76	140	116	256	478	129	14	22	12	29	11	116	98	240	411	12	109	287	..	3	209	4	2	252	83	1901
1858	1251	1194	2445	1161	885	2046	726	84	95	152	144	251	448	139	7	92	66	50	4	95	90	261	493	21	65	227	4	12	227	..	..	307	32	2046

TABLE No. 3.
Showing the number of Deaths registered quarterly in the different Divisions of the District during the year 1858.

	First Quarter.				Second Quarter.				Third Quarter.				Fourth Quarter.			
		M.	F.	Total.		M.	F.	Total.		M.	F.	Total.		M.	F.	Total.
Greenwich, East	72				57				52				67			
„ Hospital..	53	122	73	195	66	108	57	165	63	103	59	162	54	98	66	164
„ Union....	70				42				47				43			
„ West	97	68	56	124	125	98	61	159	102	70	53	123	138	101	60	161
Dreadnought Hospital	27				34				21				23			
St. Paul, Deptford ..	.....	72	84	156	.....	53	77	130	.....	84	75	159	.....	110	103	213
St. Nicholas, Deptford	.....	13	15	28	.....	24	14	38	.....	18	11	29	.....	19	21	40
Total	503	275	228	503	492	283	209	492	473	275	198	473	578	328	250	578

TABLE No. 4.

Showing the total number of Deaths that were registered in the District during the year 1858.

		Males.	Females.	Total.
Greenwich, East.....	248	431	255	686
„ Hospital	236			
„ Union	202			
„ West	462	337	230	567
Dreadnought Hospital	105			
St. Paul, Deptford .....	...	319	339	658
St. Nicholas, Deptford .....	.....	74	61	135
Total .....	.....	1161	885	2046

TABLE No. 5.

Showing the comparative number of Deaths registered in the different Divisions of the District during the years 1856, 1857, and 1858.

	Greenwich, East.			Greenwich, West.		St. Paul, Deptford.	St. Nicholas, Deptford.	Total.
	Greenwich East.	Greenwich Hospital.	Greenwich Union.	Greenwich West.	Dreadnought Hospital.			
1856..	240	239	187	380	100	608	143	1897
1857..	234	217	188	326	100	670	166	1901
1858..	248	236	202	462	105	658	135	2046

TABLE No. 6.

Showing the comparative number of Male and Female Deaths registered in the District in the years 1856, 1857, and 1858.

	Males.	Females.	Total.
1856	1104	793	1897
1857	1083	818	1901
1858	1161	885	2046

TABLE No. 7.

Showing a comparative statement of the ages at which death took place during the years 1856, 1857, 1858.

	Under 10.	10 to 20	20 to 40	40 to 60	60 to 80	80 and upwards.	Total.
1856....	760	77	264	236	461	99	1897
1857....	692	76	256	256	478	143	1901
1858....	810	95	296	251	448	146	2046

TABLE No. 8.

Showing the Death-rate per 1000 inhabitants throughout the District during the past year.

Districts.	Population, Census 1851.	Deaths.	Death-rate per 1000, includ- ing Hospitals and Union House.	Death-rate per 1000, exclud- ing Hospitals and Union House.
Greenwich, East	12628	248	42	19
„ Hospital ...	2600	236		
„ Union	1000	202		
„ West	18607	462	30	24
Dreadnought Hospital..	193	105		
St. Paul, Deptford	24899	658	26	26
St. Nicholas, Deptford..	7071	135	19	19
Total	66998	2046	30	23

TABLE No. 9.

Showing a comparative statement of the Death-rate per 1000, throughout the different Divisions of the District during the past three years.

	Greenwich, East.		Greenwich, West.		St. Paul, Deptford.	St. Nicholas, Deptford.
	Including Hospital and Union House.	Excluding Hospital and Union House.	Including Dreadnought Hospital.	Excluding Dreadnought Hospital.		
1856...	41	19	25	21	24	22
1857...	39	18	22	17	26	23
1858...	42	19	30	24	26	19

TABLE No. 10.

Showing the number of Deaths registered from Epidemic Diseases in the different Divisions of the District during the year 1858.

	Scarlatina.	Measles.	Hooping Cough.	Small Pox.	Diarrhoea and Dysentery.	Fever.	Total.
Greenwich, East	10	3	10	..	2	4	29
„ Hospital....	..	..	..	..	10	2	12
„ Union	1	..	..	..	2	20	23
„ West	38	36	21	3	24	19	141
Dreadnought Hospital..	1	1	..	..	8	15	25
St. Paul, Deptford	36	21	16	1	42	23	139
St. Nicholas, Deptford..	6	5	3	..	7	7	28
Total	92	66	50	4	95	90	397

TABLE No. 11.

Showing a comparative statement of Epidemic and Chest Diseases during the past three years.

	Scarlatina.	Measles.	Hooping Cough.	Small Pox.	Diarrhoea & Dysentery.	Fever.	Chest.
1856..	24	47	77	14	90	79	661
1857..	22	12	29	11	116	98	663
1858..	92	66	50	4	95	90	754

TABLE No. 12.

Showing the number of Births that have been registered in the different Divisions of the District during the year 1858.

	Males.	Females.	Total.
Greenwich, East	240	244	484
„ West	316	290	606
St. Paul, Deptford	568	537	1105
St. Nicholas, Deptford..	127	123	250
Total	1251	1194	2445

TABLE No. 12.

Showing the comparative number of Births during the
past three years.

	Greenwich.	St. Paul.	St. Nicholas.	Total.
1856.....	1194	1232	300	2726
1857.....	1250	1266	341	2857
1858.....	1090	1105	250	2445

REPORT.

To the Greenwich District Board of Works.

GENTLEMEN,

A number of Tabular Forms will preface this my Third Annual Report; on the merits of which I will leave you to form your own opinions. They have been compiled with great accuracy, and considerable time has been devoted to the abbreviation of such facts and information as will appear necessary to convey to you a true and complete statement of the Mortality of your District.

Although to many the foregoing Forms would be alone sufficient to elucidate the various changes that have occurred in the sanitary condition of the District, since the commencement of the operations of the Metropolis Local Management Act, still there are many points connected with those Tables, and many subjects associated with further necessary sanitary improvements, that require more particular allusion, and which, to the best of my ability, I will endeavour to introduce to your notice and consideration.

During the past year of 1858, the deaths registered amounted to 1161 Males and 885 Females, making a total of 2046. These numbers exhibit an increase upon the previous year of 78 Males and 67 Females, making a total of 145. This fact cannot fail to attract your particular attention.

It has fallen to my duty to represent to your Board on several occasions during the past year, that an unusual amount of sickness was prevailing in the District, and more particularly sickness arising from Epidemic Diseases; and I brought to your notice the large number of deaths arising from that class of disease. Those representations are fully borne out by the Mortality Tables that I have now the honour of laying before you.

It may be assumed by many who do not think deeply, or who do not consider rightly as regards the causes of disease, that the increased mortality, above alluded to, is not after all of such magnitude as to demand particular attention.

It may be assumed that the rapid increase of population in this District would be alone sufficient to admit of a yearly increase in the number of deaths.

It may also be assumed that, inasmuch as the past year numbered a greater amount of deaths, not only in the Metropolis but also throughout the country, this District must be expected to bear its fair proportion of that increased mortality.

Such assumptions will scarcely hold good. It is true that all diseases, and more particularly those arising from epidemic influences, are subjected to considerable fluctuations. One disease will rage and extend its ravages during one year, and another disease will partake of the same virulence during the following year; but they are on that account not the less under human controul.

Thus in the year 1857, there were only 22 deaths referred to Scarlatina, yet in the year 1858 were numbered 92 from the same disease. In 1857 Measles carried off 12 children, whereas 66 died from Measles in 1858. The same observations will apply to all Epidemic Diseases; and on referring to the foregoing Tables it will be seen that the increased mortality during the past year must be attributed almost entirely to Epidemic Disease.

The cause of the prevalence of Epidemics during one year more than another is somewhat obscure; but the causes of the *mortality* arising from such maladies can be easily demonstrated.

It has been clearly proved in the various publications issued by the Board of Health, that the mortality from Cholera, when it made its appearance in London in 1849, was due, in a very large proportion of cases, to the emanations of night-soil floating in the air; to emanations from cesspools and sewers; to the impurities of the water in wells; to the water supplied by some of the water companies; and also to the emanations from the waters of the Thames. In the year 1854, when the Cholera again made its appearance, it was observed, that over the same Districts, the virulence of the disease was much lessened, in fact, in some parts, it scarcely made

its appearance, and the mortality was consequently comparatively decreased : and why ?

During the interval various sanitary measures had been carried out in those localities ; cesspools had been filled up ; sewers had been made where none existed before ; houses had been consequently drained that were previously in a foul condition ; and the water companies had changed their source of supply. The like observations will apply to Scarlatina, Measles, Fever, and other Epidemics, and in all districts.

The time, I trust, is not far distant when the sanitary improvements of this District will be more complete, and when I shall be able to point out to you, that although Epidemics prevail, they do not destroy so large a number of the inhabitants.

As I have before observed, Scarlatina proved fatal in 92 cases during the year of 1858 ; Measles in 66 ; Hooping-cough in 50 ; Diarrhoea in 25 ; Fever in 90 ; and 754 Deaths were referred to Heart and Chest Affections : and I would here remark that this prevalence of Epidemics, that this increased mortality, is not the result of mere accident. It is due to some morbid agent ; to some pestilential effluvia ; to some specific influence which exists in the streets ; which exists in the very houses in which we live, and in the atmosphere we breathe.

It was in consequence of such prevalence of disease that I pointed out the necessity for a house to house visitation, and I cannot but still deplore the decision arrived at by your Board in respect to the proposition recommended by the Sanitary Committee for the more effectual inspection and supervision, more particularly of the poorer parts of the District : and I would even now again urge upon you the necessity of making some provision whereby, in the absence of the complete sewerage and drainage of the District, such a necessary and beneficial operation can be carried into effect ; and that the Sanitary Committee should be again empowered to devise some plans for the purpose, to be submitted to the Board for consideration and adoption.

Having drawn your attention to the large amount of deaths arising from Epidemic Disease, I would next make some observations on some of the more powerful causes of disease and death

that appear annually to destroy very large numbers of your population.

It will be seen from Table No. 10, that, in addition to the deaths already enumerated as arising from Epidemic Diseases, 261 persons died during the past year from Pulmonary Pthisis, being an increase of 21 deaths from that disease on the previous year of 1857; and, on examining the foregoing Tables, it will appear that a greater number die annually in this District from Consumption than from any other disease. It is a generally received opinion that, independent of an hereditary disposition, a foul and damp atmosphere and defective ventilation, are among the chief causes to which the production of Consumption is to be attributed.

In the Report on the Sanitary Condition of the Army, lately published, it was proved, that a very high mortality arose from Consumption, and it was assumed that such mortality proceeded in a great measure from the narrow space allotted to each soldier in the barrack and guard-rooms. Many similar examples could be brought forward to elucidate the causes of this disease; but to investigate the whole of the causes contributing to the production of Pthisis, would occupy more time and space than could be allotted in this Report.

Bronchitis, Pneumonia, and other Chest Affections, were also unusually fatal. Exclusive of Pthisis, 493 persons died from diseases of the Respiratory Organs. These deaths were distributed through the four quarters of the year in the following proportions: in the first, 154; second, 130; third, 60; and in the fourth quarter 149 deaths were registered. The mean temperature during the same periods was 38°, 54°, 61°, and 44°; from which it will be seen that the deaths increased in number in proportion as the temperature decreased; and on referring to Table No. 1, it will also be observed, that the deaths from Pthisis corresponded with the increase or decline of temperature.

21 deaths were registered from Croup, 10 of which took place during the last quarter of the year, the greater portion of which occurred in the month of November, following the unusual degree of cold which prevailed at that period.

65 deaths arose from Intestinal and Diseases of the Digestive

Organs, which deaths were nearly equally distributed throughout the year.

Apoplexy, Convulsions of Infants, Paralysis, and other Brain Diseases, carried off 227 persons.

There is much reason to be thankful that, amidst the alarm of late created by the appearance of the Diphtheria Epidemic, when the public papers are daily reporting the numerous deaths that are occurring in various parts of London, in many parts of the country, and even in the elevated and generally healthy neighbourhood of Blackheath, this District has been almost free from the ravages of that disease, 4 deaths only having been registered during the year. Every Epidemic seems to have its own congenial climate, and each will thrive under peculiar favourable circumstances: Typhus Fever will rage in ill-ventilated and confined neighbourhoods; Ague will prevail in low and marshy lands; but it would appear that Diphtheria has no putrid effluvia in this District on which its development depends.

12 deaths are recorded from women dying in Childbirth; and when it is noticed that 2445 children were born in the District, it will be shown that on an average the death of one mother occurred out of the births of 203 children.

227 deaths were referred to Atrophy amongst children and to aged persons; and 32 Inquests were held during the year, being 51 less than during the year of 1857.

The foregoing facts and figures do not speak very favourably as to the progress made and, perhaps, by many expected from the sanitary measures that have been adopted; and on referring more particularly to Table No. 2, wherein is shown a comparative statement of the mortality and the ages at which that mortality took place, it would appear that very little amelioration had been effected or benefit derived from the labours of the Board.

In some of my former Reports I have particularly drawn your attention to the great Infantile Mortality that was annually occurring in the District, and at the same time I strongly pointed out to you that the one great object to be attained by your operations was the saving of infantile life. In my last Annual Report I had the great satisfaction of being able to state that that desideratum had been

in some measure effected during the previous year; but it is with equal regret that I now have to announce to you, that a very large increased mortality has taken place amongst children under the age of 10 years during the past year. In 1857, the deaths under 10 years of age amounted to 692; but in 1858 they numbered 810, being an increase of 118 over the previous year, and making two-fifths of the whole number of deaths that have taken place at all ages. In the same Table you will observe that the increased mortality for the past year has arisen principally, as I before remarked, from Epidemic and Chest Affections, to which classes of disease we are chiefly to refer for the purpose of obtaining a correct knowledge of the sanitary state of every neighbourhood; for although science has not yet pointed out to us that the prevention of these diseases is within the power of man, still it is an acknowledged principle, to be borne in mind by all persons having the direction of sanitary matters, that the mortality arising from that class of disease is very much, if not almost entirely, under human control. Take, for example, Typhus Fever. It has been already shown, in some of my former Reports, that filth and deficient ventilation tend much to aggravate all Epidemic Diseases, but more especially do they operate in the spread of the contagion of Typhus Fever; and I have also remarked, that whilst it often affects the whole members or a large proportion of a family amongst the lower orders, it rarely spreads in the same manner amongst the better classes of society, who attend more to cleanliness and ventilation. I have also pointed out that an amelioration of the condition of the lower orders in those particulars, would, as the changes were effected, diminish their chances of catching contagion, and would not only operate in directly lessening its diffusion, but, by reducing the number of its sources, would tend to diminish the actual quantity of this morbid principle that might be generated in a given time.

The Registrar-General, in his Quarterly Return, October 28th, particularly adverts to the City of Ely as an example of the salutary effects of simple sanitary measures. He points out that during the seven years (1843-1849) before the Public Health Act was brought into operation, the mortality was at the rate of 26 deaths annually

to every 1000 persons ; in the seven subsequent years, when the sanitary measures were only partially carried out, the mortality fell to the rate of 19 per thousand ; and in the two last years (1856-1857) it was at the rate of 17 per 1000. The principal measures adopted were the supply of water, the formation of public sewers, and the destruction of the greater portion of the cesspools throughout the city.

It has been proved, beyond all doubt, that the effects of cesspool emanations are very injurious to the public health ; and it would appear, from evidence that has come before me within the past two or three years, that those who advocate the common bog-hole and cesspool drainage, or rather those who oppose the formation of sewers and the consequent drainage of houses into those sewers, are not aware of the pernicious operations of cesspool gases upon the human frame.

A series of experiments on animals, principally dogs, has been lately made by Dr. Barker, for the purpose of testing the effects of cesspool air. He placed the animals in a chamber over a cesspool, with which a communication was formed by means of a tube, and a lamp was so arranged as to draw a current of cesspool air over the animals within. After having continued the experiments for a certain time, Dr. Barker arrived at the conclusion that cesspool emanations were, when steadily inhaled, poisonous. The dogs subjected to the cesspool air were all more or less affected, and some were killed. The symptoms were those of intestinal derangement, followed by prostration, heat of the surface of the body, distaste for food, great thirst, and those general signs which mark the forms of continued fever common to the dirty streets and ill-ventilated houses of the lower classes.

Dr. Barker has here imitated on a small scale on animals, the operation which is constantly going on throughout the principal parts of this District. These noxious gases are constantly generated in the sewers and cesspools, and they must find some means of escape ; the gases generated in the cesspools either return through the drain-pipes into your houses, or, in the event of such outlets being well trapped and rendered impassable, they permeate the surrounding soil into the atmosphere, which is at all times charged

with these gases, though very commonly in such a diffused state as not to be appreciable to the senses.

The gases generated in the sewers are also no doubt operating very injuriously on your population.

The present mode of ventilating the sewers cannot but be defective ; the generated gases being lighter than the atmosphere, escape by their own elasticity into the streets, and thereby contaminate to a very injurious extent the surrounding atmosphere. There are many methods of getting rid of the gases thus produced, but none more simple than the carrying pipes, at certain intervals, from the sewers to the tops of the houses, which operation could be carried out without entailing a heavy expense on the ratepayers of the District.

On reviewing the amount of sanitary work done during the past year, I find that 367 houses have been drained into the sewers, and consequently a corresponding number of cesspools and bogholes have been done away with, and the animal and decomposable matter which previously was allowed to ferment in those pits, and to discharge into the atmosphere *the most noxious and deadly vapours, is now carried into the river Thames*, and there diluted to such an extent as to become comparatively innocuous.

During the past summer, not only the Greenwich District Board but other Boards in the Metropolitan Districts, passed resolutions that no houses should be drained into the sewers during the hot weather.

When it is borne in mind that since the Local Management Act came into operation, 1739 houses in this District alone have been drained into the Thames, and a corresponding number have also been drained throughout the 40 Metropolitan Districts, *it cannot be a matter of surprise that the river Thames should have reached such a putrid condition* as during the past summer ; and in all probability such a state of things will continue to exist during each succeeding summer, varying, of course, according as the temperature is high or low, until the intercepting drainage works have been completed. Although it was shown that a certain increase of sickness prevailed on the banks of the river during those months in some districts, still it was a remarkable fact that, throughout the whole period, when

the unpleasant effluvia from the Thames was at its height, this District was never so free from sickness and death. In the months of April and May the deaths amounted to 185 and 183 respectively ; whereas in June, July, and August, 124, 158, and 149, were the numbers assigned to each month. It would therefore appear that such increase of sickness and mortality that did prevail in a certain few river-side localities, was just as likely to have arisen from other causes as from the unpleasant state of the Thames. But even admitting the expediency of preventing the further pollution of the river, it is nevertheless at present an evil of almost inappreciable extent in comparison to the ill health occasioned by the detention of large accumulations of nightsoil in the most densely populated neighbourhoods. There can be doubt therefore that such a resolution, suggested by some well-meaning persons and passed by some of the local Boards, was a step in the wrong direction,—it was a mistaken and retrograde movement ; a large number of cesspools were thereby prevented from being annihilated, and the pestiferous gases arising therefrom were still allowed to spread in a concentrated form through the dwellings of the inhabitants, instead of the contents of those cesspools being carried into the river, and there, as I before remarked, to become so largely diluted as to render them comparatively innocuous.

Whilst on the subject of cesspools and drainage, I would wish to advert to the opinions that I have heard expressed, not only by some Members of the Board, but by many other influential persons of these towns : “ That they would still prefer the old boghole and cesspool to the system of drainage into the sewer.” “ They considered that the water-closets were not water-closets ; that they were continually being choked up and rendered useless ; and that the sewer gases were as constantly returning through the outlets of the supposed water-closets.” These are points to which I have on many former occasions directed the attention of the Board, and which, it cannot be denied, are existing to a considerable extent amongst the houses of the poorer classes throughout the District.

The principal causes of the ineffectual working of these closets, is the insufficient quantity of water and the small size of the supply-pipe from the cistern to the closet. Instead of having a rush of

water sufficiently powerful to carry everything before it, and thoroughly clearing out the pan, and leaving the apparatus watertight, there is, for the most part, only a small dribblet of water, which finds its way into the sewer without removing the soil upon which it was intended to operate. I would advise that the Surveyor should be instructed, that in all applications for drainage, and when the plans are submitted to him for approval, he should provide for a much larger supply of water, and a supply-pipe to the closet of at least one inch and a quarter in diameter. It also has been frequently urged that a child, for the sake of mischief, may turn on the water to the closet, and the whole contents of the cistern be thereby wasted. Even if such should be the case, you will have the satisfaction of knowing that by such a rush of water as would be obtained by adopting the above recommendation, the closet would be thoroughly flushed out at least once in every day, and thereby the objections hitherto made respecting the uncertain working of the closets would be obviated.

Having now laid before you a statement of the sanitary condition of the District; the principal diseases that have given rise to the past increased mortality; and the various causes that would appear to have chiefly operated in the production of such diseases; it will naturally follow that some other suggestions should be offered towards the removal of such harbingers of death.

These remedies can be summed up in a few words.

It is indispensable that the sewerage of the District should be proceeded with as fast as circumstances will admit of. That the cesspools should be generally suppressed. That the method of ventilating the sewers should at once undergo an alteration. That accumulations of all refuse and decomposable matter should not only be removed from the inhabited parts of the District, but that a repetition of such deposits should be prevented. That the water supplied to the District by the water company should, if possible, be still further purified. That a considerable number of streets should, particularly during the summer months, be constantly and thoroughly flushed and scoured down with water: and that the dwellings of the poorer classes should receive a regular and systematic examination by the Inspectors of Nuisances and by

your Officer of Health, where required, not only as regards their internal condition, but as regards the water supply, the state of the privies, and the accumulations of dust and other refuse matter. And here I would again observe, that such operations cannot be carried out whilst your Inspectors of Nuisances are compelled to perform the duties at present laid upon them.

My former recommendations that these regular and systematic inspections should go on throughout the District, met with an opposition at the Board which I had not anticipated, and upon grounds which can scarcely be said to be tenable. It was urged that such an inspection would be an inquisitorial act on the part of the Board; that such inspections were not necessary; and that no Epidemic was prevailing of sufficient magnitude to require such an intervention.

Gentlemen, it was in consequence of a severe Epidemic that those suggestions were made. It was in consequence of my knowledge of the increased mortality of the District during the past year, as shown to you in the annexed Tables, that I was induced to offer such recommendations. But even admitting that no such epidemic mortality was or had been existing at the time, I felt it my duty on other grounds of equal importance, to advance the adoption of such necessary preventive measures. Far better is it to take timely and reasonable precautions to fortify your dwellings against the invasion of an enemy, than to have to combat and expel him when once a firm lodgment has been effected. As to its being an inquisitorial act of the Board, or being an infringement of the liberty of the subject, it might rather be designated an attempt to *prevent* the *improper* liberties of the subject; for what right has any man to keep his premises in such a state as to deteriorate health and shorten life? It is not only those unfortunate individuals who live in close proximity to such places, but the whole district is more or less affected by the generation of those elements of disease in such centres of filth and decomposing organic matter. I can also with truth affirm, that, amidst all the inspections that I have made, and I believe the same observations will generally apply to the Inspectors of Nuisances, very little, if any, opposition has ever been offered to a general inspection of such premises as appeared to be

necessary ; and where the slightest indisposition has been shown, I believe it has generally been from the knowledge on the part of the owner or occupier, that something wrong was existing on the premises ; and the objection certainly has not been made on any constitutional grounds.

Although the increased mortality of the District has been already pointed out to you, and the causes treated on under their respective heads, still there are a few other important matters that are to be taken under consideration.

On referring to Table No. 5, it will be seen that the increase of deaths has not been equally distributed throughout the separate divisions of the District. Thus, in Greenwich East there has been a considerable increase ; in Greenwich Hospital the deaths have increased from 217 to 236 ; and in the Union Workhouse from 188 to 202, out of which 20 deaths have arisen from Typhus Fever, a proportion apparently large for that establishment, when it is seen that only 90 deaths have occurred from Fever throughout the whole District, including the Royal Hospital and Schools, and the Dreadnought Hospital Ship. In Greenwich West the rate of mortality has been magnified to a much greater extent. In 1857 only 326 deaths were registered in that part of the parish, exclusive of the Dreadnought Hospital ; whereas, during the past year 462 have been registered in that division of the parish, making the rate of mortality to have increased from 17 and a fraction to 24 per 1000 persons. The causes of such death-rate I have endeavoured to illustrate in the earlier part of this Report.

In the Parish of St. Paul, Deptford, the deaths have been reduced from 670 to 658. This reduction does not appear to be sufficiently large so as to warrant the assumption that the parish has borne a more healthy aspect during the past two years, as, in comparing those two years with that of 1856, there will be an increase of 50 in the one and 62 in the other, and it is but natural to attribute the non-improvement in health of the Parish to the causes alluded to.

On referring to the Parish of St. Nicholas, the Board have much cause to be satisfied, that, although there has been no extension of sewerage, and no sanitary works of importance beyond the surface-

cleansing of the streets and thoroughfares, carried out in the parish, there has been a very large reduction in the mortality. In a population of 7071, according to the census of 1851, the number of deaths has fallen from 166 in the year 1857, to 135 in the year 1858, showing an improvement at the rate of 4 per 1000 of the inhabitants.

Again, on turning to Table No. 12, it will be perceived that there has been a very great falling off in the number of births throughout the whole District. In the Parish of Greenwich 160 less births have been registered during the past year than in the year 1857; St. Paul, Deptford, will show 161 less than during the previous year; and the Parish of St. Nicholas a diminution of 91; making the total number of births in the whole District to be less by 412.

It is a source of considerable regret to me to have to report thus unfavourably, not only as regards the deaths but also as regards the births that have been registered during the year.

From the foregoing figures it would appear that, after three years' toil in working out the orders of the Board, the state of the District is now even in a worse condition than previous to your being armed with the authority you now possess. There is however this question to be asked, "What would have been the rate of mortality during this year of Epidemic Disease, had not numerous sanitary measures and improvements been carried out, and had the different parishes been allowed to continue, in many respects, in the same foul condition that existed before your attention was directed to their amelioration?" There is also this consolation to fall back upon, that this District has not deteriorated, in a sanitary point of view, more than, I believe I am correct in stating, all the other Districts around the Metropolis.

The Minute-books of your Board, and the books of your officers, will be sufficient to satisfy the rate-payers that much good has been done, and that much and deserved attention has been paid by the Board to the sanitary requirements of the neighbourhood. Still much more is required to be done. Sanitary science is yet in its infancy. Your Officers anxiously await the orders of the Board to carry out the principal and more important works origi-

nally contemplated by the Act of Parliament by which you are directed, and I trust that in my next and subsequent Annual Reports, I shall have the satisfaction of announcing a considerable addition of new sewerage works, but which, it is with much regret, I am not in a position to record for the past year.

I am well aware that you have been labouring under much uncertainty as regards the Precept of the Metropolitan Board of Works, but now that that pecuniary difficulty has been finally arranged, and you know the worst of the burthens which you will have to bear, and inasmuch as a very considerable increase of wealth will accrue to the District in consequence of the anticipated rating of Government Property, I would humbly submit to your consideration, that it would be desirable that a certain amount of new sewerage works should be annually completed in the several parishes of the District.

There are many other subjects of general importance that I should have liked to have touched upon in this Report, but it has already reached far beyond the limits to which it was originally intended to have been confined; and I am also aware that I should be trespassing on your already extended patience.

Gentlemen, I have to thank you for the calm and deliberate consideration with which you have entertained the various propositions that I have submitted to you during the past year; and although your sanction has not been given to the adoption of some few of those recommendations, still I am persuaded that such a non-compliance has arisen from a desire to confine the expenses of the Board within the narrowest limits, and not from any disinclination on your part to work out those great improvements that are actually required in this populous and increasing neighbourhood.

I remain, your obedient Servant,

HENRY N. PINK.

Crooms Hill, May 25, 1859.

fully contemplated by the Act of Parliament by which
 directed, and I trust that in my next and subsequent annual
 reports I shall have the satisfaction of submitting a considerable
 addition of new surveys - some, but which, it is with much
 regret I am not in a position to record for the present year.

I am well aware that you have been labouring under much
 anxiety as regards the progress of the investigation, and as
 to the fact that the necessary information has been
 obtained, and you know the want of the papers which you will
 have to look and consider, a very considerable number of
 which will refer to the history of some of the antiquated
 buildings of the Government. I would have been glad to see
 a statement, and to have been able to state that a certain amount of
 new surveys were made, but unfortunately in the matter
 of the Old London Lane, which was the subject of the
 survey, there are many circumstances, and it is very much to be
 regretted that the necessary papers for this purpose have not
 been received, and the matter is now in a state of
 delay. In the case of the Old London Lane, I should
 be glad to have seen the papers, and to have been able to state
 that the necessary information had been obtained, and that the
 necessary steps had been taken to secure the necessary
 information with which you are concerned, and the various
 matters that I have mentioned to you during the last year, and
 all the other matters which are now in the hands of some
 few of those responsible persons, and I am persuaded that such a
 and complete has been sent to you, and that the necessary
 information will be obtained, and that the necessary steps
 will be taken to secure the necessary information, and that the
 necessary steps will be taken to secure the necessary information.

1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
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